

11 Ιουνίου 2018

Προς,
καθηγήτρια Μαίρη Κουτσελίνη
Πρόεδρο Συμβουλίου Φορέα
Διασφάλισης της Ποιότητας της Ανώτερης Εκπαίδευσης (Δι.Π.Α.Ε.)
Γωνία Κίμωνος και Θουκυδίδου
1434, Λευκωσία

Αξιότιμη κυρία,

**Θέμα : Απαντητική επιστολή για την Έκθεση Εξωτερικής Αξιολόγησης –
Πιστοποίησης του Προγράμματος Σπουδών «Diploma in Mobile and Web Application
Development » (2 Years, plus an Optional Foundation Year Diploma)**

Αναφορικά με το πιο πάνω θέμα, θα θέλαμε αρχικά να ευχαριστήσουμε τον Φορέα Διασφάλισης Ποιότητας της Ανώτερης Εκπαίδευσης και την Επιτροπή Εξωτερικής Αξιολόγησης του προγράμματος Σπουδών της Σχολής μας για την Έκθεση Εξωτερικής Αξιολόγησης. Επιπλέον, θα θέλαμε να σας ευχαριστήσουμε για τα σχόλια, τις παρατηρήσεις και τις εισηγήσεις σας, που συμβάλλουν στην περεταίρω βελτίωση του προγράμματος.

1. Όσον αφορά τις εισηγήσεις σας που αφορούν την μεθοδολογία έχουμε υιοθετήσει νέες μεθόδους διδασκαλίας βασισμένες στην ψηφιακή τεχνολογία (βλ.Σελ. 42-335).
2. Έχουμε ήδη προβεί σε αλλαγές στους μηχανισμούς αξιολόγησης που αντικατοπτρίζουν την βαρύτητα της διδασκόμενης ύλης (βλ.Σελ. 42-335).
3. Όσον αφορά τα ακαδημαϊκά παραπτώματα, υπάρχει ήδη διαδικασία και εφαρμόζεται η οποία επισυνάπτεται και στα παραρτήματα . Υπάρχουν μηχανισμοί που εφαρμόζονται με σκοπο να εμπλουτίσουν την ακαδημαϊκη εμπειρία των φοιτητών και όχι την τιμωρία (βλ. Σελ. 426-428)
4. Παίρνουμε όλα τα μέτρα προκειμένου να διατηρήσουμε ή ακόμη και να βελτιώσουμε το επίπεδο διδασκαλίας τόσο με αξιολογήσεις των καθηγητών από τον υπεύθυνο τους όσο και από την εσωτερική επιτροπή ποιότητας, από τους φοιτητές όπως επίσης και από σχετικά άτομα από την βιομηχανία.
5. Στην προσπάθεια της συνεχούς εκπαίδευσης, το ακαδημαϊκό προσωπικό του κολλεγίου λαμβάνει μέρος σε σεμινάρια και εξ αποστάσεως μαθήματα που προσφέρονται ηλεκτρονικά και που είτε αφορούν μαθήματα ειδικού αντικειμένου, είτε γενικά μαθήματα που αφορούν τους τρόπους διδασκαλίας (βλ. Σελ.416-421).
6. Όσον αφορά το μάθημα MW202 είχαν γίνει από πριν οι αλλαγες και έχουν αποσταλλεί ηλεκτρονικά στον Φορέα (βλ. Σελ.131-148). Αναφορικά με το CSC101 έχουν γίνει αλλαγές στην δομή του μαθήματος έτσι ώστε να διασφαλίζεται το βάθος και η επαρκής κάλυψη της εκπαιδευτικής ύλης (βλ.Σελ. 53-64).

Λαμβάνοντας υπόψιν τα καταληκτικά σχόλια και τις εισηγήσεις της επιτροπής έχουμε εισάξει νέες μεθόδους διδασκαλίας που υποστηρίζουν την πρακτική φύση του προγράμματος. Έχουμε τροποποιήσει όπου χρειάζεται τα μαθήματα έτσι ώστε να διασφαλίζεται η σωστή κατανομή μεταξύ θεωρητικής και πρακτικής εκπαίδευσης .

Έχουμε υιοθετήσει επιπλέον διαδικασίες που διασφαλίζουν την συνεχή επικαιροποίηση υλικού και λογισμικού όπως επίσης και των πηγών που είναι διαθέσιμες στην βιβλιοθήκη. Αρμόδια επιτροπή προς τούτο η επιτροπή βιβλιοθήκης.

Ο υπεύθυνος του κλάδου αξιολογεί ανα τακτά χρονικά διαστήματα τόσο τον εργαστηριακό εξοπλισμό όσο και την απόδοση των καθηγητών του κλάδου. Επιπλέον, γίνεται ξεχωριστή αξιολόγηση από τους φοιτητές όσο αφορά το κομμάτι του εργαστηρίου και το κομμάτι των εργασιών που ανατίθενται στους φοιτητές με επιπρόσθετες καταστάσεις αξιολόγησης οι οποίες επισυνάπτονται στα παραρτήματα σελίδα 422-425 .

Το κολλέγιο έχει ήδη συνάψει συνεργασία με την εταιρεία Powersoft έτσι ώστε να βοηθήσει τους φοιτητές να αποκτήσουν εργασιακή εμπειρία από τον χώρο με τις τελευταίες τεχνολογικές εξελίξεις (βλ. Σελ.409-410).

Επιπρόσθετα, ο υπεύθυνος του κλάδου, ο Διευθυντής της Powersoft κ. Γιώργος Μαλέκκος και η Εσωτερική Επιτροπή Ελέγχου Ποιότητας του κολλεγίου είναι υπεύθυνοι για την διασφάλιση της ποιότητας του προγράμματος και τον έλεγχο για την αποτελεσματικότητα της διδασκαλίας (βλ.Σελ.415).

Σας επισυνάπτουμε την αίτηση μαζί με τις διορθώσεις και τις προσαρμογές υπογραμμισμένες με κίτρινο χρώμα που αφορούν στο Πρόγραμμα «Diploma in Mobile and Web Application Development» (2 Years, plus an Optional Foundation Year Diploma), με βάση τις εισηγήσεις της Επιτροπής Εξωτερικής Αξιολόγησης.

Σας ευχαριστούμε για την επικοδομητική συνεργασία.

Με εκτίμηση,

Γεώργιος Κακούρης
Διευθυντής
Ledra College

**APPLICATION FOR EVALUATION – ACCREDITATION
- PROGRAM OF STUDY -**

Institution: Ledra College

District: Nicosia

Name of the Program of Study in Greek:

Δίπλωμα στην Ανάπτυξη Εφαρμογών Διαδικτύου και Κινητών

Name of the Program of Study in English:

Diploma in Mobile and Web Application Development

Department: Computer

Faculty:

Program Status (check where applicable):

- **New Program of Study:**
- Currently operation Program of Study:
 - Registered but not evaluated
 - Evaluated and accredited by SEKAP
 - Evaluated by the Cy.Q.A.A.and did not get accreditation

Which of the following applies to the program submitted? Complete or / and delete accordingly:

~~a) It operates without evaluation – accreditation and it had its first graduates in the
– Winter / Spring semester of the academic year~~

~~b) It operates without evaluation – accreditation and it will have its first graduates in the
Winter / Spring semester of the academic year~~

c) It is a new program of study and after its evaluation - accreditation, it is expected to operate
in the Winter / ~~Spring semester~~ of the academic year **2018**

Program Category (check ✓ where applicable):

- **Conventional** ✓
- Distance Learning
- Inter-university (Name of collaborating university/ies)

APPLICATION SUBMISSION CHECKLIST

For the effective processing of your application, it is confirmed that the following have been delivered/sent to the offices of CY.Q.A.A (check ✓ where applicable):

1. Cover letter
2. Copy of the receipt for the payment of the fees
3. Application in English and Greek in print (1 copy)
4. Application in English and Greek
in digital form (1CD)
5. Practical Training Guide
6. Submitting of Foundation Year (if it is offered)
7. Test for English language competency or set levels on the basis of international examinations
8. Submitting of two-year and three-year programs of study in the same discipline and with the same qualification (if the application concerns the evaluation of a bachelor's program) and one-year and two-year if the application concerns the evaluation of a three-year program

Program Coordinator (the coordinator's CV is included in the application with the CVs of the academic personnel)

Name: Panayiotis Vorkas

Signature:

Tel: 22514044

E-mail: vorkas@ledra.ac.cy

Date of Application Submission: 15/01/2018

**This Document is submitted on the basis of Article 17 of Laws 136(I)/2015 to 47
(I)/2016 for the evaluation of a program of study**

Note the following:

1. The Institution of Higher Education prepares and submits the application, in both Greek and English. The application (in five original copies) and cover letter, which should be submitted both in print and electronically, must be signed by the chief administrative officer of the institution.
2. The deadline for submitting applications, is published on the Agency's website according to the relevant provisions of the the "Quality Assurance and Accreditation of Higher Education and the Establishment and Operation of an Agency on Related Matters Laws of 2015 to 2016".
3. The institution is responsible to ensure that the application contains all required information and that the information is true and accurate.
4. The application must include the following information, as well any other additional information pertinent to the Criteria set by the Agency, in relation to programmatic evaluation:
 - 4.1 Name of the Institution
 - 4.2 Institution or branch of the Institution pertinent to this application
 - 4.3 Name of the program of study
 - 4.4 Final higher education qualification awarded
 - 4.5 Program type (academic / vocational)
 - 4.6 Duration of studies
 - 4.7 Program's purpose and objectives
 - 4.8 Intended learning outcomes
 - 4.9 Program's language of instruction
 - 4.10 Detailed curriculum, including the structure of the program, courses per semester and the content of each course analytically (in Greek or in English depending on the program's language of instruction)
 - 4.11 Student admission requirements
 - 4.12 Academic / teaching personnel and their qualifications

- 4.13 Program's courses and the academic / teaching personnel teaching each course for every year of studies
- 4.14 Research activities of the teaching personnel involved in the program and synergies between research and teaching
- 4.15 Address or addresses of the program's premises where the program is offered
- 4.16 Number and description of classrooms, laboratories, library, equipment and of any relevant infrastructure in general
- 4.17 Regulations and procedures for quality assurance for the program of study
- 4.18 Student welfare mechanisms, for monitoring the sufficiency of student support
- 4.19 Feasibility study, which must include, amongst others:
 - The proposed number of students
 - Graduates' employability prospects
- 4.20 Tuition and the management of the program's financial resources
- 4.21 Administrative structure of the institution's programs of study, including the program in the proper position (i.e. by indicating the School and the Department under which the program will operate, by noting whether the program is inter-institutional, inter-departmental, etc).
- 4.22 Name and contact information of the Program's Coordinator.

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GENERAL INSTRUCTIONS FOR COMPLETING THIS DOCUMENT

1. Since, it is not possible to pre-estimate the necessary space to enter information required, interested parties are requested to copy this document on their computers, along with the instructions included herewith, allowing the necessary space for every entry.
2. A separate application should be submitted for every program of study. If the same program of study is offered at the main premises of the institution, as well as at a branch of the institution, separate applications should be submitted.
3. As this application, when it becomes accepted, will be evaluated by an External Evaluation Committee, it should be submitted in five print copies and electronically.
4. Please insert all that is applicable or note “Not applicable” and explain the institution’s relevant policy on the particular standard or indicator.

A. PROGRAM'S GENERAL PROFILE

<p>1. Name of the Institution:</p> <p>LEDRA COLLEGE</p>
<p>2. Institution or branch of the Institution pertinent to this application:</p> <p>NICOSIA, CYPRUS</p>
<p>3. Name of program of study (See <i>Specific Instructions</i>):</p> <p>MOBILE AND WEB APPLICATION DEVELOPMENT (2 YEARS DIPLOMA, PLUS AN OPTIONAL FOUNDATION YEAR)</p>
<p>4. Final Higher Education Qualification (See <i>Specific Instructions</i>):</p> <p>DIPLOMA IN MOBILE AND WEB APPLICATION DEVELOPMENT</p>
<p>5. Type of the program of study (See <i>Specific Instructions</i>):</p> <p>CONVENTIONAL ACADEMIC PROGRAM</p>
<p>6. Duration of studies (See <i>Specific Instructions</i>):</p> <p>2 YEARS FULL TIME</p>

Note:

In order for this application to be valid, a copy of the receipt for the payment of the fees, provided by Law N. 136(I)/2015, should be attached to it and it should be submitted within the deadline specified by the relevant legislation.

B. PROGRAM'S CONTENT

1. Program's purpose and objectives:

Program's Purpose:

The Diploma in Mobile & Web application development provides students with the specialized knowledge that is needed for the development of advanced mobile and web applications. Students will learn about the languages and frameworks that are most commonly used in developing these applications, along with the design of user interfaces and web systems, and with associated topics such as networking, hosting infrastructure, and security. Furthermore, students will learn best practices in browser based and packaged apps, 3rd party native extensions, distribution to app stores, and cross platform application development. Furthermore, they will acquire specialized developer knowledge and the technical skill set needed to succeed as professional mobile and web app designers and developers.

2. Intended learning outcomes:

Students will be able to:

- Assess current and emerging technologies in areas such as mobile applications, web platforms, software systems, and cloud computing.
- Learn how to create applications for Android, iOS and other mobile platforms.
- Get a firm grasp of the technology prerequisites necessary for the development of such applications.
- Evaluate, select, and apply proper software design and development methodologies.
- Gain hands-on app development experience by utilising our specially designed application lab. Plan, evaluate, select, and apply appropriate systems and software quality assurance methods and tools.

3. Program's language of instruction:

English

4. Detailed curriculum, including the structure of the program, courses per semester, and the content of each course analytically (in Greek or in English depending on the program's language of instruction (*See Specific Instructions*):

5. Student admission requirements (See Specific Instructions):

- I. Both Cypriots and foreign male or female high school graduate students or those holding an equivalent certificate without prejudice or any distinction of their race, color, or religion can be registered at the college.
- II. The college accepts enrollment applications in the 1st Semester from Cypriot or foreign high school graduates.
- III. The college is interested in attracting high school graduates with good academic performance and who show a real desire for personal and professional success. Thus, before they can be officially registered as Ledra College students they will be attending a personal interview.
- IV. For enrollment or student transfer to any program of studies the knowledge of the English language is a prerequisite.
- V. Candidates who have obtained a score of at least 500 on the Test of English as a Foreign Language (TOEFL) or a passing grade of C or better on the G.C.E.O' Level in English or IELTS with score of 5.0 will be exempted from the English Placement Test. English to the level of the final year of a Cypriot six-year Secondary School, is a necessary requirement.
- VI. Those candidates whose native language is not English will have to take the **English Pearson Placement Test – (Success Upper Intermediate - Advanced Placement Test) which is internationally recognized.**
<http://pearsonpte.com/pearson-english-assessment-2/>

***Please refer to Appendix 3 – Placement Test**

- VII. Those students who will fail the placement test they should be enrolled at the Foundation year which includes the following classes:

Course Code	Course Title	Course type	LEDRA Credits
Semester 1: 2 modules both compulsory			
F-ENG 01	English Language 1	Core compulsory	0
F-ENG 02	English Language 2	Core compulsory	0
Semester 2: 3 modules, 1 compulsory & 2 electives			
F-ENG 03	English Language 3	Core compulsory	0
F-ENG 04	English for Business	Elective	0
F-MTH 01	Intermediate Algebra	Elective	0
F-MTH 02	Mathematics and Statistics for Computing	Elective	0
F-SLRI 01	Principles of Successful Learning and researching Information	Elective	0

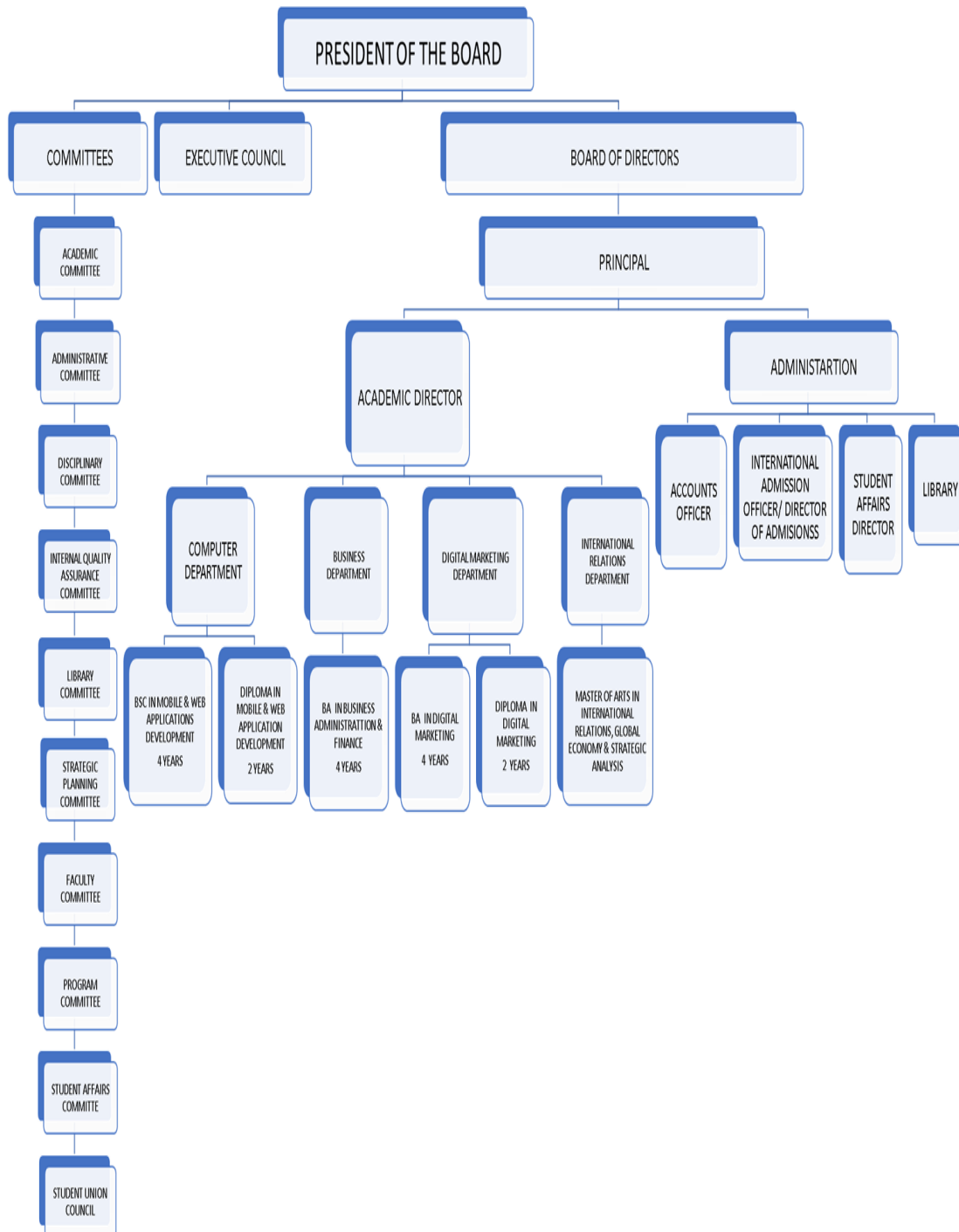
For the Foundation programme, there are two semesters of study. In the first semester, students would be studying and be assessed on one module – English Language. In the second semester, a full-time student would study and be assessed in three modules – advanced English language, and two elective subjects from our list of optional general education preparatory modules.

***For Foundation English course Pearsons material is used for lectures and exams which are internationally recognized. Further, our Foundation English course has been examined and accredited by DIPAE in accordance to the standards and guidelines provided by the European Network for Quality Assurance (ENQA).**

6. Academic / Teaching Personnel and their qualifications - their biographical notes should be attached (See *Specific Instructions*):

7. Program's courses and the Teaching Personnel teaching each course, for every year of studies (See *Specific Instructions*):

8. Administrative structure of the institution's programs of study, including the program in the proper position (i.e. by indicating the School and Department under which the program operates, by noting whether the program is inter-university, inter-departmental etc) (See Specific Instructions):



9. Regulations and Procedures for Quality Assurance for the program of study (See *Specific Instructions*):

Ledra College is dedicated in hiring and retaining faculty with strong credentials. Faculty performance will be evaluated according to the established policy of the College. Professionalism, integrity and excellence in teaching and/or research are the main goals of the College. The faculty appraisal scheme aims at improving and preserving these qualities.

The College is committed in providing support to its faculty members in order to pursue their development goals and objectives. The College considers participation in scholarly and creative work to be part of a faculty member's commitment. These activities are perceived to be an essential part of personal growth and of preparation for teaching at the College. Publication, presentation, or performance, as appropriate, is seen as a natural and desired outgrowth of this scholarly and creative work.

The annual faculty performance appraisal is based initially on a self-assessment of two key areas: teaching effectiveness and scholarly and professional activity. A peer faculty member reviews classroom evaluation annually. The Program Coordinator reviews annually each faculty. The faculty performance appraisal process includes the student evaluation analysis and the peer class observation. This review is discussed with the faculty member, and both the faculty member and the Program Coordinator sign the form.

The academic director appraises program Coordinators through the same process.

All faculty members shall be evaluated every semester for every different course taught, using an approved Student Evaluation Form. Student evaluations are an integral part of the faculty performance appraisal process.

The evaluation is administered before the end of the semester, after the middle of the term. If a faculty member believes that there are mitigating circumstances that may affect the outcome of the evaluation, he/she may file a petition to the academic director.

The College recognizes that student evaluations are important indicators of teaching effectiveness, but numerical scores from these evaluations alone neither confirm nor deny an individual's effectiveness. Therefore, the Academic Director may additionally consider trends over different semesters, or different courses over the same semester.

All faculty members have a responsibility to advise students. Faculty should be available on a regular basis for consultation with students and thus need to be aware of relevant academic and procedural matters.

All students are assigned to faculty advisors. Advisors are expected to assist students in planning their academic work. Advisors are frequently the students' initial contact with college academic procedures. They should acquaint themselves with their advisee's academic interests and achievements to give appropriate guidance. For each program, arrangements are made during registration and faculty post their office hours for advising during those periods.

All those employed by the College must comply with lawful instructions and regulations of the College. The College code of conduct and ethics established guidelines for professional conduct by those acting on behalf of the College including executive officers, faculty, personnel, (including volunteers and representatives acting on behalf of the College). Every complaint with regard to conduct or harassment will be investigated by the Principal.

Those acting on behalf of the College have a general duty to conduct themselves in a manner that will maintain and strengthen the public's trust and confidence in the integrity of the College and refrain from taking actions which are incompatible with their obligations to the College.

With regards to professional conduct, those acting on behalf of the College should:

- I. Act with integrity by maintaining an ongoing dedication to honesty and responsibility
- II. Be trustworthy by acting in a reliable and dependable manner
- III. Treat others impartially
- IV. Treat others with civility and decency
- V. Be responsible for the College's property and resources
- VI. Be compliant to the laws and regulations of the Republic of Cyprus and the College's policies related to their duties and responsibilities
- VII. Treat all information as confidential while protecting the integrity and security of College information such as students' records, employee files, records, and all relevant college documents.

The College's code of conduct and ethics guidelines, do not tolerate sexual harassment of students, faculty or personnel. Such behavior includes unwelcome sexual advances; requests for sexual favors. And other verbal or physical conduct when:

- I. Submission to such conduct is made either explicitly or implicitly
- II. Submission to or rejection of such conduct by an individual is used as the basis for academic decisions or performance or creating and intimidating, hostile, or offensive learning or working environment.

The College's policy prohibits discrimination on the grounds of race/national/ethnic origin, color religion, age, gender, sexual orientation, marital status, childbirth/pregnancy, disability, class, political, conviction or affiliation, and trade union membership/activity. The Principal will investigate any form of possible discrimination.

Dismissal of a full-time faculty member can be decided upon by the College for reasons such as:

- Inadequate performance, inefficiency, incapacity.
- Appraisals related to the performance of the faculty member are to be carried out by the appropriate Program Coordinator/Academic Director.

***The Handbooks bellow will be handed upon request:**

1. Quality Assurance Handbook
2. Student Handbook
3. Faculty Handbook
4. Library Handbook
5. Academic Handbook
6. Bullying and Harassment Policy

10. Research Activities of the teaching personnel involved in the program and synergies between research and teaching:

The academic staff is continuously involved in research activities both individually as well as in collaboration with other colleagues as well as students mainly in relation to their final thesis.

11. Feasibility study which must, include, amongst others:

- **The proposed number of students**
- **Graduates' employability prospects**

- I. We expect to register 16 students in the first intake and 16 students in each subsequent semester, due to the immense growth of Mobile and Web Application Development field in combination to the excellent work opportunities arising in the EU.
- II. Mobile and web application development is one of the most demanded and fastest growing career fields in the world. As mobile devices continue to change the way we do business, communicate, and access news & entertainment, the demand for new and innovative mobile applications is growing at breakneck speeds. This increased demand translates to one of the largest skills gaps ever realized – there are simply more mobile development jobs than skilled and qualified developers to fill them.

Careers:

Our graduates can be employed as: Mobile systems developers, Mobile applications developers, Mobile applications engineers, Web application developers, Mobile software developers, Android developers, iOS developers and many more.

Moreover, it has been assigned a professional collaboration between Ledra College and PowerSoft which promotes students internship and PowerSoft involvement in student projects*.

***For further information upon the collaboration between Ledra College and PowerSoft please refer to Appendix 6.**

Financial forecast for Mobile & Web Application Development Diploma Course.

	Year 1 2017-2018	Year 2 2018-2019	Year 3 2019-2020
Income			
<i>Tuition Income</i>	76.000	152.000	152.000
Total Income	76.000	152.000	152.000
Expenditure			
<i>Teaching staff Costs</i>	16.640	33.280	33.280
<i>Teaching contingency (20%)</i>	3.328	6.656	6.656
<i>Administrative & other costs as percentage of total expenditure</i>	18.000	18.000	18.000
Total Expenditure	37.968	57.936	57.936
Net Income/ Surplus	38.032	94.064	94.064

12. Student welfare mechanisms for monitoring the sufficiency of student support

Ledra College, places a strong emphasis on the overall academic experience of students. To make sure that students have all the necessary means to complete their studies successfully we provide a series of Student Services. Upon registration, students are assigned an Academic Advisor who is also a member of the faculty. The academic advisor is responsible for responding to queries and concerns of the student and monitoring their progress. In addition, all members of faculty are available during office hours to provide further guidance to the students in areas pertinent to their expertise and research interests. In matters concerning academic processes and regulations, concerns and questions may be addressed by the Head of the Department in collaboration with the members of faculty and the students.

Further on, students are encouraged to participate in a variety of social functions organized by the college with a focus on cultural aspects of life in Cyprus. What is more, academic events and presentations also providing an excellent opportunity for students to meet with prominent members of the community and become informed about current trends in the field of Mobile and Web Application Development.

13. Address or addresses of the program's premises

13, Lankada,
2023
Stovolos-Nicosia
Cyprus

14. Number and Description of classrooms, laboratories, library, equipment and of any relevant infrastructure in general (See Specific Instructions)

The College campus is providing the following facilities:

- a) **Seven (7) lecture rooms with total capacity for 300 students:** The lecture rooms are bright and spacious. They are fully equipped with large whiteboards, PC's and projectors to facilitate the lectures. The rooms are available to the students for the presentation of their projects.
- b) **Administration offices:** The administration offices are located on the first floor of the building and are equipped with all the necessary facilities such as personal computers, laser printers, photocopy machines, scanners, fax machine etc.
- c) **Staff offices, copier room for staff, Registrar Office, International Office.**
- d) **Reception:** Always willing to help and assist students in any major problem. Next to it is the office of the College Secretary and the office of the Administrative Director which deals with the registry and inquires.
- e) **Computer Lab:** The lab continuously provides the best computing facilities for students as it consists of 16 Fujitsu Esprimo E910 fully incorporated into the College Network and featuring full Internet access and all the software needed for an effective and productive teaching. *
- f) **Server Proliant:** The following server is used in the school for the File Sharing (Active Directory). There is also the VirtualBox that is used for the workshops of the school where there is installed operating Linux as well as older versions of windows in order to meet the requirements of Digital Marketing and Mobile and Web Application Development.
- g) **HPE Proliant ML10 Server 838124-425 + Windows Server 2012 R2**
 - CPU: Intel Xeon E3-1225v5 (3.3GHz/4-core/80W) Processor Kit
 - Memory: 1 x HPE 8GB Single Rank x8 PC4-17000P-E (DDR-2133) Unbuffered CAS-15 Standard Memory Kit
 - HDD: 2x HP 1TB 6G 7.2k rpm SATA (3.5in) Non-Hot Plug MDL HDD 1yr Warranty (up to 4 NHP LFF SATA)
 - Power supply: 1 x HPE 300W Multi-Output Power Supply Kit
 - Optical Drives: HP 9.5mm SATA DVD-RW JackBlack Gen9 Optical Drive
 - LAN: Intel Ethernet Connection I219-LM
 - Interfaces: 2x display port, 1 Network RJ-45, 4x USB 3.0, 3x USB 2.0
 - Storage Controller: Intel RST controller (RAID 0/1/1+0/5) SATA Only
 - VirtualBox: Windows 7, MAC OSX

- h) **Library:** The library is fully equipped with 6 x Lenovo Ideapad G50-80, Intel Pentium i3 500U5 (2.0 GHz) 4GB RAM/500GB, Intel HD Graphics, 802.11b/g/n Wireless LAN, Windows 7 Professional x64,
- i) **Printers:** 1 Samsung LASER Colour Printer, 1 HP Scanjet 2400 colour scanner and 1 Ricoh CL7000 LASER Colour Printer, 1 Ricoh CL7000 LASER Colour Printer, 3 Epson LASER Colour Printers, 1 Epson Photo stylus A4 colour ink-jet printer, 1 Aficio DSM 725 photocopier, 1 Photocopier Machine and 1 Spiral Binding Machine.
- j) **Cafeteria:** A student cafeteria is available on the second floor of the college and is open during regular College hours.

***For further information please refer to the attached Appendices- Appendix 6: Lab Program's Requirements.**

15. Tuition and Management of the Program's Financial Resources

Tuition Fees for Year 1: € 4, 750.00

Tuition Fees for Year 2: € 4, 750.00

16. Name and contact information of the Program's Coordinator (See *Specific Instructions*):

Panayiotis Vorkas

Tel. 22514044

Fax. 22879250

E-mail: vorkas@ledra.ac.cy

C. APPLICATION INFORMATION

Payment of Fees According to the Law:

Receipt Number:

Date on the Receipt:

Chief Person in Charge of the Institution According to the Law:

.....

Signature of the Chief Person in Charge of the Institution According to the Law:

.....

Institution's Representative (in the case of a company):

.....

Institution Representative's signature (in the case of a company):

.....

Date of Application:

D. SPECIFIC INSTRUCTIONS FOR COMPLETING THE DOCUMENT

A.3 Name of the program of study:

Mobile and Web Application Development (2 years, Plus an Optional Foundation Year / 120 ECTS, Diploma).

A.4 Final Higher Education Qualification:

Diploma in Mobile and Web Application Development



has been awarded the

Diploma in
Mobile & Web Applications Development

After having successfully completed at Ledra College-Nicosia

a two year programme of study registered as
Mobile & Web Applications Development
(2 Years, Diploma)

Qualifications Register Serial No:
Students Register Serial:

Principal

Head of Department

Registrar

Date of Issue:

Note: A transcript of academic record has been issued separately

A.5 Type of the Program of Study:

- Conventional Academic Program
- The college considers the program of Mobile and Web Application Development as academic.

A.6 Duration of Studies:

- 2 Years Program.
- 120 ECTS

SEMESTER	ECTS
1 st Semester	30
2 nd Semester	30
3 rd Semester	30
4 th Semester	30

B.4 Detailed curriculum, including the structure of the program, courses per semester, and the content of each course analytically (in Greek and in English depending on the program’s language of instruction:

- Structure of the program of study (Table 1)
- Distribution of courses per semester (Table 2)
- Complete list of compulsory courses and elective courses (Annex 1)
- Course description (Annex 2)

Student admission requirements

The student entry requirements at Ledra College are examined by the Academic Committee. These have been established in order to determine whether students can, depending on their qualifications, be placed in the relevant programs for which they have expressed interest in successfully pursuing their academic goals. Every student must be a graduate of a secondary school of at least six years of study or an equivalent qualification. Admission of new students takes place three times a year. During September-October for the Winter semester of study (A) and January-February for the Spring semester of study (B) and June for the Summer Semester.

Candidates must meet one of the following criteria:

1. Graduation certificate of the Secondary Education School of the Republic of Cyprus.
2. A 12-year certificate with satisfactory performance (15/20) or equivalent for foreigners depending on their country of origin.
3. Any other certificate or qualification judged by the Academic Committee to be equivalent to a secondary school leaving certificate.
4. Equivalent to the above shall be examined and documented by the Academic Committee provided that they are equivalent to a secondary school leaving certificate.
5. If a student does not have the appropriate level to follow a branch then he / she may be allowed to join the preparatory year of study.

Proof of Knowledge of the English Language

The language of teaching at Ledra College is English. A candidate whose mother tongue is not English may be required to produce evidence of written and oral knowledge in English such as TOEFL with a grade of at least 500 or G.C.E O' Level or other equivalent certificate or IELTS with score of 6.0.

In the case of Cypriot students, the high school diploma is considered to be a satisfactory qualification only if the degree held by the student in the English language is (16/20). If his/her grade is between 14-15 / 20, then he / she will be required to attend the English language course offered and taught in the field of study for which he / she has expressed interest.

Foreign Students

In the case of foreign students, a Residence Permit will be issued to foreign students once they meet the admission criteria. All the necessary registration forms must be enclosed in a dossier and sent to the Admissions Office at least one month before the beginning of the semester.

Candidates holding other academic qualifications must produce certified copies of their academic qualifications. If the academic qualifications are not in English, they must be accompanied by an official or certified translation into English.

The Application Form must be accompanied by the amount of €150 as an entitlement and which is non-refundable.

Candidates whose mother tongue is not English will have to undertake an English exam. For candidates holding an English language qualification, namely holders of TOEFL with a minimum of 500 or a Grade C or holders of G.C.E. O' Level or IELTS with score of 5.0 will be excluded from the written examination.

Candidate foreign students should hold an apolytirion with a general grade of at least 50/100 and an English degree of at least 50/100. The term "equivalent examination" also includes the attendance of at least one year in an English-speaking higher education program in the country of origin of the foreign student. Students who meet the above criteria are not eligible to enroll in foundation courses.

It should also be noted that the UCAS International Qualification Guide is used to match the courses and grades required by foreign students.

<https://www.ucas.com/sites/default/files/2015-international-qualifications.pdf>

Transfer students from other institutions to the school

Students wishing to transfer from one branch to another must submit to the Admission office the following documents:

- 1) A transfer request.
- 2) Official and complete academic transcription.

Transferred credits can only be accepted if they have a 'Pass' mark degree.

Transfer students from one branch of the faculty to another.

Students attending another Higher Education Institution who wish to move to a related or same field at Ledra College must present to the Admissions Office the following documents:

- 1) A transfer request.
- 2) Official and complete academic transcription.
- 3) Official description of the subjects he/she attended in High School.
- 4) In the case of foreign students, the Migration Office needs to approve their decision of transferring.

Transferred credits may be accepted by Ledra College only if they have at least a "Pass" mark in their degree. Student transfer must cover at least one year of study. If the language of teaching in the institution where the student was attending was not the English language, then the student should provide evidence of knowledge of the English language. The college also has the option of asking the student to take an exam so as to ascertain the student's ability to attend classes in the field he/she is requesting to carry.

Each case of transfer from other institutions to the school is accorded a similar treatment depending on the institution from which the student comes, as well as on the grades he will present to the Academic Council.

B.6 Academic / Teaching Personnel and their qualifications - their biographical notes should be attached

[Instructions: Provide a short description (10 lines) and a biographical note (Annex 3), for every member of the academic / teaching personnel.]

B.7 Program's courses and the teaching personnel teaching each course, for every year of studies

[Instructions: Provide the teaching personnel teaching each course and their corresponding teaching periods per week (Table 3). If the members of the teaching personnel teach, additionally, in other programs, provide their total number of teaching periods, per week, for every program of study (Table 4).]

[Instructions: Designate the Coordinator.]

B.8 Administrative structure of the institution's programs of study, including the program in the proper position (ie by indicating the School and Department under which the program operates, by noting whether the program is inter-university, inter-departmental etc)

B.9 Regulations and procedures for quality assurance for the program of study

[Instructions: Provide information regarding the procedures for the approval, operation, review, and internal evaluation for the program of study.]

B.14 Number and Description of classrooms, laboratories, library, equipment and of any relevant infrastructure in general.

[Instructions: Provide detailed information regarding the infrastructure which supports the program of study (Annex 4).]

B.16 Name and contact information of the Program's Coordinator

- Mr. Panayiotis Vorkas
- Tel. 22514044, Fax. 22879250, E-mail: vorkas@ledra.ac.cy

Qualifications:

- BSc in Information Technology Engineering.
- MSc in Information Communication Technology.
- CISCO Certified Network Associate (Routing and Switching).
- CISCO Instructor.
- Privacy & Data Protection Practitioner (GDPR)
- Microtik Certified Network Associate

E. TABLE 1: STRUCTURE OF THE PROGRAM OF STUDY

PROGRAM REQUIREMENTS	ECTS
Compulsory courses& Elective Courses	90
Elective courses (α) Courses of specialization (β) General Education courses / Free Electives	30
Undergraduate / Postgraduate Assignment	None
Practical training	None
Total ECTS	120

TABLE 2: COURSE DISTRIBUTION PER SEMESTER

A/A	Course Type	Course Name	Course Code	Periods per week	Period duration	Number of weeks/ Academic semester	Total periods/ Academic semester	Number of ECTS
A' Semester								
1.	Compulsory	Introduction to Databases	MW101	4	55'	13	52	7.5
2.	Compulsory	Introductory Programming	CSC101	4	55'	13	52	7.5
3.	Compulsory	Introduction to Web Application Development	MW102	4	55'	13	52	7.5
4.	Elective	Please select one elective module		4	55'	13	52	7.5
B' Semester								
1.	Compulsory	Mobile Application Development	MW207	4	55'	13	52	7.5
2.	Compulsory	Intermediate Programming	CSC102	4	55'	13	52	7.5
3.	Compulsory	HTML5 and CSS3	MW201	4	55'	13	52	7.5
4.	Elective	Please select one elective module		4	55'	13	52	7.5

C' Semester								
1.	Compulsory	Fundamentals of Web Design and Applications for Social Media	DM204	4	55'	13	52	7.5
2.	Compulsory	Intermediate Web Application Development	MW202	4	55'	13	52	7.5
3.	Compulsory	Software Engineering Principles & Techniques	CSC202	4	55'	13	52	7.5
4.	Elective	Please select one elective module		4	55'	13	52	7.5
D' Semester								
1.	Compulsory	IOS Mobile Application Development	MW407	4	55'	13	52	7.5
2.	Compulsory	Mobile Computing Systems	CSC401	4	55'	13	52	7.5
3.	Compulsory	Advanced Web Development	MW304	4	55'	13	52	7.5
4.	Elective	Please select one elective module		4	55'	13	52	7.5



	List of Elective Courses
1.	DM 206: Content Development for Social Media and Search Engine Optimization
2.	DM 101: Social Media Marketing Management
3.	CYB103: Introduction to Networks
4.	DM 203: Web Analytics, Data Mining and key Performance Indicators for Social Media
5.	DM102: Modern PR & Mobile Advertising
6.	MW405: Project Management
7.	MW302: Cloud Computing
8.	CYB201: Foundations Cyber Security
9.	MW404: Mobile Applications Security

TABLE 3: TEACHING PERSONNEL, COURSES AND TEACHING PERIODS IN THE PROGRAM OF STUDY

A/A	Name and Surname	Discipline / Specialization	Teaching courses in the program of study under evaluation		
			Code	Course title (Diploma in Mobile and Web Application Development)	Periods/ week
1.	Panayiotis Vorkas	BSc in Information Technology Engineering. MSc in Information Communication Technology. CISCO Certified Network Associate (Routing and Switching). CISCO Instructor. Privacy & Data Protection Practitioner(GDPR) Microtik Certified Network Associate	MW201 CYB201 MW304 DM206	HTML5 & CSS3 Foundations of Cyber Security Advanced Web Development Content Development for Social Media and Search Engine Optimization.	4 4 4 4

2.	Vasiliki Moti	BA in Journalism. MA in Media and Public Relations. CIPR Diploma in Public Relations. PhD Candidate in Media and Communication.	DM102	Modern Public Relations and Mobile Advertising.	4
3.	Anastasia Kalli	BSc in Computer Engineering and Communications. PGD in Management.	CYB103 MW101 DM204 MW102	Introduction to Networks Introduction to Database Fundamentals of Web design and Applications for Social Media Introduction to Web Application Development	4 4 4 4
4.	Alexis Marcou	BSc in Ethical Hacking and Network Security. MSc in Computer and Communications Engineering. MPhil in Computing Design Routing Protocol in Wireless Ad Hoc Networks for QoS.	MW302 MW404 MW207 CSC401	Cloud Computing Mobile Applications Security Mobile Application Development Mobile Computing Systems	4 4 4 4

5.	Giorgos Malekkos	BSc in Computer Science.	MW407 MW405	iOS Mobile Application Development Project Management	4 4
6.	Giorgos Georgiou	BSc in Computer Science. MSc in Computer Networking.	CSC102 CSC101 MW202 CSC202	Intermediate Programming Introductory Programming Intermediate Web Application Development Software Engineering Principles and Techniques	4 4 4 4
7.	Marina Kozanidi	BA in European Studies and Modern Languages. MA in Applied Translation Studies.	F-ENG 01 F-ENG02 F-ENG03	English Language 1 English Language 2 English Language 3	4 4 4
8.	Demetrios Melides	BA in Greek Philology. BA in Computing. MA in Digital Media and Communications.	DM101 DM203	Social Media Marketing Management Web Analytics, Data Mining and Key Performance Indicators for Social Media	4 4

TABLE 4: TEACHING PERSONNEL, QUALIFICATIONS, AND TOTAL TEACHING PERIODS

A/A	Name and Surname	Qualifications	Rank*	FT/PT* *	Program of Study	Periods / week	Total periods /week
1.	Vasiliki Moti	BA in Journalism. MA in Media and Public Relations. CIPR Diploma in Public Relations. PhD Candidate in Media and Communication.	L	FT	Digital Marketing Mobile & Web Application Development	16	16
2.	Panayiotis Vorkas	BSc in Information Technology Engineering. MSc in Information Communication Technology. CISCO Certified Network Associate (Routing and Switching). CISCO Instructor. Privacy & Data Protection Practitioner (GDPR) Microtik Certified Network Associate.	L	FT	Digital Marketing Mobile & Web Application Development	16	16

3.	Giorgos Georgiou	BSc in Computer Science. MSc in Computer Networking.	L	FT	Digital Marketing Mobile & Web Application Development	16	16
4.	Anastasia Kalli	BSc in Computer Engineering and Communications. PGD in Management.	L	FT	Digital Marketing Mobile & Web Application Development	16	16
5.	Demetrios Melides	BA in Greek Philology BA in Computing MA in Digital Media and Communications	L	FT	Digital Marketing	16	16
6.	Alexis Marcou	BSc in Ethical Hacking and Network Security. MSc in Computer and Communications Engineering. MPhil in Computing Design Routing Protocol in Wireless Ad Hoc Networks for QoS.	L	FT	Mobile & Web Application Development	16	16

7.	Giorgos Malekkos	BSc in Computer Science.	L	PT	Mobile & Web Application Development	8	8
8.	Marina Kozanidi	BA in European Studies and Modern Languages. MA in Applied Translation Studies.	L	FT	Foundation	19	19

* Rank: Professor (P), Associate Professor (Assoc. P), Assistant Professor (Assis. P), Lecturer (L), Special Teaching Personnel (STP), Visiting Professor (Vis. P), Special Scientist (SS), Lab Assistant (LA)

** Full Time (FT), Part Time (PT)

F. ANNEXES

ANNEX 1 – LIST OF COMPULSORY COURSES AND ELECTIVE COURSES

Semester 1	Weekly Hours	Credits
MW101: Introduction to Databases	4	7.5
CSC101: Introductory Programming	4	7.5
MW102: Introduction to Web Application Development	4	7.5
Please select one elective module	4	7.5
Semester 2		
MW207: Mobile Application Development	4	7.5
CSC102: Intermediate Programming	4	7.5
MW201: HTML5 and CSS3	4	7.5
Please select one elective module	4	7.5
Semester 3		
DM204: Fundamentals of Web Design and Applications for Social Media	4	7.5
MW202: Intermediate Web Application Development	4	7.5
CSC202: Software Engineering Principles & Techniques	4	7.5
Please select one elective module	4	7.5
Semester 4		
MW407: iOS Mobile Application Development	4	7.5
CSC401: Mobile Computing Systems	4	7.5
MW304: Advanced Web Development	4	7.5
Please select one elective module	4	7.5

	List of Elective Courses
1.	DM 206: Content Development for Social Media and Search Engine Optimization
2.	DM 101: Social Media Marketing Management
3.	CYB103: Introduction to Networks
4.	DM 203: Web Analytics, Data Mining and key Performance Indicators for Social Media
5.	DM102: Modern PR & Mobile Advertising
6.	MW405: Project management
7.	MW302: Cloud Computing
8.	CYB201: Foundations Cyber Security
9.	MW404: Mobile Applications Security

ANNEX 2 –COURSE DESCRIPTION

Course Title	English Language 1 - Pearson Material Taught ACCREDITED				
Course Code	F-ENG 01				
Course Type	Compulsory				
Level	Foundation				
Year/ Semester	1st / 1st				
Lecturer's Name	Marina Kozanidi				
E-mail:	marina@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Tue 11:00 – 13:00, Wed 11:00 - 15:00 & Thu 13:00 – 15:00				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	0	Lectures/Week	25	Laboratories / week	None
Course Purpose and Objectives	The course is designed to develop the effective and appropriate use of English for the purpose of both oral and written communication.				
Learning Outcomes	Students will be able to write a small narrative or descriptive essay of 150-200 words. Students will be familiar with the basic structures of English grammar and gain a good knowledge of intermediate level vocabulary.				
Prerequisites	0	Required		0	
Course Content	Reported Speech, Unreal Past, Causative form, Gerund, Prepositions, correlative conjunctions, special forms of nouns.				
Teaching Methodology	Lectures, in class exercises. Pearson Material Taught http://pearsonpte.com/				
Bibliography	Total English by Pearson Longman.				
Assessment Methods	10%Class attendance and participation, 30% Midterm, 60% Final Exams.				
Language	English				

Course Title	English Language 2 - Pearson Material Taught ACCREDITED				
Course Code	F-ENG 02				
Course Type	Compulsory				
Level	Foundation				
Year/ Semester	1st / 2nd				
Lecturer's Name	Marina Kozanidi				
E-mail:	marina@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Tue 11:00 – 13:00, Wed 11:00 - 15:00 & Thu 13:00 – 15:00				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	0	Lectures/Week	25	Laboratories / week	None
Course Purpose and Objectives	Students are expected to be familiar with most of the grammatical and syntactical structures used in English. What is more, students are also expected to write a descriptive, narrative, argumentative, or reflective essay. Students are also expected to answer comprehension questions and grammatical structure and style questions.				
Learning Outcomes	Students will be able to write a small narrative or descriptive essay of 150-200 words. Students will be familiar with more advanced structures of English grammar and gain a good knowledge of intermediate level vocabulary as well as become confident in conversational English for a variety of settings.				
Prerequisites	0	Required	0		
Course Content	Inversion, clauses of purpose, clauses of reason, clauses of result, special verbs. Perfect infinitive, concord, phrasal verbs, easily confused words.				
Teaching Methodology	Lectures, in class exercises. Pearson Material Taught http://pearsonpte.com/				
Bibliography	Total English by Pearson Longman.				
Assessment Methods	10%Class attendance and participation, 30% Midterm, 60% Final Exams.				
Language	English				

Course Title	English Language 3 - Pearson Material Taught ACCREDITED				
Course Code	F-ENG 03				
Course Type	Compulsory				
Level	Foundation				
Year/ Semester	1st / 2nd				
Lecturer's Name	Marina Kozanidi				
E-mail:	marina@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Tue 11:00 – 13:00, Wed 11:00 - 15:00 & Thu 13:00 – 15:00				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	0	Lectures/Week	25	Laboratories / week	None
Course Purpose and Objectives	The course is designed to develop the effective and appropriate use of English for the purpose of both oral and written communication.				
Learning Outcomes	Advanced knowledge of the English language, extensive use of idioms and advanced vocabulary. 200-250 word argumentative, reflective, or imaginary essay. Students will also be able to deliver oral presentations and debate issues effectively.				
Prerequisites	0	Required		0	
Course Content	Idioms, synonyms, antonyms, phrasal verbs, derivatives.				
Teaching Methodology	Lectures, in class exercises. Successful Writing – Intermediate by Pearson Longman Pearson Material Taught http://pearsonpte.com/				
Bibliography	Total English by Pearson Longman				
Assessment Methods	10%Class attendance and participation, 30% Midterm, 60% Final Exams.				
Language	English				

Course Title	Introduction to Databases				
Course Code	MW101				
Course Type	Compulsory				
Level	Diploma				
Year / Semester	1st / 1st				
Lecturer's Name	Anastasia Kalli				
E-mail:	anastasia@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 15:00 – 18:00, Tue 13:00 – 14:30, Wed 11:00 - 14:30 & Thu 13:00 – 14:30.				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	To introduce students to fundamentals of database technology by studying databases from three viewpoints: those of the database user, the database designer, and the database administrator. It teaches the use of a database management system (DBMS) by treating it as a black box, focusing only on its functionality and its interfaces. In addition, the course includes extensive coverage of the relational model, relational algebra, and SQL, and relational design principles based on dependencies and normal forms.				
Learning Outcomes	<p>After the successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> • Use SQL to create and modify tables in DB2 databases • Work in groups or individually to design and create a DB2 database for an application • Merge normalized relations from each user view into a complete set of normalized relations for a simple business application • Prepare an Entity Relationship Diagram for a simple business application • Use SQL to retrieve data from DB2 databases • Prepare the physical relational database schema for a simple business application • Identify user views for an application • Normalize a user view to 3rd Normal Form • Describe the basic differences between relational, hierarchical and network databases • Describe the basic functions of a Database Management System • Describe the responsibilities of a Database Administrator in an organization 				

Prerequisites	None	Required	None
Course Content	<p><u>Weeks:</u></p> <p>Week 1</p> <p>Slot 1: Lecture 1 – Introduction to Databases (2 hours Lecture + 4 hours recommended reading)</p> <p>This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course and help students to understand the concepts of databases and basic terms.</p> <p>Outline</p> <ul style="list-style-type: none"> • Description of the module outline • Overview of the course aims • Basic terms of databases <p>Intended Learning Outcomes</p> <p>At the end of this lecture students should be able to:</p> <ul style="list-style-type: none"> • Understand the aims of the course and learning outcomes • Understand the concept of databases • Understand the basics of databases <p>Slot 2: Lab practice (2 hours Lab practice + 4 hours recommended reading)</p> <p>This is a practical lecture in lab and it is based on the material taught from lecture1, practicing in the code from the examples in lecture notes and with exercises during the lab time.</p> <p>Week 2</p> <p>Slot 1: Lecture 2 – Database design (2 hours Lecture + 4 hours recommended reading)</p> <p>The aims of this lecture are: (1) consider the role of databases within the organization, (2) provide an appreciation of the rigorous methods that are needed to design, develop and maintain database systems, and (3) highlight current and emerging technologies in the topic of databases.</p> <p>Outline:</p> <ul style="list-style-type: none"> • Methods to design database systems. • Methods to maintain database systems. 		

- Database Development lifecycle

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Develop an understanding of databases and their role within organisations
- Apply database design concepts (for example, conceptual, logical and physical modelling) to a given scenario

Slot 2: Lab practice

(2 hours Lab practice + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture2, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 3

Slot 1: Lecture 3 – Data Modeling and the ER Model

(2 hours Lecture + 4 hours recommended reading)

The aim of this lecture is to provide an introduction to data modelling and the design and implementation of relational databases. Furthermore, to provide students with an introduction to and an overview of database systems including database design, Entity Relationship data modeling, the relational model of data.

Outline

- Roles of users of databases in the context of the three-level architecture model
- Conceptual Design: including ER and UML modelling
- Advantages and Disadvantages of various file access structures.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Use examples to explain the basic terminology of, and perform the operation associated with, sets, relations and functions.
- Prepare a relational schema from a conceptual model developed using the entity-relationship model.
- Describe the advantages and disadvantages of common data models and schemas for abstracting the details of data from users of the database.

- Identify and apply principles of conceptual design using ER and UML design methodologies.

Slot 2: Lab practice

(2 hours Lab practice + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture3, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 4:

Slot 1: Lecture 4: Relational Model and Relational Algebra

(2 hours Lecture + 4 hours recommended reading)

To enable students to gain an understanding of database systems, encourage the appropriate and efficient design and usage of database systems at the conceptual and logical level. To provide students a basic understanding of relational algebra and its mapping to SQL.

Outline:

- Relational Model
- Relational Algebra
- Different DBMS Environments

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- understand what is the relational model
- conceptualize data using the relational model.
- understand what basic relational algebra operators under set semantics.
- express queries using relational algebra.
- create tables using SQL DDL
- understand integrity constraints

Slot 2: Lab practice

(2 hours Lab practice + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture4, to provide students a basic understanding of relational algebra and its mapping to SQL.

Week 5

Slot 1: Lecture 5: Normalization

(2 hours Lecture + 4 hours recommended reading)

The aim of this lecture is to provide an introduction to data normalization and the normal forms 1NF, 2NF, 3NF. In addition, what role normalization plays in the database design process, how normal forms can be transformed from lower normal forms to higher normal forms.

Outline

- Need for Normalization
- Types of Dependencies
- First Normal Form
- Second Normal Form
- Third Normal Form
- Normalizing Tables

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understanding importance of normalization.
- Identifying dependencies from the given Table.
- Converting Tables into various normal forms.
- Evaluating Tables after normalization for correctness and lossless decomposition.
- Understanding some more dependencies.
- Learning with examples: how to normalize Tables.

Slot 2: Lab practice

(2 hours Lab practice + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 5 and solving exercises found in the lecture notes.

Week 6

Slot 1: Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Slot 2: Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exam)

Midterm Exams

Week 8

Lecture 8: Introduction to SQL

(2 hours Lecture + 4 hours recommended reading)

This course provides a solid foundation of the SQL programming language that enables students to build, query and manipulate databases.

Outline:

- Understand the basics of Relational Databases
- Write SQL code based to build and maintain database structures
- Update database content with SQL and transaction handling

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Creating and modifying tables, constraints and indexes
- Modifying table contents
- Retrieving data from tables
- Joining multiple tables
- Applying row and aggregate functions
- Embedding subqueries within statements

Lecture 2: Lab practice

(2 hours Lab practice + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture8, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 9

Slot 1: Lecture 9: Modelling Persistent Data

(2 hours Lecture + 4 hours recommended reading)

This module will provide a theoretical background in modelling persistent data using both relational databases and NoSQL systems. It will also introduce key concepts in information security.

Outline:

- Database and Information Security
- Relational Databases
- Not Only SQL (NoSQL)

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Design and validate a database from a given enterprise description, justifying design decisions.
- Implement a database design using a modern DBMS.
- Access a database through an appropriate programmatic interface.
- Explain and provide a rationale for relational, semi-structured and alternative data model concepts.
- Explain key principles of database and information security.

Slot 2: Lab practice

(2 hours Lab practice + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 9 and solving exercises found in the lecture notes.

Week 10

Lecture 1: Lab practice: Using DDL Statements to Create and Manage Tables

(2 hours Lecture + 4 hours recommended reading)

Practical test-Students will be given a practical test based on previous lecture notes.

Lecture 2: Lab practice: Manipulating Data Using DML

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the practical test from the previous slot, practicing in the test material and answering all students' questions.

Week 11

Lecture 1: Database Administration and Design

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide the theoretical insights and practical skills required to administer and maintain a secure database using tools and objects within a current industry-standard Relational Database Management System.

Outline

- Theory and implementation of database administration and object creation
- Theory and implementation of backup and recovery strategies

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the theoretical use of database administration tools.
- Outline the main aspects of a security strategy and backup strategy

Lecture 2: Lab practice

(2 hours Lab practice + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture11, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 12

Lecture 1: Data Administration Concepts and Database Administration

(2 hours Lecture + 4 hours recommended reading)

This module also aims to promote critical thinking to validate a database administration strategy and demonstrate that any strategy is heavily dependent upon the business context.

Outline

- Rebuild database
- database administration automation

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Identify, explain and implement the essential principles involved in importing legacy systems, and maintaining a secure database within a relational database management system.

Lecture 2: Lab practice

(2 hours Lab practice + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 12 practicing in the code from the examples in lecture notes and answering all students' questions based on the lecture material during the lab time.

Week 13

Lecture 1: Web Technology and DBMSs

(2 hours Lecture + 4 hours recommended reading)

This module will cover the basics of the Internet, Web, HTTP, HTML, URLs, and Web services. In addition, by the end of this course, students will have added to their understanding the advantages and disadvantages of the Web as a database platform.

Outline

- PHP/HTML
- Creating a Database Driven Website

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the skills necessary to create websites specifically designed to share research data over the web.

Slot 2: Lab practice

(2 hours Lab practice + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 13 and practicing in the code from the examples in lecture notes and answering all students' questions based on the lecture material during the lab time.

Week 14

Slot 1: Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Slot 2: Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

	<p>Week 15</p> <p>(2 hours exam)</p> <p>Final Examination</p>
Teaching Methodology	Lectures/Labs/Group discussions/Weekly Quizzes (Bookwidgets) /Flipped Teaching using online platform such as Moodle
Bibliography	<p>Core</p> <ul style="list-style-type: none"> Database Concepts, 7th Edition, Kroenke, Auer, Vandenberg & Yoder, Pearson Education, 2018. <p>Recommended</p> <ul style="list-style-type: none"> Database Systems: A Practical Approach to Design, Implementation, and Management, Global Edition by Thomas Connolly, Carolyn Begg, 6th Edition, Pearson Education, 2015.
Assessment Methods	Class Attendance & Participation, Quizzes, Project, Midterm, Final Exams.
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>
Weighting of Assessment	Class Attendance & Participation (10%), Weekly quizzes (5%), Project (15%) Mid-term (20%), Final Exams (50%).
Project Details and Assessment	<p>Students will be required to build a program during the practical test slot. Everything will be explained to them with a short presentation and the results will be checked on screen.</p> <p>The supportive justification of the practical test will be graded as follows: Effective use and reference to theory from the course: 30%</p>

	Strategic thinking and creative solutions: 20% Overall presentation: 40% Persuasion: 10%																				
Lectures / Hours per week	1 Lecture / 2 hours 1 Lab / 2 hours																				
Indicative learning and teaching time	<p>This module is delivered through lectures, lab practice, group discussions, and project.</p> <p><u>Teaching Hours:</u></p> <table> <tr> <td>Lectures</td> <td>30 Hours</td> </tr> <tr> <td>Labs</td> <td>26 Hours</td> </tr> <tr> <td>Mid-term Exam</td> <td>2 Hours</td> </tr> <tr> <td>Group Discussions</td> <td>8 Hours</td> </tr> <tr> <td>Final Exams</td> <td>2 Hours</td> </tr> <tr> <td colspan="2">Student Learning Time</td> </tr> <tr> <td>Student reading</td> <td>56 Hours</td> </tr> <tr> <td>Homework/ Projects</td> <td>44 Hours</td> </tr> <tr> <td colspan="2">Midterm and Final Exams Preparation 20 Hours</td> </tr> <tr> <td>Total:</td> <td>188 Hours</td> </tr> </table>	Lectures	30 Hours	Labs	26 Hours	Mid-term Exam	2 Hours	Group Discussions	8 Hours	Final Exams	2 Hours	Student Learning Time		Student reading	56 Hours	Homework/ Projects	44 Hours	Midterm and Final Exams Preparation 20 Hours		Total:	188 Hours
Lectures	30 Hours																				
Labs	26 Hours																				
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Group Discussions	8 Hours																				
Final Exams	2 Hours																				
Student Learning Time																					
Student reading	56 Hours																				
Homework/ Projects	44 Hours																				
Midterm and Final Exams Preparation 20 Hours																					
Total:	188 Hours																				
Language	English																				

Course Title	Introductory Programming				
Course Code	CSC101				
Course Type	Compulsory				
Level	Diploma				
Year / Semester	1st / 1st				
Lecturer's Name	Giorgos Georgiou				
E-mail:	george@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 15:00 – 18:00, Tue 13:00 – 14:30, Wed 11:00 - 14:30 & Thu 13:00 – 14:30.				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	To introduce students to computer programming. To present the fundamental concepts and terminology of software application development and encourage the development of skills in designing and writing simple computer programs. To provide an overview of the software development process in addition to introducing important programming constructs and methodologies. To build student knowledge in the areas of programming language characteristics, integrated development environments, flowcharts, algorithms and pseudo code, variables, operators, conditional statements, looping statements, procedures, error-handling and debugging.				
Learning Outcomes	<p>After the successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> • Describe a typical computer system and its critical components • Describe the software development process, its purpose, critical steps, and where programming fits in that process • Describe the purposes of programming and software development • Describe the evolution of common characteristics of, and differences among, modern programming languages • Define an integrated development environment • Describe the architectural aspects of a software application • Identify a problem that requires a programmed solution • Use common abstract methods to describe the solution concept • Implement variables • List and describe common operators • Implement conditional statements 				

	<ul style="list-style-type: none"> • Implement looping constructs • Implement procedures • Handle errors • Implement object-oriented programming techniques • Model an object-oriented program 		
Prerequisites	None	Required	None
Course Content	<p><u>Weeks:</u></p> <p>Week 1</p> <p>Lecture 1 - Introduction to programming</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>If you want to build applications for mobile devices, desktop computers, or the web, you need to know Java. This course provides the foundation for learning Java SE (Standard Edition), so you can build your first apps or start exploring the language on your own. Lecturer shows how to install Java and the IntelliJ IDEA IDE, and start working with variables, data types, keywords, and other critical language components. He also helps you control program flow with conditional logic and loops, store data with the Java Collections Framework, and understand how Java implements object-oriented coding principles such as inheritance and polymorphism.</p> <p>Outline</p> <ul style="list-style-type: none"> • Understanding the history and principles of Java • Installing Java, IntelliJ IDEA, and BlueJ • Creating a Java project <p>Intended Learning Outcomes</p> <p>At the end of this lecture students should be able to:</p> <ul style="list-style-type: none"> • Understand how java works • Be able to create a java project <p>Lecturer 2: Lab practice</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This is a practical lecture in lab and it is based on the material taught from lecture1, practicing in the code from the examples in lecture notes and solving exercises during the lab time.</p>		

Week 2

Lecture 2 - Overview of software development and phases in the execution of a computer program

(2 hours Lecture + 4 hours recommended reading)

Most modern programming languages, such as Java, C#, Ruby, and Python, are object-oriented languages, which help group individual bits of code into a complex and coherent application. However, object-orientation itself is not a language; it's simply a set of ideas and concepts. The lecturer introduces you to the terms—words like abstraction, inheritance, polymorphism, subclass—and guide you through defining your requirements and identifying use cases for your program.

Outline:

- Why use object-oriented design (OOD)?
- Pinpointing use cases, actors, and scenarios
- Identifying class responsibilities and relationships
- Creating class diagrams
- Using abstract classes
- Working with inheritance
- Understanding object-oriented design principles

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understanding OOP
- Creating use cases
- Creating scenarios
- Knowing inheritance
- Understanding OOP Principles

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture2, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 3

Slot 1: Lecture 3 – Java Fundamentals

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of language fundamentals. The Program Structures, syntax details, Datatypes, Variables, Constants Data Types & Type

Conversions Comments, Java expressions, Input/Output, Arithmetic/Relational Operators, Formatting Output etc

Outline:

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the program structure and syntax details
- Implement syntax rules in Java programs.
- Explain variables and data types used in program development.
- Apply arithmetic operations for displaying numeric output.
- Write and apply decision structures for determining different operations

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture3, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 4

Slot 1: Lecture 4: Object-Oriented Programming Concepts

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of object-oriented programming concepts. We will start with the objects. A review to classes will follow. Following we will see messages. Inheritance will follow.

Outline

- What are Objects?
- What are Classes?
- What are Messages?
- What is Inheritance?

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know what are objects
- Know what are classes
- Know what are messages
- Know what is inheritance

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture4, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 5

Slot 1: Lecture 5 - Java Objects & Classes

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of java objects. First we will start with the objects. Then we will see one example with 3 different parts. We will be analyzing these 3 examples to see, how we are creating objects, how we are instantiating a class, how we are initialing an object, how we are referencing an object's field and how we are calling an object's methods. On the last section of the lecture we will analyze the garbage collector.

Outline:

- Creating Objects
- Defining a class
- Coding example
- Creating objects
- Instantiating a class
- Initializing an object
- Referencing an object's field
- Calling an object's methods
- The garbage collector

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the objects
- Understand the coding examples
- Know how to create objects
- Know to instantiate a class
- Know to initialize an object
- Know to reference an object's field
- Know to call an object's methods
- Understand the garbage collector

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from

lecture4 & lecture 5, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 6

Slot 1: Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Slot 2: Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exam)

Midterm Exams

Week 8

Slot 1: Lecture 8 - More on Classes

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of more on classes. First, we will start with the returning values from methods. Following we will explain the “this” keyword. Following we will compare class vs. instance members. On the last section of the lecture we analyze access control.

Outline:

- Returning values from methods.
- The “this” keyword.
- Class vs. instance members.
- Access control.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know how to return values from methods.
- Understand the “this” keyword.
- Understand the comparison between classes vs. instance members.
- Access control.

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from

lecture8, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 9

Slot 1: Lecture 9 – Introduction to Inheritance

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of inheritance. We will start with an introduction to inheritance. Then we will analyze the shapes. Following we will review the abstract class modifier. Interesting methods modifiers comes next and a comparison of inheritance vs. composition will follow. Composition will be the next section of the lecture.

Outline

- Inheritance
- Shapes
- Abstract class modifier
- Interesting methods modifiers
- Inheritance vs. composition

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the inheritance
- Understand the shapes
- Understand the abstract class modifier
- Understand the interesting methods modifiers
- Understand the inheritance vs. composition comparison

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture9, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 10

Slot 1: Lecture 10 – Inheritance Part B

(2 hours Lecture + 4 hours recommended reading)

Comparison of inheritance vs. composition. After that we will see the implementation inheritance. On the last section of the lecture we will analyse the casting objects followed by the interface implementation.

Outline

- Composition
- Implementation inheritance
- Casting objects
- Interface implementation

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the composition
- Understand the implementation inheritance
- Understand the casting objects
- Understand the interface implementation

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture10, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 11

Slot 1: Lecture 11 - Exceptions

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of exceptions. First we will start with analyzing of what an exception is. We will carry on with the catch or specify requirement. Then we will analyze the three kinds of exceptions. Catching and handling exceptions will follow. The next thing we will see will be the try block followed by the catch blocks. On the last section of the lecture we will review the advantages of exceptions.

Outline

- What is an exception
- The Catch or Specify Requirement
- The Three Kinds of Exceptions
- Catching and Handling Exceptions
- The try Block
- The catch Blocks
- Advantages of Exceptions

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand what is an exception
- Understand the catch or specify requirement
- Understand the three kinds of exceptions
- Understand the catching and handling exceptions
- Understand the try block
- Understand the catch blocks
- Understand the advantages of Exceptions

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lectures, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 12

Slot 1: Lecture 12 - Basic IO & IO from the command line

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of basic IO & IO from the command line. We start with the I/O streams. Then we will analyze when we are using byte streams. Following we will review the character streams. Next section will be the line oriented I/O. Buffered streams will follow. The next section will be scanning and formatting. Then will analyze the standard streams followed by the console section. On the last section of the lecture we will analyze data streams.

Outline:

- I/O streams
- Using byte streams
- Character streams
- Line oriented I/O
- Buffered streams
- Scanning and formatting
- Standard streams
- The console
- Data streams

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the I/O streams
- Understand the byte streams
- Understand the character streams
- Understand the line oriented I/O
- Understand the buffered streams
- Understand the scanning and formatting
- Understand the standard streams
- Understand the console
- Understand the data streams

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture7, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 13

Preparation for the project

Slot 1: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from previews lectures, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from previews lectures, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 14

Slot 1: Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Slot 2: Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 15

(2 hours exam)

	Final Examination						
Teaching Methodology	Lectures/Lab/Group discussions/Weekly quizzes						
Bibliography	<p>Core</p> <ul style="list-style-type: none"> Bloch, J., 2008. Effective Java. 2nd ed. Addison-Wesley <p>Recommended</p> <ul style="list-style-type: none"> Ambler, S., 2004. <i>The Object Primer: Agile Model-Driven Development with UML 2.0</i>. 3rd ed. Cambridge University Press Fowler, M., 2003. <i>UML Distilled: A Brief Guide to the Standard Object Modeling Language</i>. 3rd ed. Addison-Wesley Professional http://java.sun.com 						
Assessment Methods	Class Attendance & Participation, Weekly quizzes, Mini-project, Midterm and Final Exams.						
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%. At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 20% in any unit they did not adequately attend. At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>						
Weighting of Assessment	Class Attendance & Participation (10%), Weekly quizzes (5%), Mini Project (10%) Mid-term (25%), Final Exams (50%).						
Lectures / Hours per week	<p>1 Lecture / 2 hours</p> <p>1 Lab / 2 hours</p>						
Indicative learning and teaching time	<p>This module is delivered through lectures, group discussions, and project.</p> <p>Teaching Hours:</p> <table> <tr> <td>Lectures</td> <td>28 Hours</td> </tr> <tr> <td>Labs</td> <td>26 Hours</td> </tr> <tr> <td>Mid-term Exam</td> <td>2 Hours</td> </tr> </table>	Lectures	28 Hours	Labs	26 Hours	Mid-term Exam	2 Hours
Lectures	28 Hours						
Labs	26 Hours						
Mid-term Exam	2 Hours						

	Group Discussions	8 Hours
	Final Exams	2 Hours
	<u>Student Learning Time</u>	
	Student reading	44 Hours
	Homework/ Projects	44 Hours
	Midterm and Final Exams Preparation	40 Hours

	Total:	188 Hours
Language	English	

Course Title	Introduction to Web Application Development ACCREDITED				
Course Code	MW102				
Course Type	Compulsory				
Level	Diploma				
Year / Semester	1st / 1st				
Lecturer's Name	Anastasia Kalli				
E-mail:	anastasia@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 15:00 – 18:00, Tue 13:00 – 14:30, Wed 11:00 - 14:30 & Thu 13:00 – 14:30				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	<p>This course focuses on building core competencies in web design and development. It begins with a complete immersion into HTML essentially XHTML and Dynamic HTML (DHTML). Students are exposed to Cascading Style Sheets (CSS), as well as Dynamic CSS. The fundamentals of JavaScript language including object-oriented JavaScript is covered comprehensively. AJAX with XML are covered, as they are the primary means to transfer data from client and server. Open source libraries such as Prototype, jQuery and Mootools might optionally be covered, as they assist in building cross-browser web applications rapidly and efficiently. Also, the PHP language will be presented and covered as well as other server-side languages such as ASP.NET, Java (JEE) and Ruby on Rails (RoR).</p>				
Learning Outcomes	<ul style="list-style-type: none"> • Understand web programming concepts. • Demonstrate client-side competency with knowledge of XHTML and CSS. • Develop web applications skills using software such as APTANA. • Create dynamic web pages with JavaScript and Ajax. • Understand the basics of XML. • Understand the basics of PHP and MySQL. 				
Prerequisites	None	Required	None		
Course Content	<p><u>Weeks:</u></p> <p>Week 1</p>				

Lecture 1 - Introduction to PHP

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course. It will explain the rationale behind the course and along with a gist of the courses content. This will include an overview of a number of examples of real life web applications, where we shall high light the main problems and questions that we shall seek to address and answer through the lecture series. An introduction to the course language that is the PHP listing the capabilities of the language and explaining how it's working. Coding examples for HTML, CSS and JavaScript. Explaining to the class what PHP can do and the basic syntax of PHP. Making clear that the language is case sensitive.

Outline

- Overview of Course, and design of the course
- Our expectations, and where to find resources for this course
- The lecture guide for this course
- Examples of Internet web applications
- The main issues, concerns and problems in developing web applications
- Introduction to PHP
- PHP Capabilities
- How PHP works
- Coding examples HTML, CSS and JavaScript
- What PHP can do
- PHP basic syntax

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Explain the structure of course and the course objectives/aims
- List different examples of web applications
- Explain the complexity of web applications
- Identify the main topics and points of concern when developing web applications
- Know the PHP capabilities
- Know how PHP works
- Know what is HTML, CSS, JavaScript
- Know the basic PHP syntax
- Know what PHP can do

Lecture 2 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture1, practicing in the code from the examples in lecture notes and with

exercises during the lab time.

Week 2

Lecture 3 -PHP Basic Instructions

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the PHP variables, the data types and the basic PHP instructions. Explaining the PHP variables, the rules for the variables and giving coding examples. Explain the scope of the variables and explain the basic PHP commands along with the data types.

Outline

- PHP Variables
- PHP variables scope
- PHP basic commands
- PHP data types

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the term variable and how we declare it
- Understand the variable scope
- Learn the basic PHP commands and how we use them
- Learn and understand the data types that we use in PHP

Lecture 4 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture3, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 3

Lecture 5 - String Functions, Constants, Operators

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of string functions, constants and the operators. Analyzing and explaining the various string functions, Explain the constants data type and analyze the variety of the operators with the support of coding examples.

Outline

- String functions
- Constants
- Arithmetic operators

- Assignment operators
- String operators
- Increment/Decrement operators
- Comparison operators
- Logical operators
- Array operators

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand string functions and what they do
- Understand the constants and when we use them
- Learn the variety of the operators and how we use them

Lecture 6 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture5, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 4

Lecture 7 – Functions and Control Structures

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of If...Else...Elseif, Switch, While Loops, For Loops, Functions and Arrays. As starting point we will analyze the conditional statements and the syntax that is used for the conditional statements with coding examples, following that we will analyze the looping statements and the syntax that is used for the looping statements with coding examples. As next step, we will see how to create a user defined function and analyze the function arguments with the use of coding examples to make this as clear as possible to the students to understand. Also having the aim to teach the students when a function is returning a value and when it's not. The last section of the lecture has to do with the arrays. We will explain the term array to students, and show how to create an array. Also explain the different types of the arrays.

Outline

- If statement
- IF...else statement
- IF...elseif...else statement
- Switch statement
- While loop
- Do...while loop
- For loop
- Foreach loop

- Create a user defined function
- Functions arguments
- Arrays

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the conditional statements and their syntax
- Understand the looping statements and their syntax
- Learn how to create a user defined function and how to use the function arguments
- Learn what an array is, what types of arrays we have and when we use arrays.

Lecture 8 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture7, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 5

Lecture 9 - HTML – Headings, Paragraphs, Styles, Formatting.

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of HTML – Headings, Paragraphs, Styles, and Formatting. As starting point we will analyze the Headings and the heading rules with coding example, following that we will analyze the HTML paragraphs and the way they are displayed on the screen with coding examples. As next step, we will see how to change HTML styles with the use of coding examples to make this as clear as possible to the students to understand. On the last section of the lecture we will deal with HTML formatting, and how we use it.

Outline

- Headings
- HTML horizontal rules
- HTML display
- <pre> Element
- HTML styling
- HTML formatting

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the headings and their importance

- Understand the paragraphs and variety of the ways that they are used.
- Learn how to use/change the HTML style
- Learn how to use/change the HTML formatting.

Lecture 10 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture9 and solving exercises found in the lecture notes.

Week 6

Lecture 11 - Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exams)

Midterm Exams

Week 8

Lecture 13: Links, Images, Tables, Lists

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Links, Images, Tables and Lists. As starting point we will analyze the links and their attributes, following that we will analyze the HTML images syntax with coding example. As next step, we will see the HTML tables with coding example. On the last section of the lecture we will see the HMTL lists.

Outline

- Links – Hyperlinks
- Links attributes
- Images and syntax
- Tables
- Lists

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the links, their syntax and their attributes
- Understand the images and their syntax.
- Understand the HTML tables and how they are defined
- Understand the HTML lists.

Lecture 14: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 13, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 9

Lecture 15 – CSS-Introduction, Syntax, Selectors, How To, Backgrounds, CSS - Text, Fonts, Borders

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of introduction to CSS, the syntax, selectors and how to also a review to the backgrounds, Text, Fonts and Borders. As starting point we will analyze the CSS and what is and its syntax with a coding example, following that we will analyze the comments and selectors with coding examples. As next step, we will see how to insert CSS with coding examples and the style sheets. Following we will see the CSS background. Then we will analyze the CSS text with coding examples and its properties, following that we will analyze the fonts and their properties with coding examples. On the last section of the lecture we will see the CSS borders and their properties.

Outline

- Introduction to CSS and syntax
- Comments and selectors
- How to insert CSS
- Style sheets
- Background
- Text color, alignment, decoration, indentation and properties
- Font families, style, size and properties
- Borders, width, color, style and properties

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the CSS and its syntax
- Understand the comments and selectors.
- Understand how to insert CSS and its style sheets
- Understand the CSS backgrounds

- Understand the CSS text and its properties
- Understand the font families and their properties.
- Understand the borders and their properties

Lecture 16 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 15, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 10

Lecture 17 - AJAX

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of AJAX. As starting point we will analyze the motivation for AJAX, following that we will identify the problem and the answer to the problem. Then we will explain what AJAX is, its definition and where we can find it. Following we will compare AJAX with the classic model. The JavaScript will follow. We will check the AJAX application characteristics and the AJAX surrounded background information, some prediction, its capabilities and some example applications. On the last section of the lecture we will see who is using AJAX, its limitations, some examples of its dangers and AJAX apps debugging.

Outline

- Identify the problem and give the answer
- What is Ajax, definition and where do we find it
- Ajax application characteristics
- Background information
- Some prediction
- Capabilities
- Example applications
- Who is using Ajax
- Limitations
- Dangers examples
- Apps debugging

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the problem and its answer
- Understand the definition of Ajax, its characteristics and its limitations and capabilities.

Lecture 18 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture17, practicing in the code from the examples in lecture notes and answering all student's questions based on the lecture material during the lab time.

Week 11

Lecture 19 - Introduction to MySQL

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of introduction to MySQL. As starting point we will make an introduction to MySQL, following that we will see how we are connecting and disconnecting to MySQL. Then we will review and explain the basic queries. Following we will learn how to use, create/manipulate a database with coding examples.

Outline

- Introduction to MySQL
- Connecting and Disconnecting
- Entering Basic Queries
- Creating and Using a Database
-

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand MySQL
- How we connect and disconnect to MySQL
- How to enter the basic queries
- How to use a MySQL database.

Lecture 20 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture19, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 12

Lecture 21 - XML

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of introduction to XML. As starting point we will explain what XML is, its anatomy and data components, following

that we will analyze the XML data model. Then we will review the XML schema languages. Following we will learn XML querying. Continuously we will learn the XML query processing. On the last section of the lecture we will see the schema mapping.

Outline

- XML data model
- XML schema languages
- XML querying
- XML query processing
- XML schema mapping

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the basics of XML
- What is XML data model
- XML schema languages
- How to query in XML
- Learn the XML query processing
- Realize and use the XML schema mapping.

Lecture 22 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture21, practicing in the code from the examples in lecture notes and answering all student's questions based on the lecture material during the lab time.

Week 13

Lecture 23 - Getting Started with APTANA

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of how to start using Aptana. As starting point we will explain what Aptana is, what a website is and what Aptana can offer, then we are exploring the Aptana workspace. Following that we will view a webpage and use help. After that we will see how to plan and setup a website. On the last section of the lecture we will see how we add folders and pages.

Outline

- Explore the Aptana workspace
- View a web page and use Help
- Plan and set up a website
- Add a folder and pages

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Start using and explore the Aptana and its workspace
- Use the Help on the web browsers, and understand what is a web page
- Plan and set up their own website
- Add a folder and pages to their website

Lecture 24 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture23, practicing in the code from the examples in lecture notes and answering all students' questions based on the lecture material during the lab time.

Week 14

Lecture 25- Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 26- Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 15

(2 hours exams)

Final Examination

-
- Introductions, course outline & expectation
 - Introduction to Web Architecture
 - How to write XHTML Documents. Choosing a HTML editor
 - Cascading Style Sheets
 - Introduction to JavaScript
 - JavaScript Functions, Arrays and Dates
 - Introduction to Ajax - Using Open Source Libraries

	<ul style="list-style-type: none"> • Introduction to PHP • PHP Arrays, Date and Time
Teaching Methodology	Lectures/Labs/Group discussions/Weekly Quizzes/Flipped Teaching
Bibliography	<p>Core</p> <ul style="list-style-type: none"> • Nixon,R.(2014)."<i>Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5 (Learning Php, Mysql, Javascript, Css & Html5)</i>", 4th Edition,NY: O'Reilly Media. • PureWal,S. (2014)."<i>Learning Web App Development: Build Quickly with Proven JavaScript Techniques</i>", 1st Edition,NY: O'Reilly Media. <p>Recommended</p> <ul style="list-style-type: none"> • Libicki, M. (2009)."<i>Web Application Architecture: Principles, Protocols and Practices</i>",2nd Edition,NY: O'Reilly Media.
Assessment Methods	Class Attendance &Participation, Quizzes, Project, Midterm, Final Exams.
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>
Weighting of Assessment	Class Attendance & Participation (10%), Weekly quizzes (5%), Project (15%) Mid-term (20%), Final Exams (50%).
Lectures/ Hours per week	1 Lecture / 2hours 1 Lab / 2 hours
Indicative learning and teaching time	<p>This module is delivered through lectures, group discussions and labs.</p> <p>Teaching Hours:</p> <p>Lectures 30 Hours</p>

	Labs	30 Hours
	Mid-term Exam	2 Hours
	Group Discussions	4 Hours
	Final Exams	2 Hours
	<u>Student Learning Time</u>	
	Student reading	80 Hours
	Midterm and Final Exams	
	Preparation	44 Hours

	Total:	188 Hours
Language	English	

Course Title	Mobile Application Development				
Course Code	MW207				
Course Type	Compulsory				
Level	Diploma				
Year / Semester	1st/ 2nd				
Lecturer's Name	Alexis Marcou				
E-mail:	alexis@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 15:00 – 18:00, Tue 13:00 – 14:30, Wed 11:00 - 14:30 & Thu 13:00 – 14:30				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	<p>Mobile application development frameworks; Architecture, design and engineering issues, techniques, methodologies for mobile application development. Course introduction. Characteristics of mobile applications. History of mobile application frameworks. Overview of mobile application development languages – Objective-C and Java. Application models of mobile application frameworks. User-interface design for mobile applications. Managing application data. Integrating with cloud services. Integrating networking, the OS and hardware into mobile-applications. Addressing enterprise requirements in mobile applications – performance, scalability, modifiability, availability and security. Testing methodologies for mobile applications. Publishing, deployment, maintenance and management.</p>				
Learning Outcomes	<ul style="list-style-type: none"> • Be exposed to technology and business trends impacting mobile applications • Be competent with the characterization and architecture of mobile applications. • Be competent with understanding enterprise scale requirements of mobile applications. • Be competent with designing and developing mobile applications using one application • development framework 				
Prerequisites	None	Required	None		
Course Content	<u>Weeks:</u>				

Week 1:

Lecture 1 – Setup for Android Development

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course. It will explain the motivation behind the course and along with the idea of the course content. This will include an overview of a number of examples of real life web applications, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. An introduction to Android programming.

Outline

- Getting Started
- Android Programming

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Get in touch with Android Programming

Lecture 2 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture1, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 2

Lecture 3 - Android Application Model I

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the Android Application Model I. An introduction to the Framework Capabilities and Add-Ons. Then we will analyze the Types of Android Programs. Following we will review how we are Implementing Activities. The analysis of Views, ViewGroups, Layouts, and Widgets will follow. On the last section of the lecture we will see the menus.

Outline

- Framework Capabilities and Add-Ons
- Types of AndroidPrograms
- Implementing Activities

- Views, ViewGroups, Layouts, Widgets
- Menus

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Framework Capabilities and Add-Ons
- Understand the types of Android Programs
- Understand Implementing Activities
- Understand Views, ViewGroups, Layouts, Widgets
- Know Menu

Lecture 4 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture2, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 3

Lecture 5 - Android Application Model II

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Android Application Model II. An introduction to the Activity Lifecycle. Then we will analyze services. Following we will review the persistence. On the last section of the lecture we will see the content providers.

Outline

- Activity Lifecycle
- Services
- Persistence
- Content Providers

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the activity Lifecycle
- Know the services
- Understand the persistence
- Understand the content Providers

Lecture 6 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture3, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 4

Lecture 7 - Object-Oriented Design

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Object-Oriented Design. An introduction to Elements of Good Object-Oriented Design. Then we will Identify Objects and Classes. As next step we will Allocate Responsibilities to Classes.

Outline

- Elements of Good Object-Oriented Design
- Identify Objects and Classes
- Allocate Responsibilities to Classes

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the elements of Good Object-Oriented Design
- Know to identify Objects and Classes
- Know to allocate Responsibilities to Classes

Lecture 8 – Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture4, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 5

Lecture 9 – External Services

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the External Services. We will analyze Invoking Browser App. Then we will review Embedded WebView. On the last section of the lecture we will see the Location-Based Applications.

Outline

- Invoking Browser App
- Embedded WebView
- Location-Based Applications

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Invoking Browser App
- Understand Embedded WebView
- Understand Location-Based Applications

Lecture 10 – Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture5, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 6

Lecture 11 - Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exams)

Midterm Exams

Week 8

Lecture 13 - Internal Services

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Internal Services. An introduction to Communication. Then we will analyze Audio and video. Following we will review Sensors.

Outline

- Communication
- Audio and video
- Sensors

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know Communication
- Understand Audio and video
- Understand Sensors

Lecture 14 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture6, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 9

Lecture 15 - User Interface Development

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of User Interface Development. We will analyze UI support in Android. On the last section of the lecture we will see fragments.

Outline

- UI Support in Android
- Fragments

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand UI Support in Android
- Understand Fragments

Lecture 16 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture7, practicing in the code from the examples in lecture notes and with

exercises during the lab time.

Week 10

Lecture 17 - Addressing Non-Functional Requirements in Mobile Applications

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Addressing Non-Functional Requirements in Mobile Applications. We will start with Non-Functional Requirements. As next steps Optimize Performance with Profiler. Maximize Battery Life come next. Optimize for Responsiveness will follow. Last but not least is Improve App Security. On the last section of the lecture we will see testing.

Outline

- Non-Functional Requirements
- Optimize Performance with Profiler
- Maximize Battery Life
- Optimize for Responsiveness
- Improve App Security
- Testing

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the Non-Functional Requirements
- Know to Optimize Performance with Profiler
- Know to Maximize Battery Life
- Know to Optimize for Responsiveness
- Know to Improve App Security
- Understand Testing

Lecture 18 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture8, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 11

Lecture 19 – Wrap Up

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide a Wrap Up. An Essence of a Mobile Device. Then we will analyze Mobile Application Development Challenges. Following we will review Framework Concepts, Capabilities and Add-Ons.

Outline

- Essence of a Mobile Device
- Mobile Application Development Challenges
- Framework Concepts, Capabilities and Add-Ons

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Have an essence of a Mobile Device
- Know Mobile Application Development Challenges
- Know Framework Concepts, Capabilities and Add-Ons

Lecture 20 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture9, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 12

Lecture 21 - Programming in Java for Android Development

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Programming in Java for Android Development. We will start with the Java Basics. Then we will analyze Object–Oriented Programming. Following we will review Android Programming.

Outline

- Getting Started
- Java: The Basics
- Java: Object–Oriented Programming

- Android Programming

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the Java Basics
- Know Object–Oriented Programming
- Understand Android Programming

Lecture 22 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture10, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 13

Lecture 23 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught through the module, practicing in given exercises during the lab time.

Lecture 24 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught through the module, practicing in given exercises during the lab time.

Week 14

Lecture 25- Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 26 - Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 15

(2 hours exams)

Final Examination

	<ul style="list-style-type: none"> • Be competent with the characterization and architecture of mobile applications. • Be competent with understanding enterprise scale requirements of mobile applications • Be competent with designing and developing mobile applications using at least 2 mobile application development frameworks • Be competent with comparatively evaluating the capabilities of at least 2 mobile application development frameworks. • Be exposed to technology and business trends impacting mobile applications
Teaching Methodology	Lectures/Labs/Assignments
Bibliography	<p>Core</p> <ul style="list-style-type: none"> • Mobile Applications: Architecture, Design, and Development, Valentino Lee; Heather Schneider; Robbie Schell, Publisher: Prentice Hall <p>Recommended</p> <ul style="list-style-type: none"> • Mobile Design and Development, Brian Fling, Publisher: O'Reilly • Programming the Mobile Web, Maximiliano Firtman, Publisher: O'Reilly Media
Assessment Methods	Participation and Class Attendance, Midterm, Final Exams.
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office).The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>
Weighting of Assessment	Participation and Class Attendance (10%), Midterm, (40%), Final Exams (50%).
Lectures / Hours per week	1 Lecture / 2 hours 1 Lab / 2 hours

<p>Indicative learning and teaching time</p>	<p>This module is delivered through lectures, group discussions, seminars, projects, presentations and case studies.</p> <p><u>Contact Hours:</u></p> <p>Lectures 56 Hours</p> <p>Mid-term Exam 2 Hours</p> <p>Group Discussions/Seminars/Presentations/Case studies 8 Hours</p> <p>Final Exams 2 Hours</p> <p><u>Student's Private Study</u></p> <p>Student self- initiated 56 Hours</p> <p>Homework/ Projects/Presentations 44 Hours</p> <p>Midterm and Final Exams Preparation 20 Hours</p> <p>-----</p> <p>Total : 188 Hours</p>
<p>Language</p>	<p>English</p>

Course Title	Intermediate Programming ACCREDITED				
Course Code	CSC102				
Course Type	Compulsory				
Level	Diploma				
Year / Semester	1st / 2nd				
Lecturer's Name	Giorgos Georgiou				
E-mail:	george@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 15:00 – 18:00, Tue 13:00 – 14:30, Wed 11:00 - 14:30 & Thu 13:00 – 14:30.				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	<p>To explore Java's object-oriented features, with the goal of making student's own programs more reliable, efficient, and reusable. To teach students how to write classes that include variables, constructors, and methods, and learn to create objects based on their own classes and classes included in Java's class libraries. To examine the concepts of inheritance and class hierarchy, and learn to design classes which inherit and extend existing functionality. To develop students' knowledge in formatting numeric and date data, overloading methods and constructors, managing flexible-size collections, working with polymorphic variables, and organizing classes into packages. To present object-oriented design through the study of models, modeling, and tools to design and document dynamic object behavior in software systems. To encourage an investigation of commonly-overlooked basic features of the language, in order to shape students' knowledge on the JAVA language constructs and language features.</p>				
Learning Outcomes	<p>After the successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> • Distinguish good designs and make educated design decisions • Read and understand advanced Java texts • Approach design texts (which are more challenging) • Make good use of such reference books as Design Patterns: Elements of Reusable Object-Oriented Software • Understand and apply most documented design patterns without needing a tutorial 				

Prerequisites	CSC101	Required	None
Course Content	<p><u>Weeks:</u></p> <p>Week 1</p> <p>Lecture 1 - Introduction and Java Review</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course. It will explain the motivation behind the course and along with the idea of the course content. This will include an overview of a number of examples of real life web applications, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. In this first lecture, students will get a taste of what they will learn before the course is over. To make sure everyone is on the same page, we'll do a short review of the Java skills they should already have; this will get their wheels turning if they haven't worked with Java in a while! Terms like classes, private fields, constructors, methods and other critical language components. Then a programming exercise, broken into small problems will be viewed to help the students understand that a big programming problem is easier to be solved if it's broken into smaller tasks. Students will also find out about a few different development environments they can use to create and run their own Java programs.</p> <p>Outline</p> <ul style="list-style-type: none"> • Revising Introductory Programming • Programming exercise broken into smaller tasks <p>Intended Learning Outcomes</p> <p>At the end of this lecture students should be able to:</p> <ul style="list-style-type: none"> • Understand that a big programming problem is easier to be solved if it's broken into smaller tasks • Be able to use new environments to write their programs. <p>Lecturer 2: Lab practice</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This is a practical lecture in lab and it is based on the material taught from lecture1, practicing in the code from the examples in lecture notes and solving exercises during the lab time.</p>		

Week 2

Lecture 2 - Arrays, Loops, and Using Multiple Classes

(2 hours Lecture + 4 hours recommended reading)

The array is one of the most commonly used data structures in any programming language. In this lecture, we'll go over how arrays work, including their internal structure. Students will find out how to create arrays, how to store and access data in them, and how to process them efficiently using loops. Along the way, they will also learn the difference between a class that's a complete program and one that isn't. They will see how to write classes that use other classes in their processing, which is helpful when you're working with a lot of information.

Outline:

- Arrays
- Loops
- Multiple classes

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know how arrays work
- Find out how to create arrays
- How to store and access data in arrays
- How to process arrays efficiently using loops
- How to write classes that use other classes in their processing

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture2, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 3

Slot 1: Lecture 3 - File Input and Output

(2 hours Lecture + 4 hours recommended reading)

Computers can do an incredible amount of work, but it's often all for nothing if you can't save the results after the program finishes. That's where data files come into play. Today's lecture shows you how to read and write computer data files using Java. This process takes place many times every day in all kinds of programs, so it's a very useful and important one to understand.

Outline:

- File input
- File output

Intended Learning Outcomes

At the end of this lecture students should be able to:

- How to read and write computer data files using Java

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture3, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 4

Slot 1: Lecture 4 - Inheritance and Class Hierarchies

(2 hours Lecture + 4 hours recommended reading)

In this lecture we have the aim to answer the following questions; Have you ever wondered exactly what the big deal is about object-oriented programming (OOP)? Why does it matter whether a language is object-oriented or not? In this lecture, we'll look at exactly what object orientation means to Java through the topic of inheritance. One of the primary features of an OOP language is how its classes inherit features from other classes in the class hierarchy. Students will find out how Java's class hierarchy is organized, and learn how to use the different types of classes (interfaces, abstract classes, and concrete classes) to their advantage.

Outline:

- Inheritance features
- Class hierarchies
- Different types of classes

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know how classes inherit features from other classes in the class hierarchy.
- Find out how Java's class hierarchy is organized
- Learn how to use the different types of classes

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture4, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 5

Slot 1: Lecture 5 - Stand-Alone GUI Applications

(2 hours Lecture + 4 hours recommended reading)

We'll explore Java's GUI tools in today's lecture. Just about every program we use on computers today has a graphical user interface, or GUI. That just means the program appears in a window with menus, icons, buttons, and so on. Java has hundreds of GUI tools we can use to build our own applications to run in any windowed operating system that supports Java (Windows, Linux, and Mac OS X, among others). Students will learn how to set up a stand-alone application using Java's GUI tools, including labels, buttons, dialogs, and more.

Outline

- Stand-Alone GUI applications
- Labels, buttons, dialogs, and more

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Learn how to set up a stand-alone application using Java's GUI tools including labels, buttons, dialogs, and more.

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture5, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 6

Slot 1: Revision part1

(2 hours Lecture + 11 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Slot 2: Revision part2

(2 hours Lecture + 11 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exam)

Midterm Exams

Week 8

Slot 1: Lecture 7 - Layouts and Multiple GUI Components

(2 hours Lecture + 4 hours recommended reading)

In this lecture students will continue learning about Java's GUI capabilities. They will explore several ways that Java can organize multiple GUI components in a window, and they will find out how to split windows into smaller areas called panels, which they can organize in different ways. They will see how to set up Java's scroll bars in a window or part of a window so that users can scroll up, down, left, and right through the display.

Outline:

- Java's GUI capabilities
- Multiple GUI components in a window
- Split windows into smaller areas
- Java's scroll bars in a window

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Learn about Java's GUI capabilities
- Explore several ways that Java can organize multiple GUI components in a window
- Find out how to split windows into smaller areas called panels, which they can organize in different ways
- Examine how to set up Java's scroll bars in a window or part of a window so that users can scroll up, down, left, and right through the display

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture7, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 9

Slot 1: Lecture 8 – GUI Menus

(2 hours Lecture + 4 hours recommended reading)

What do almost all modern-day programs have in common? They have menus. Menus are probably the best-known and most widely used GUI programming feature. In this lecture, students will learn how to create menus using Java's menu bar, menu, and menu item components. They will be able to create as many menus in an application as they need each with all the menu items and submenus necessary to perform the task they are programming.

Outline

- Menu bar, menu, and menu item components

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Learn how to create menus using Java's menu bar, menu, and menu item components
- Be able to create as many menus in an application as they need

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 8, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 10

Slot 1: Lecture 9: A Working GUI Application (1)

(2 hours Lecture + 4 hours recommended reading)

Before this lecture students have spent three lectures learning about different Java GUI programming techniques and tools. In this, they will learn how to put the pieces together into a complete, reasonably complex Java application. They will see how to combine menu options, graphics, check boxes, radio buttons, and text entry fields into a windowed program that can actually perform a useful task: It allows someone to order a pizza! (How much more useful can it get?)

Outline

- Putting pieces together
- Menu options, graphics, check boxes, radio buttons, and text entry fields

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Learn how to put the pieces together into a complete, reasonably complex Java application
- See how to combine menu options, graphics, check boxes, radio buttons, and text entry fields into a windowed program that can actually perform a useful task

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture9, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 11

Slot 1: Lecture 10: A Working GUI Application (2)

(2 hours Lecture + 4 hours recommended reading)

In this lecture, students will take what we started in lecture 9, where they learned how to design and build a GUI interface to order a pizza, and we'll make it functional. They already have all the GUI components displayed nicely in the window, so now they will learn how to make your program gather all the data from the different components in the window, and then put that information together into a useful pizza order. (I'm afraid it won't actually deliver the pizza, though.) They will get an idea of what they can create with Java's GUI capabilities.

Outline

- Design and build a GUI interface
- Different components in the window
- Java's GUI capabilities

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know how to design and build a GUI interface
- Learn how to make your program gather all the data from the different components in the window
- They will get an idea of what they can create with Java's GUI capabilities.

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture10, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 12

Slot 1: Lecture 11 – Java Collections (1)

(2 hours Lecture + 4 hours recommended reading)

Most programmers don't write computer programs to deal with individual data items. Usually, they write programs to deal with groups of items. In this lecture, students will learn all about Java's collection classes, a group of data structures designed to work with many items at once. They will discover the difference between lists, queues, sets, maps, and other types of collections. We'll explore how to work with a list to load a group of items from a file into a list, and how to display items from the list in a GUI window. Along the way, they will learn another useful technique in GUI programming: how to use Java's file chooser dialog to select a file to open and process.

Outline

- Java collections classes
- Lists, queues, sets, maps
- Display items from the list in a GUI window
- Java's file chooser dialog

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Learn all about Java's collection classes, a group of data structures designed to work with many items at once
- Discover the difference between lists, queues, sets, maps, and other types of collections
- Explore how to work with a list to load a group of items from a file into a list
- Explore how to display items from the list in a GUI window
- Learn how to use Java's file chooser dialog to select a file to open and process

Slot 2: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture11, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 13

Slot 1: Lecture 12 – Java Collections (2)

(2 hours Lecture + 4 hours recommended reading)

To explore more of Java's collections, in this lecture we'll continue working on the program we began in lecture 11. Students will find out how to navigate through a list (forward and backward), displaying each list item as they go. They will also see how to set up a window with multiple display formats, and switch between them by clicking tabs that describe the different views. They will also learn how to create items that Java can compare, even if Java doesn't know the details of what is in the items. They will use that capability to build a list and sort its items in a specified sequence. That's a very useful and important capability when they are dealing with large numbers of items. Due the last lecture, we'll delve even deeper into the topic of collections. (They can see that it's a large and important subject!) They will find out how to use maps, which are Java collections that let you store and retrieve data items quickly based on a unique data element of each item (its key). Think of looking up a telephone number in a large telephone book like New York City's. Finding a single number would be impossible if the data weren't properly organized. We'll see how to use the same type of search to quickly find any data item we need in a collection. And while we're doing that, they will also learn a bit more about Java's other features, including Java's wrapper class, which is one more important data feature of the Java language that they will use quite often. By the end of this lecture, they will be amazed at what they were able to do with Java!

Outline

- Lists
- Windows with multiple display formats
- Create items
- Build a list and sort its items
- Maps
- Types of search
- Java's other features

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Find out how to navigate through a list (forward and backward), displaying each list item as they go
- See how to set up a window with multiple display formats, and switch between them by clicking tabs that describe the different views.
- Learn how to create items that Java can compare, even if Java doesn't know the details of what is in the items
- Use that capability to build a list and sort its items in a specified sequence

	<ul style="list-style-type: none"> • Find out how to use maps • See how to use the same type of search to quickly find any data item we need in a collection • Learn a bit more about Java's other features, including Java's wrapper class <p>Slot 2: Lab practice</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This is a practical lecture in lab and it is based on the material taught from lecture12, practicing in the code from the examples in lecture notes and with exercises during the lab time.</p> <p>Week 14</p> <p>Slot 1: Revision part1</p> <p>(2 hours Lecture + 11 hours recommended reading)</p> <p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Slot 2: Revision part2</p> <p>(2 hours Lecture + 11 hours recommended reading)</p> <p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Week 15</p> <p>(2 hours exam)</p> <p>Final Examination</p> <ul style="list-style-type: none"> • How to model dynamic object behavior with the UML • How and when to use sequence, collaboration, activity and state UML diagrams • Commonly overlooked features of Java, including elements of the standard Java library • Major language features affecting design profoundly, including exceptions and templates • Inheritance capabilities and flaws in Java • Techniques and guidelines for safely and effectively managing the lifetime of objects
Teaching Methodology	Lectures/Labs /Flipped Teaching using online platform such as Moodle
Bibliography	<p>Core:</p> <ul style="list-style-type: none"> • Walter Savitch. 2016. Absolute Java, 6th Edition, University of California, San Diego Kenrick Mock: Pearson. <p>Recommended:</p> <ul style="list-style-type: none"> • Bloch, J. 2008. Effective Java. 2nd ed. Addison-Wesley.

	<ul style="list-style-type: none"> • Ambler, S., 2004. <i>The Object Primer: Agile Model-Driven Development with UML 2.0</i>. 3rd ed. Cambridge University Press. • Fowler, M., 2003. <i>UML Distilled: A Brief Guide to the Standard Object Modeling Language</i>. 3rd ed. Addison-Wesley Professional. 												
Assessment Methods	Class Attendance & Participation, Project, Midterm and Final Exams.												
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%. At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend. At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>												
Weighting of Assessment	Class Attendance & Participation (10%), Project (15%), Midterm (25%), Final Exams (50%).												
Lectures / Hours per week	<p>1 Lecture / 2 hours 1 Lab / 2 hours</p>												
Indicative learning and teaching time	<p>This module is delivered through lectures and Labs.</p> <p><u>Teaching Hours:</u></p> <table> <tr> <td>Lectures</td> <td>30 Hours</td> </tr> <tr> <td>Labs</td> <td>22 Hours</td> </tr> <tr> <td>Mid-term Exam</td> <td>2 Hours</td> </tr> <tr> <td>Final Exams</td> <td>2 Hours</td> </tr> </table> <p><u>Student Learning Time</u></p> <table> <tr> <td>Student reading</td> <td>88 Hours</td> </tr> <tr> <td>Midterm and Final Exams Preparation</td> <td>44 Hours</td> </tr> </table> <hr/> <p>Total: 188 Hours</p>	Lectures	30 Hours	Labs	22 Hours	Mid-term Exam	2 Hours	Final Exams	2 Hours	Student reading	88 Hours	Midterm and Final Exams Preparation	44 Hours
Lectures	30 Hours												
Labs	22 Hours												
Mid-term Exam	2 Hours												
Final Exams	2 Hours												
Student reading	88 Hours												
Midterm and Final Exams Preparation	44 Hours												
Language	English												

Course Title	HTML5 & CSS3 ACCREDITED				
Course Code	MW201				
Course Type	Compulsory				
Level	Diploma				
Year / Semester	1st / 2nd				
Lecturer's Name	Panayiotis Vorkas				
E-mail:	vorkas@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 13:30 – 14:30, Tue 9:00 – 12:00, Wed 09:00 - 10:00, Thu 16:00 – 18:00 and Fri 9:00-10:00.				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	This course aims for students to understand and use the main components of HTML5 & CSS3 in order to create well coded web pages utilizing text, graphics, lines, video and audio content, as well as being able to control behaviors. Students are expected to understand the new standard that HTML5 is setting towards the development of web content and web apps for mobile and to understand how CSS3 allows developers to design more flexible and dynamic style sheets, which can respond to a user's device, screen size and orientation, as well as the user's behavior.				
Learning Outcomes	<ul style="list-style-type: none"> • Gain a thorough understanding of the HTML5 specification. • Gain an understanding of how HTML5 differs from previous specifications. • Implement new HTML5 elements and attributes. • Effectively use the audio, video and canvas elements. • Gain a basic knowledge of the new JavaScript APIs. • Gain an understanding of the CSS3 specification • Implement new CSS3 features 				
Prerequisites	None	Required	None		
Course Content	Weeks: Week 1 Lecture 1 - Introduction to HTML5 & CSS3 (2 hours Lecture + 4 hours recommended reading)				

This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course. It will explain the rationale behind the course and along with a gist of the courses content. This will include an overview of a number of examples of real life web applications, where we shall high light the main problems and questions that we shall seek to address and answer through the lecture series. An introduction to HTML5, the capabilities of the language and explaining how it's working. Coding examples for HTML, CSS3.

Outline

- Overview of Course, and design of the course, history of HTML5 & CSS3
- Our expectations, and where to find resources for this course
- The lecture guide for this course
- Examples of Internet web applications
- The main issues, concerns and problems in developing web applications
- Introduction to HTML5
- Introduction to CSS3
- Capabilities
- How it works
- Coding examples HTML 5, CSS3.
- What HTML 5 & CSS3 can do
- Basic syntax HTML5 & CSS3

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Explain the structure of course and the course objectives/aims
- List different examples of web applications
- Explain the complexity of web applications
- Identify the main topics and points of concern when developing web applications
- Know the HTML 5 capabilities.
- Know the CSS3 capabilities.
- Know what is HTML 5 & CSS3.
- Know the basic HTML5 & CSS3 syntax.
- Know the HTML5 & CSS3 basic syntax.

Lecture 2 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture1, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 2

Lecture 3 - Variables, Data Types, Basic Instructions

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the HTML5 & CSS3 variables, the data types and the basic instructions. Explaining the HTML5 & CSS3 variables, the rules for the variables and giving coding examples. Explain the scope of the variables and explain the basic HTML5 & CSS3 commands along with the data types.

Outline:

- HTML5 & CSS3 variables
- HTML5 & CSS3 variables scope
- HTML5 & CSS3 basic commands
- HTML5 & CSS3 data types

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the term variable and how we declare it
- Understand the variable scope
- Learn the basic HTML5 & CSS3 commands and how we use them
- Learn and understand the data types that we use in HTML5 & CSS3

Lecture 4 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture2, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 3

Lecture 5 - HTML5 Attributes: Functions, Constants, Operators

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of string functions, constants and the operators. Analyzing and explaining the various string functions, Explain the constants data type and analyze the variety of the operators with the support of coding examples.

Outline

- Functions
- New elements in HTML5

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the new elements and what they do
- Understand the functions and when we use them
- Learn the variety of the operators and how we use them

Lecture 6 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture3, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 4

Lecture 7 - Origins, ground rules, new features & examples.

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of origins, ground rules, new features & examples. As starting point we will analyze the conditional statements and the syntax that is used for the conditional statements with coding examples, following that we will analyze the origins and ground rules with coding examples. As next step, we will see how to create a user defined function and analyze the function arguments with the use of coding examples to make this as clear as possible to the students to understand. Also, having the aim to teach the students when a function is returning a value and when it's not. We will explain the terms of ground rules, new features through examples.

Outline:

- New features should be based on HTML, CSS, DOM, and JavaScript
- Origins
- Reduce the need for external plugins
- Better error handling
- More markup to replace scripting
- HTML5 should be device independent
- Dev process should be visible to the public
- Practical Examples.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the statements and their syntax
- Understand the Canvas element for drawing
- Understand the Video/audio elements for media playback

- Understand the better support for local offline storage
- Understand the new content specific elements, like article, footer, header, nav, section
- Understand the new form controls, like calendar, date, time, email, url, search

Lecture 8 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture4, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 5

Lecture 9 – HTML 5 – Headings, Paragraphs, Styles, Formatting.

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of HTML5 – Headings, Paragraphs, Styles, and Formatting. As starting point we will analyze the Headings and the heading rules with coding example, following that we will analyze the HTML5 paragraphs and the way they are displayed on the screen with coding examples. As next step, we will see how to change HTML5 styles with the use of coding examples to make this as clear as possible to the students to understand. On the last section of the lecture we will deal with HTML5 formatting, and how we use it.

Outline

- Headings
- HTML5 horizontal rules
- HTML5 display
- HTML5 styling
- HTML5 formatting

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the headings and their importance
- Understand the paragraphs and variety of the ways that they are used.
- Learn how to use/change the HTML5 style
- Learn how to use/change the HTML5 formatting.

Lecture 10 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture5 and solving exercises found in the lecture notes.

Week 6

Lecture 11 - Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exams)

Midterm Exams

Week 8

Lecture 13: Links, Images, Tables, Lists

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Links, Images, Tables and Lists. As starting point we will analyze the links and their attributes, following that we will analyze the HTML5 images syntax with coding example. As next step, we will see the HTML5 tables with coding example. On the last section of the lecture we will see the HTML5 lists.

Outline

- Links – Hyperlinks
- Links attributes
- Images and syntax
- Tables
- Lists

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the links, their syntax and their attributes
- Understand the images and their syntax.
- Understand the HTML5 tables and how they are defined

- Understand the HTML5 lists.

Lecture 14: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture7, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 9

Lecture 15 – CSS3-Introduction, Syntax, Selectors, How To, Backgrounds, CSS3 - Text, Fonts, Borders

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of introduction to CSS3, the syntax, selectors and how to also a review to the backgrounds, Text, Fonts and Borders. As starting point we will analyze the CSS3 and what is and its syntax with a coding example, following that we will analyze the comments and selectors with coding examples. As next step, we will see how to insert CSS3 with coding examples and the style sheets. Following we will see the CSS3 background. Then we will analyze the CSS3 text with coding examples and its properties, following that we will analyze the fonts and their properties with coding examples. On the last section of the lecture we will see the CSS3 borders and their properties.

Outline

- Introduction to CSS3 and syntax
- Comments and selectors
- How to insert CSS3
- Style sheets
- Background
- Text color, alignment, decoration, indentation and properties
- Font families, style, size and properties
- Borders, width, color, style and properties

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the CSS3 and its syntax
- Understand the comments and selectors.
- Understand how to insert CSS3 and its style sheets
- Understand the CSS3 backgrounds
- Understand the CSS3 text and its properties
- Understand the font families and their properties.
- Understand the borders and their properties

Lecture 16 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 8, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 10

Lecture 17 – Audio, video, Canvas elements and Web Storage

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Audio, video, Canvas elements, Web Storage. As starting point we will analyze the motivation for Audio, video, Canvas elements and Web Storage. Following that we will identify the problem and the answer to the problem. Then we will explain what Audio video is, its definition and where we can find it. Following we will compare canvas elements with the classic model. The JavaScript will follow. We will check the Audio, video, Canvas elements, Web Storage characteristics and the surrounded background information, some prediction, its capabilities and some example applications. On the last section of the lecture we will see who is using, its limitations, some examples of its dangers and Audio, video, Canvas elements and Web Storage apps debugging.

Outline

- What is Audio, video, Canvas elements and Web Storage.
- Application characteristics
- Background information
- Some prediction
- Capabilities
- Example applications
- Who is using Audio, video, Canvas elements and Web Storage
- Limitations
- Dangers examples
- Apps debugging

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the problem and its answer
- Understand the definition of, Audio, video, Canvas elements and Web Storage its characteristics and its limitations and capabilities.
- Know how to use Audio, video, Canvas elements and Web Storage

Lecture 18 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture9, practicing in the code from the examples in lecture notes and answering all student's questions based on the lecture material during the lab time.

Week 11

Lecture 19 - New JavaScript APIs, Canvas JavaScript API

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of introduction to New JavaScript APIs, Canvas JavaScript API. As starting point we will make an introduction to New JavaScript API. Following that we will see how we are connecting and disconnecting to New JavaScript APIs. Then we will review and explain the basic queries. Following we will learn how to use, create/manipulate a database with coding examples.

Outline

- New JavaScript APIs
- New Selectors
- Canvas JavaScript API
- Web Workers
- Drag and Drop
- HTML5 Storage
- HTML DOM Extensions
- Event Listeners

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the new JavaScript APIs and new Selectors
- Understand the canvas JavaScript API
- Understand the Drag and Drop
- Understand the HTML5 Storage
- Understand the HTML DOM Extensions/ Event Listeners

Lecture 20 - CSS3 Borders, CSS3 Backgrounds, CSS3 Text Effects /Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture10, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 12

Lecture 21 - Assignment of project

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of introduction to XHTML5 & CSS3 through the assignment project. As starting point we will explain what the assignment is and its requirements. Following that we will analyze the XML5 & CSS3 data model through the assignment. **“Create web pages with DOM and CCS3”**

Outline

- Explain the assignment’s requirements

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the steps of creating of webpage
- Be able to build a webpage

Lecture 22 - CSS3 Fonts, CSS3 2D Transforms CSS3 3D Transforms / Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture11 and CSS3 Fonts, CSS3 2D Transforms CSS3 3D Transforms, practicing in the code from the examples in lecture notes and answering all student’s questions based on the lecture material during the lab time.

Week 13

Lecture 23 - External Style Sheets, Rules in CSS3/ Selectors

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of how to start using Dreamweaver. As starting point we will explain what External Style Sheets and Rules in CSS3 are, what a website is and what it can offer, then we are making some in class example for each style. Following that we will view a webpage and use help.

Outline

- Explore the External Style Sheets
- Explore the rules in CSS3

- CSS Simple, or Element Selectors
- Class Selectors vs ID Selectors, Class & Element Selector Order

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Be able to use the external style sheets
- Understanding the rule CSS 3
- Be able to embed CSS 3 into website
- CSS Simple, or Element Selectors
- Class Selectors vs ID Selectors, Class & Element Selector Order

Lecture 24 - CSS3 Multiple columns / CSS3 selectors / Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from previous lecture and CSS3 Multiple columns / CSS3 selectors and practicing in the code from the examples in lecture notes and answering all student's questions based on the lecture material during the lab time.

Outline

- How do we know which to use and when?
- Inheritance

Intended Learning Outcomes

- Understand style sheets and how to use it.
- Understand CSS3 and how to use it
- When and which from both to use it
- Inheritance in CSS3 and External Style Sheet

Week 14

Lecture 25- Essential Meta Information, Validating your code, and browser issues

(2 hours Lecture + 4 hours recommended reading)

Outline:

- How meta information works
- How to validate a code
- Understand the browser issues

	<p>Intended Learning Outcomes</p> <ul style="list-style-type: none"> • Using the meta information • Be able to validate the code • Be able to troubleshoot browser issues <p>Lecture 26 - Revision</p> <p>(2 hours Lecture + 20 hours recommended reading)</p> <p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Week 15</p> <p>(2 hours exam)</p> <p>Final Examination</p> <hr/> <ul style="list-style-type: none"> • Introductions, course outline & expectation • Introduction to Web Architecture • How to write XHTML Documents. Choosing a HTML editor • Cascading Style Sheets • Introduction to JavaScript • JavaScript Functions, Arrays and Dates • XML and RSS • Introduction to Ajax - Using Open Source Libraries • Introduction to PHP • PHP Arrays, Date and Time • Using MySQL with PHP and Advanced Topics in Web Application Development
Teaching Methodology	<p>Lectures/Labs/Group discussions/Project/Flipped teaching classroom</p>
Bibliography	<p>Core</p> <ul style="list-style-type: none"> • Freeman, A. (2011). <i>"The Definitive Guide to HTML5</i>. NY: Apress Publishing. • Minnick, J., and Friedrichsen, L. (2016). <i>"Web Design with HTML & CSS3: Comprehensive (Shelly Cashman Series)"</i>, 8th Edition, Boston :Course Technology. • Vodnik, S. (2015). <i>"HTML5 and CSS3, Illustrated Complete"</i>, 2nd Edition, Boston: Course Technology. <p>Recommended</p> <ul style="list-style-type: none"> • Frain, B. (2012). <i>"Responsive Web Design with HTML5 and CSS3"</i>. NJ:PACKT Publishing. • Murphy, C., Clark, R., Studholme, O., and Manian, D. (2012). <i>"Beginning HTML5 and CSS3: The Web Evolved"</i>. NY: Apress.

Assessment Methods	Class Attendance & Participation, Midterm, Final Exams and project.
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>
Weighting of Assessment	Class Attendance & Participation (10%), Project (15%), Midterm (25%), Final Exams (50%).
Project Details and Assessment	<p>Students will be required to deliver a course project on the below (or similar) subject:</p> <p>“Create web pages with DOM and CCS3”</p> <p>The final project should be between 10 to 15 A4 pages 1.5 spacing, Times New Roman 12 font, 2cm margins on each side, excluding appendices, tables, figures, charts, references. The project should also contain REFERENCES part at the end, where you should list all sources used in the preparation of the project. The Harvard referencing system should be used.</p> <p><u>The project will be graded as follows:</u></p> <p>Effective use and reference to theory from the course and from external sources: 30% Strategic thinking and creative solutions: 20% Overall presentation: 10% Suggestions and recommendations for improvement: 10% Thorough, focused and insightful analysis: 10% The use of examples and data: 10% Persuasion: 10%</p>
Lectures / Hours per week	<p>1 Lecture / 2 hours</p> <p>1 Lab / 2 hours</p>
Indicative learning	This module is delivered through lectures, group discussions and labs.

and teaching time	<p><u>Teaching Hours:</u></p> <p>Lectures 30 Hours Labs 26 Hours Mid-term Exam 2 Hours Group Discussions 8 Hours Final Exams 2 Hours</p> <p><u>Student Learning Time</u></p> <p>Student reading 56 Hours Homework/ Projects 44 Hours Midterm and Final Exams Preparation 20 Hours</p> <p>-----</p> <p>Total: 188 Hours</p>
Language	English

Course Title	Fundamentals of Web Design and Applications for Social Media ACCREDITED				
Course Code	DM204				
Course Type	Compulsory				
Level	Diploma				
Year / Semester	2nd / 3rd				
Lecturer's Name	Anastasia Kalli				
E-mail:	anastasia@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 15:00 – 18:00, Tue 13:00 – 14:30, Wed 11:00 - 14:30 & Thu 13:00 – 14:30				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	To enable students to develop basic web pages, designed from a consumer usability perspective, as well as applications for Social Media. To equip students with knowledge in the areas of functionality, formatting and editing of web content, content structure, content elements and organization, including the creation, incorporation and formatting of tables, images, forms, and links. To create student understanding of Cascading Style Sheets in terms of page layout and CSS techniques, HTML5, as well as develop sound knowledge about floating, positioning, transitions, transforms and animation. To introduce students to JavaScript, its anatomy and usage.				
Learning Outcomes	<ul style="list-style-type: none"> • Possess an all-inclusive understanding of the process used to create a webpage • Possess an all-inclusive understanding of the process used to create a Social Media application • Be able to build a basic web and Social media application page by themselves • Be able to differentiate a business and give it a competitive advantage via its webpage and its Social Media applications by developing them from a user-friendly perspective • Have basic knowledge of JavaScript • Understand Cascading Style Sheets (CSS) and CSS techniques • Be able to create, format, edit, and improve web content including text, images, tables, forms, backgrounds, colors, shades, font as well as padding, borders, margins • Be able to assess the design of web page and of Social Media application at a basic level 				

	<ul style="list-style-type: none"> • Be able to create links to other websites, within a website, or mail links, as well as target new browser windows • Be able to add a competitive advantage to a business and increase its audience via a Social Media application. 		
Prerequisites	None	Required	None
Course Content	<p><u>Weeks:</u></p> <p>Week 1:</p> <p>Lecture 1 - Introduction to the Internet and WWW</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course. It will explain the motivation behind the course and along with the idea of the course content. This will include an overview of a number of examples of real life web applications, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. An introduction to the Internet and explaining how it's working. We will start with the internet definitions and the history. Then we will analyze the internet protocols. Following we will review the Client-Server model. The domain name system will follow. As next step explaining to the class what uniform resource locator is. Next thing we will review the hypertext transfer protocol. On the last section of the lecture we will see the web servers.</p> <p>Outline</p> <ul style="list-style-type: none"> • Definitions and history • Internet protocols • Client-Server model • Domain name system • Uniform resource locators • Hyper Text Transfer Protocol • Web servers <p>Intended Learning Outcomes</p> <p>At the end of this lecture students should be able to:</p> <ul style="list-style-type: none"> • Understand the internet definitions and history • List different examples of web applications • Understand the Internet protocols • Understand the Client-Server model • Understand the Domain name system • Understand the Uniform resource locators • Understand the Hyper Text Transfer Protocol • Know the Web servers 		

Lecture 2 Creating a Basic Web Page.

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of how to create a basic web page. An introduction to the HTML source document and explaining how it's working. Then we will analyze the HTML, XML, and XHTML. Following we will compare HTML vs. XHTML. A composition of the XHTML document will follow. As next step explaining to the class how we are creating the XHTML. Next thing we will review the XHTML tags/elements. The headings come next. On the last section of the lecture we will see how we are commenting.

Outline

- HTML source document
- HTML, XML, XHTML
- HTML vs. XHTML
- Composition of a XHTML Document
- Creating XHTML
- XHTML Tags/Elements
- Headings
- Commenting

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the HTML source document
- Know the HTML, XML, XHTML
- Compare the HTML vs. XHTML
- Know the composition of the XHTML Document
- Create an XHTML
- Use XHTML Tags/Elements
- Use Headings
- Use the commenting in their source code

Week 2

Lecture 3 - HTML basics

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the HTML basics. An introduction to the HTML and its history. Then we will analyze the HTML syntax. Following we will review the semantic markup. The analysis of structure of HTML will follow. Next step is a quick tour of HTML explaining to the class its capabilities. On the last section of the lecture we will see the HTML semantic elements.

Outline

- HTML Defined and its History
- HTML Syntax
- Semantic Markup
- Structure of HTML
- Quick Tour of HTML
- HTML Semantic Elements

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the HTML defined and its history
- Understand the HTML Syntax
- Know the semantic markup
- Understand the structure of HTML
- Know the HTML capabilities
- Know the HTML semantic elements

Lecture 4 – CSS

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of CSS. An introduction to the CSS and explaining how it's working. Then we will analyze the CSS Syntax. Following we will review location of styles. An analysis of the selectors will follow. As next step explaining to the class the cascade and how styles interact. Next thing we will review is the box model. On the last section of the lecture we will see the CSS text styling.

Outline

- What is CSS?
- CSS Syntax
- Location of Styles
- Selectors
- The Cascade: How Styles Interact
- The Box Model
- CSS Text Styling

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know what CSS is
- Understand the CSS Syntax
- Know the location of styles
- Understand the selectors
- Know the cascade and how styles interact
- Understand the box model

- Understand the CSS text styling

Week 3

Lecture 5- Javascript

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Javascript. An introduction to Javascript and explaining what it is and how it's working. Then we will analyze the client-side scripting. A quick tour to the Javascript design principles will follow. As next step, we will see how we are using Javascript. Then we present the Javascript syntax. We will explain the Javascript objects and DOM will follow. On the last section of the lecture we will see the Events and the Forms.

Outline

- What is Javascript
- Javascript design
- Using Javascript
- Syntax
- Javascript objects
- The DOM
- Javascript events
- Forms

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know what is Javascript
- Understand Javascript design
- Know how to use Javascript
- Understand the Javascript syntax
- Know the Javascript objects
- Understand the DOM
- Understand the Javascript events
- Understand the Javascript Forms

Lecture 6 - JavaScript & jQuery

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of JavaScript and jQuery. An introduction to the JavaScript and explaining how it's working. Then we will analyze the JavaScript design. Following we will review the using of JavaScript. An analysis of the JavaScript syntax will follow. As next step explaining to the class the JavaScript Objects. Next thing we will review is the DOM. JavaScript events come next. Forms are the last part of the

JavaScript section. Entering the second part of the lecture we start with an introduction to the jQuery, explaining how it's working and what is available with it. Then we will analyze how to add jQuery to your website. Following we will review the jQuery syntax. On the last section of the lecture we will see jQuery / DOM comparison.

Outline

- What is JavaScript
- JavaScript Design
- Using JavaScript
- JavaScript Syntax
- JavaScript Objects
- The DOM
- JavaScript Events
- Forms
- What is jQuery?
- What is available with jQuery?
- How to add jQuery to your website
- jQuery Syntax
- jQuery / DOM comparison

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know what JavaScript is
- Understand the JavaScript design
- Know the using of JavaScript
- Understand the JavaScript syntax
- Know the JavaScript objects
- Understand the DOM
- Understand the JavaScript events
- Know the JavaScript Forms
- Know what jQuery is
- What is available with jQuery?
- Know how to add jQuery to a website
- Understand the jQuery syntax
- Understand the jQuery / DOM comparison

Week 4

Lecture 7 - Bootstrap

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Bootstrap. An introduction to the Bootstrap and explaining how it's working. Then we will analyze the advantages of Bootstrap. Following we will review the viewport. An analysis of the bootstrap essentials will follow. As next step explaining to the class

the bootstrap features. On the last section of the lecture we will see the grid system.

Outline

- What is Bootstrap?
- Advantages of Bootstrap
- What is The Viewport?
- Bootstrap Essentials
- Bootstrap Features
- Grid System

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know what Bootstrap is
- Know the advantages of Bootstrap
- Know what The Viewport is?
- Understand the Bootstrap essentials
- Understand the Bootstrap features
- Understand the grid system

Lecture 8 – Digital Marketing

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Digital Marketing. An introduction to the Digital Marketing and explaining what it is and how it is working. Then we will analyze the Digital Marketing strategies. On the last section of the lecture we will see the social media importance.

Outline

- What is Digital Marketing
- Digital Marketing strategies
- Social media importance

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know what Digital Marketing is
- Understand the Digital Marketing strategies
- Understand the Social media importance

Week 5

Lecture 9 – Fundamentals-email-marketing

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the fundamentals of email marketing. We will analyze why we should market over the email. Then we will review some key points of email marketing. On the last section of the lecture we will see the components of an email.

Outline

- Why market via email
- Email marketing key points
- Components of an email

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand why to market via email
- Know the email marketing key points
- Know the components of an email

Lecture 10 – Mobile marketing

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of mobile marketing. We will review websites. Then we will analyze advertising and location-based services. On the last section of the lecture we will see email, SMS, apps and gaming and mobile measurements.

Outline

- Mobile Marketing Overview
- Website
- Advertising
- Location-based Services
- Email & SMS
- Apps & Gaming
- Measurement

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the mobile marketing
- Understand Websites
- Understand the term advertising

- Understand the location-based Services
- Know the email & SMS marketing
- Understand Apps & Gaming marketing
- Understand the mobile marketing measurements

Week 6

Lecture 11 - Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exams)

Midterm Exams

Week 8

Lecture 13 - Databases

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of databases. An introduction to databases and web development and explaining how they are working. Then we will analyze the Structured Query Language (SQL). Following we will review the database APIs. An analysis of managing a MySQL database will follow. As next step explaining to the class how we are accessing MySQL in PHP. Next thing we will review the case study schemas. On the last section of the lecture we will see sample database techniques.

Outline

- Databases and Web Development
- Structured Query Language (SQL)
- Database APIs
- Managing a MySQL database
- Accessing MySQL in PHP
- Case study schemas
- Sample database techniques

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand databases and web development

- Understand the Structured Query Language (SQL)
- Understand the Database APIs
- Manage a MySQL database
- Access MySQL in PHP
- Know the case study schemas
- Understand the sample database techniques

Lecture 14 - Managing State

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of managing state. An introduction to the problem of state. Then we will analyze how we are passing information via query strings. Following we will see how we are passing information via the URL path. An overview of cookies will follow. As next step explaining to the class the serialization. On the last section of the lecture we will see the session state.

Outline

- The Problem of State
- Passing Information via Query Strings
- Passing Information via the URL Path
- Cookies
- Serialization
- Session State

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the problem of state
- Know how we are passing information via query strings
- Know how we are passing information via the URL path
- Understand the cookies
- Understand the serialization
- Understand the session state

Week 9

Lecture 15 - Social media

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of social media. An introduction to social media and explaining how they are working. Then we will analyze the examples of social media. Following we will explain why we should care about social media. As next step explaining to the class what are the social media. Next thing we will review how to generate an activity stream. How to share an activity stream come next. On the last section of the lecture we will

see how to process activity streaming.

Outline

- Examples
- Why You Should Care
- What is Social Media?
- Generate an activity stream
- Share activity stream
- Process activity streaming

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the examples of social media
- Know why we should care about social media
- Know what social media is
- Know how to generate an activity stream
- Know how to share activity stream
- Know how to process activity streaming

Lecture 16 - Social Media & Public Relations

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of social media & public relations. An introduction to the social media and explaining what it is. Then we will analyze the characteristics of social media. Following we will review the opportunities in social media. An analysis of the key terms to remember about social media will follow. As next step explaining to the class what is the purpose of social media. Next thing we will review the social media & mobile Applications. What are the goals in social media measurement come next. Following will review the role of the new PR professional. On the last section of the lecture we will see why it is important to understand social media from a PR perspective.

Outline

- What is social media?
- Characteristics of Social Media
- Opportunities in Social Media
- Key terms to remember about social media
- What is the purpose of social media?
- Social media & Mobile Applications
- What are the goals in social media measurement?
- Role of the new PR professional
- Why is it important to understand social media from a PR perspective?

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know what social media is
- Know the characteristics of social media
- Understand the opportunities in social media
- Understand the key terms to remember about social media
- Know what the purpose of social media is
- Know the social media & mobile applications
- Know what the goals in social media measurement are
- Understand the role of the new PR professional
- Know why it is important to understand social media from a PR perspective

Week 10

Lecture 17 - Page Layout Techniques

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of page layout techniques. We will start with a composition of Table vs. Div. As next step explaining to the class the common page layouts. On the last section of the lecture we will see the z-index.

Outline

- Table vs. Div
- Common Layouts
- Z-index (or stack level)

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the comparison of table vs. div
- Know the common page layouts
- Understand the z-index

Lecture 18 - Lab practice

(2 hours Lab + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture15, practicing in given exercises during the lab time.

Week 11

Lecture 19 - Lab practice

(2 hours Lab + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture15, practicing in given exercises during the lab time.

Lecture 20 – Introduction to APTANA

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Aptana. An introduction to the software and explaining how it's working. We will review the basics of the software.

Outline

- Aptana Basics

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the Aptana basics

Week 12

Lecture 21 - Lab practice

(2 hours Lab + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture18, practicing in given exercises during the lab time.

Lecture 22 - Lab practice

(2 hours Lab + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture18, practicing in given exercises during the lab time.

Week 13

Lecture 23 - Lab practice

(2 hours Lab + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught through the module, practicing in given exercises during the lab time.

Lecture 24 - Lab practice

(2 hours Lab + 4 hours recommended reading)

	<p>This is a practical lecture in lab and it is based on the material taught through the module, practicing in given exercises during the lab time.</p> <p>Week 14</p> <p>Lecture 25- Lab practice</p> <p>(2 hours Lab + 4 hours recommended reading)</p> <p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Lecture 26 - Revision part2</p> <p>(2 hours Lecture + 10 hours recommended reading)</p> <p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Week 15</p> <p>(2 hours exams)</p> <p>Final Examination</p> <hr/> <ul style="list-style-type: none"> • Webpage addresses (URLs) and browsers • Anatomy of a webpage • Responsive web design, progressive enhancement, standards of web design • The steps of the process for designing a web page • Launching a text editor • Elements of web pages: content, structure, text elements, images, look and style, validation • Organizing page content • Adding links to the webpage – links to other pages, internal links, mail links, targeting a new browser window • Adding images – image formats • Tables and forms – accessibility, layout, design • CSS – Cascading Style Sheets – orientation and functionality, page layout, techniques • Introduction to HTML5 • Formatting text, colors and backgrounds, Element box, padding, borders, margins • Floating and positioning - properties • Transitions, transforms, and animation • Introduction to JavaScript and HTML5
Teaching Methodology	Lectures/Labs/Group discussions/Weekly Quizzes/Flipped Teaching classroom

	<p>Labs 12 Hours</p> <p>Mid-term Exam 2 Hours</p> <p>Group Discussions/Presentations 8 Hours</p> <p>Final Exams 2 Hours</p> <p><u>Student's Private Study</u></p> <p>Student self- initiated 56 Hours</p> <p>Homework/ Projects/Presentations 44 Hours</p> <p>Midterm and Final Exams Preparation 20 Hours</p> <p>-----</p> <p>Total : 188 Hours</p>
Language	English

Course Title	Intermediate Web Application Development ACCREDITED				
Course Code	MW202				
Course Type	Compulsory				
Level	Diploma				
Year / Semester	2nd / 3rd				
Lecturer's Name	Giorgos Georgiou				
E-mail:	george@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 13:30 – 14:30, Tue 9:00 – 12:00, Wed 09:00 - 10:00, Thu 16:00 – 18:00 and Fri 9:00-10:00.				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	<p>This course focuses on enhancing the students' knowledge in web application design and development. In addition of building upon existing student knowledge in the areas of HTML and CSS, it also introduces concepts in programming web application servers. Students are expected to understand the fundamental concepts of software engineering and how they are applied to web application design and programming, as well as utilizing appropriate programming tools. The course will also built upon students' existing knowledge in the areas of PHP, ASP.NET, Java (JEE) and Ruby on Rails (RoR).</p>				
Learning Outcomes	<ul style="list-style-type: none"> • Develop web applications skills using software such as Dreamweaver. • Create dynamic web pages with JavaScript and Ajax. • Enhance their existing knowledge of PHP and MySQL. • Gain hands-on exposure to the web site design and development process. • Enhance their existing knowledge in ASP.NET, Java and RoR • Develop web applications with various tools and technologies. 				
Prerequisites	MW102	Required	None		
Course Content	<p>Weeks:</p> <p>Week 1</p> <p>Lecture 1 - Introduction / Using HTML/XHTML, History</p> <p>(2 hours Lecture + 4 hours recommended reading)</p>				

This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course. It will explain the rationale behind the course and along with a gist of the courses content. This will include an overview of a number of examples of real life web applications, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. An introduction to the course and in HTML/XHTML listing the capabilities of the language and explaining how it's working. Coding examples in HMTL/XHTML, will be given to understand easier the topic. Explaining to the class what HMTL/XHTML can do and the basic syntax of HMTL/XHTML. Making clear that the language is case sensitive. A brief history about the web application development will follow.

Outline

- Overview of Course, and design of the course
- Our expectations, and where to find resources for this course
- The lecture guide for this course
- Examples of Internet web applications
- History of HTML/XHTML
- The main issues, concerns and problems in developing web applications
- Differences between HTML and XHTML
- Exploring the browser & adjustable documents
- Example of a simple XHTML file & Hierarchical structure
- Coding examples XHTML & CSS
- What XHTML & CSS can do
- XHTML & CSS basic syntax

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Explain the structure of course and the course objectives/aims
- Know the history of HTML/XHTML
- List the differences between HTML and XHTML
- Explain the complexity of web applications
- Identify the main topics and points of concern when developing web applications
- Know the XHTML capabilities
- General idea about how XHTML works
- Know what is XHTML & CSS
- Know the basic XHTML syntax
- Know what XHTML can do

Lecture 2 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture1, practicing in the code from the examples in lecture notes and with

exercises during the lab time.

Week 2

Lecture 3 - Problems, Differences

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the HTML/XHTML variables, the data types and the basic XHTML instructions. Explaining the HTML/XHTML variables, the rules for the variables and giving coding examples. Explain the scope of the variables and explain the basic HTML/XHTML commands along with the data types through problem examples.

Outline

- Expand on the main differences between XHTML and HTML
- XHTML Variables
- XHTML variables scope
- XHTML basic commands
- Example problems

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the term variable and how we declare it
- Understand the variable scope
- Learn the basic XHTML commands and how we use them
- Learn and understand the data types that we use in XHTML
- Solution of a basic example problem

Lecture 4 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture2, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 3

Lecture 5 - Dreamweaver more feature Layers, working with links, Forwarding, Some definitions

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Dreamweaver more feature Layers, working with links, forwarding and some definitions. Analyzing and explaining the various windows and panels overview, explain the menu and

analyze the variety of stylesheet internal & external.

Outline

- Windows and panels overview
- Menus overview
- Creating a site a Dreamweaver
- Creating a XHTML page
- Editing “Preview browser list”
- Adding text, image, tables, lists, & links
- Adding stylesheet (internal & external)

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Windows and panels overview
- Understand the Menus overview
- Creating a site, a Dreamweaver
- Creating a XHTML page
- Know how to edit “Preview browser list”
- Know how to add text, image, tables, lists, & links
- Know how to add stylesheet (internal & external)
- Learn the variety of the operators and how we use them

Lecture 6 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture3, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 4

Dreamweaver more feature

Lecture 7- Linking and embedding multi-media, and setting parameters

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Dreamweaver more feature Linking and embedding multi-media, and setting parameters.

As starting point we will analyze the insert bar and the properties inspector (contextual panel). Following that we will analyze the document toolbar and panel groups such as file, tag inspector and CSS. As next step, we will see how to organize panels and create an example of site map. Also, having the aim to teach the students about page properties, how they can modify them. Also, we will explain the term Layers, working with links and linking and embedding multi- media, and setting parameters.

Outline

- Insert bar
- Properties inspector (contextual panel)
- Document toolbar
- Panel groups (File, tag inspector, CSS)
- Organizing your panels
- Site map
- Page properties (modify->page property)
- Layers
- Working with links
- Linking and embedding multi-media, and setting parameters
- Templates
- Library items

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the utilization of the insert bar, properties inspector (contextual panel) and document toolbar.
- Know how to create panel groups (File, tag inspector, CSS)
- Know how they can organizing their panels
- Understand the site map
- Know how page properties are working (modify->page property)
- Know how to work with links
- Know how to linking and embedding multi-media, and setting parameters by linking to an audio or video file
- Create a template
- Adding editable region
- Know how to add repeating region
- Know how to modify a template
- Know how they could embedding an audio or video file
- Create library items

Lecture 8 - Lab practice of lecture 4 & What you're in for, Why AJAX?, Look at some AJAX examples

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture4, practicing in the code from the examples in lecture notes and with exercises during the lab time. Also, this lab practice will include some AJAX examples for introduce the students to the next lecture.

Week 5

Lecture 9 - AJAX for Libraries, Walkthrough sample AJAX application

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of AJAX for Libraries, Walkthrough sample AJAX application. As starting point we will have a discussion about an emerging web application framework analyze how does AJAX fit into libraries. As next step, we will walk through the code of a working AJAX application through examples to make this as clear as possible to the students to understand.

Outline

- What is AJAX?
- Why AJAX?
- Look at some AJAX examples
- AJAX for Libraries
- Walkthrough sample AJAX application
- Explore some server scripting language

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand that not all AJAX apps involve XML
- Understand the combination of technologies of XHTML, CSS and DOM
- Understand the combination of technologies of HML, XSLT, XML, Http and JavaScript
- Understand the importance of using AJAX
- Learn how to use/change the AJAX for libraries
- Learn how to use/change the AJAX formatting.

Lecture 10 - Lab practice & Read and write Data Definition grammar of SQL, Read and write data modification statements (INSERT, UPDATE, DELETE)

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture5 and solving exercises found in the lecture notes and read and write Data Definition grammar of SQL, Read and write data modification statements (INSERT, UPDATE, DELETE)

Outline

- Read and write Data Definition grammar of SQL
- Read and write data modification statements

- (INSERT, UPDATE, DELETE)
- Read and write basic **SELECT FROM WHERE** queries
- Use aggregate functions

Intended Learning Outcomes

- Know how to read and write Data Definition grammar of SQL
- Know how read and write data modification statements
(INSERT, UPDATE, DELETE)
- Know how read and write basic **SELECT FROM WHERE** queries.
- Know how to see aggregate functions

Week 6

Lecture 11 - Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exams)

Midterm Exams

Week 8

Lecture 13: Fundamentals of Web Design & Assignment: Create a web page.

(2 hours Lecture + 4 hours recommended reading)

Divide the class into 3-4 small groups and assign group tasks. Have each group present their results and discuss the differences.

Outline

Purpose of Web Design

- Inform/Educate

- Persuade

Influences on Web Design

- Technology Used by Both Target Audience and Designer
- Nature of the Content
- Economy (Budget, Time, and Scale of the Project)
- Amount and Type of Visuals Included

Meeting Usability Objectives.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the purpose of web design
- Understand the influences on web design.

Lecture 14: (Lab) The Making of a Good Design, Typical Web Site Evolution

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of a good design. As starting point we will have a discussion about a good design. We will analyze how to design a website. As next step, we will walk through the typical web site evolution, through examples to make this as clear as possible to the students to understand.

Outline

- Good design
- Typical website evolution

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand principles of good design
- Understand a typical website

Week 9

Lecture 15 – The Process of Web Design, Pre-design Work, Influences on Design, Technology

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the process of web design, pre-design work, influences on design and technology. As starting point we will

analyze the process of web design and give examples. Following that we will analyze the predesign work with coding examples. As next step, we will see what the influences on the design are. On the last section of the lecture we will see the technology.

Outline

- Introduction to the process of web design
- Predesign work
- Influences on design
- Technology

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the process of web design
- Understand the predesign work.
- Understand the influences on the design
- Understand the technology

Lecture 16 - (Lab) Content, Economy, Visuals, Usability, Conventions, Accessibility Issues, Maintenance/Improvement, Resources

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of content, economy, visuals, usability, conventions, accessibility issues, maintenance/improvement and resources. As starting point we will analyze the content of web design and give examples. Following that we will analyze the economy. As next step, we will see what the visuals of the design are. Next step will be an overview to the usability that will guide us to the conventions of the web design. On the other hand, we will discuss the accessibility issues focusing on the maintenance/improvements of the topic. On the last section of the lecture we will see the resource part.

Outline

- Content overview
- Economy
- Visuals
- Usability
- Conventions
- Accessibility issues
- Maintenance/Improvement
- Resource

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the content of web design
- Understand the term economy.
- Understand the visuals of the design
- Understand the term usability
- Understand the web design conventions
- Understand the accessibility issues
- Know the maintenance/improvement
- Know the resources

Week 10

Lecture 17 – ASP.NET The Basics, Web Technologies, Server-Side Code

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the basics of the ASPNET, web technologies and server-side Code. As starting point we will analyze the basics of ASPNET, following that we will identify the problem and the answer to the problem. Then we will explain the web technologies. Following we will analyze the server-side code.

Outline

- ASPNET basics
- Web technologies
- Server-side code

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the ASPNET basics
- Understand the web technologies, their characteristics and their limitations and capabilities.
- Understand the server-side code

Lecture 18 - (Lab) ASP.NET Overview and Features Problems, WebTime.aspx Example

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of ASP.NET, features and problems and WebTime.aspx example. As starting point we will analyze the basics of ASP.net, Following that we will identify the problems and the answers to the problems. Then we will explain its features. Following we will analyze the webtime.aspx example.

Outline

- ASP.net overview
- Features and problems
- Webtime.aspx example

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the ASP.net basics
- Understand the ASP.net problems
- Understand the ASP.net features, their characteristics and their limitations and capabilities.
- Know the webtime.aspx example

Week 11

Lecture 19 - What is Ruby, Framework, how it works

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of What Ruby is, its framework and how it works. As starting point we will make an introduction to Ruby, following that we will see its framework. Then we will see how it works.

Outline

- Introduction to Ruby
- Framework
- How it works

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Ruby
- Understand Ruby framework
- Understand how it works

Lecture 20 - (Lab) Ruby tutorial

(2 hours Lecture + 4 hours recommended reading)

This is a tutorial lecture in lab and it is based on the material taught from lecture10.

Week 12

Lecture 21 - HTML – Headings, Paragraphs, Styles, Formatting.

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of HTML – Headings, Paragraphs, Styles, and Formatting. As starting point we will analyze the Headings and the heading rules with coding example, following that we will analyze the HTML paragraphs and the way they are displayed on the screen with coding examples. As next step, we will see how to change HTML styles with the use of coding examples to make this as clear as possible to the students to understand. On the last section of the lecture we will deal with HTML formatting, and how we use it.

Outline

- Headings
- HTML horizontal rules
- HTML display
- <pre> Element
- HTML styling
- HTML formatting

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the headings and their importance
- Understand the paragraphs and variety of the ways that they are used.
- Learn how to use/change the HTML style
- Learn how to use/change the HTML formatting.

Lecture 22 - (Lab) Links, Images, Tables, Lists

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Links, Images, Tables and Lists. As starting point we will analyze the links and their attributes, following that we will analyze the HTML images syntax with coding example. As next step, we will see the HTML tables with coding example. On the last section of the lecture we will see the HTML lists.

Outline

- Links – Hyperlinks
- Links attributes
- Images and syntax
- Tables
- Lists

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the links, their syntax and their attributes
- Understand the images and their syntax.
- Understand the HTML tables and how they are defined
- Understand the HTML lists.

Week 13

Lecture 23- Variables, Data Types, Basic Instructions

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the PHP variables, the data types and the basic PHP instructions. Explaining the PHP variables, the rules for the variables and giving coding examples. Explain the scope of the variables and explain the basic PHP commands along with the data types.

Outline

- PHP Variables
- PHP variables scope
- PHP basic commands
- PHP data types

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the term variable and how we declare it
- Understand the variable scope
- Learn the basic PHP commands and how we use them
- Learn and understand the data types that we use in PHP

Lecture 24 - (Lab) String Functions, Constants, Operators, If...Else...Elseif, Switch, While Loops, For Loops, Functions, Arrays

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of string functions, constants and the operators. Analyzing and explaining the various string functions, Explain the constants data type and analyze the variety of the operators with the support of coding examples. Following we will provide an overview of If...Else...Elseif, Switch, While Loops, For Loops, Functions and Arrays. As starting point we will analyze the conditional statements and the syntax that is used for the conditional statements with coding examples, following that we will analyze the looping statements and the syntax that is used for the looping statements with coding examples. As next step, we will see how to create a user defined function and analyze the function arguments with the use of coding examples to make this as clear as possible to the students to understand. Also having the aim to teach the students when a function is returning a value and when it's not. The last section of the lecture has to do with the arrays. We will explain the term array to students, and show how to

create an array. Also explain the different types of the arrays.

Outline

- String functions
- Constants
- Arithmetic operators
- Assignment operators
- String operators
- Increment/Decrement operators
- Comparison operators
- Logical operators
- Array operators If statement
- IF...else statement
- IF...elseif...else statement
- Switch statement
- While loop
- Do...while loop
- For loop
- Foreach loop
- Create a user defined function
- Functions arguments
- Arrays

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand string functions and what they do
- Understand the constants and when we use them
- Learn the variety of the operators and how we use them
- Understand the conditional statements and their syntax
- Understand the looping statements and their syntax
- Learn how to create a user defined function and how to use the function arguments
- Learn what an array is, what types of arrays we have and when we use arrays.

Week 14

Lecture 25- Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 26 - Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 15

	<p>(2 hours exams)</p> <p>Final Examination</p> <hr style="border-top: 1px dashed black;"/> <ul style="list-style-type: none"> • Introductions, course outline & expectation • Introduction to Web Architecture • How to write XHTML Documents. Choosing a HTML editor • Cascading Style Sheets • Introduction to JavaScript • JavaScript Functions, Arrays and Dates • XML and RSS • Introduction to Ajax - Using Open Source Libraries • Introduction to PHP • PHP Arrays, Date and Time • Using MySQL with PHP and Advanced Topics in Web Application Development 												
<p>Teaching Methodology</p>	<p>Lectures/Labs/Group discussions/Weekly Quizzes/Flipped Teaching</p>												
<p>Lab Hardware and Software</p>	<p>Lab Hardware Specification</p> <table border="1"> <tr> <td> <p>10 x DELL Laptop Inspiron 15-N5050</p> </td> <td> <p>6 x Lenovo Ideapad G50-80</p> </td> </tr> <tr> <td> <p>Intel Pentium B950 (2.10 GHz)</p> </td> <td> <p>Intel Pentium i3 500U5 (2.0 GHz)</p> </td> </tr> <tr> <td> <p>4 GB RAM / 500 GB HDD</p> </td> <td> <p>4GB RAM / 500GB</p> </td> </tr> <tr> <td> <p>Intel HD Graphics</p> </td> <td> <p>Intel HD Graphics</p> </td> </tr> <tr> <td> <p>802.11b/g/n Wireless LAN</p> </td> <td> <p>802.11b/g/n Wireless LAN</p> </td> </tr> <tr> <td> <p>Windows 7 Professional x64</p> </td> <td> <p>Windows 7 Professional x64</p> </td> </tr> </table>	<p>10 x DELL Laptop Inspiron 15-N5050</p>	<p>6 x Lenovo Ideapad G50-80</p>	<p>Intel Pentium B950 (2.10 GHz)</p>	<p>Intel Pentium i3 500U5 (2.0 GHz)</p>	<p>4 GB RAM / 500 GB HDD</p>	<p>4GB RAM / 500GB</p>	<p>Intel HD Graphics</p>	<p>Intel HD Graphics</p>	<p>802.11b/g/n Wireless LAN</p>	<p>802.11b/g/n Wireless LAN</p>	<p>Windows 7 Professional x64</p>	<p>Windows 7 Professional x64</p>
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<p>Windows 7 Professional x64</p>	<p>Windows 7 Professional x64</p>												

	HPE Proliant ML10 Server 838124-425 + Windows Server 2012 R2
	Intel Xeon E3-1225v5 (3.3GHz/4-core/80W) Processor Kit
	HPE 8GB Single Rank x8 PC4-17000P-E (DDR-2133) Unbuffered CAS-15 Standard Memory Kit
	2 x HP 1TB 6G 7.2k rpm SATA (3.5in)
	HPE 300W Multi-Output Power
	HP 9.5mm SATA DVD-RW JackBlack Gen9 Optical Drive
	Intel Ethernet Connection I219-LM
	2x display port, 1 Network RJ-45, 4x USB 3.0, 3x USB 2.0
Lab Software Requirements	
<ul style="list-style-type: none"> • WireShark https://www.wireshark.org/docs/wsug_html_chunked/ChIntroPlatforms.html <ul style="list-style-type: none"> ○ The current version of Wireshark should support any version of Windows that is still within its extended support lifetime. At the time of writing this includes Windows 10, 8, 7, Vista, Server 2016, Server 2012 R2, Server 2012, Server 2008 R2, and Server 2008. ○ Any modern 64-bit AMD64/x86-64 or 32-bit x86 processor. ○ 400 MB available RAM. Larger capture files require more RAM. ○ 300 MB available disk space. Capture files require additional disk space. ○ 1024x768 (1280x1024 or higher recommended) resolution with at least 16 bit color. 8-bit color should work but user experience will be degraded. ○ A supported network card for capturing <ul style="list-style-type: none"> ○ Ethernet. Any card supported by Windows should work. See the wiki pages on Ethernet capture and offloading for issues that may affect your environment. ○ 802.11. See the Wireshark wiki page. • NotePad++ http://notepad.reviewsoft.com/details/ <ul style="list-style-type: none"> ○ No special requirements. ○ OS Support Win2003, Win2000, Win7 x64, Win XP, Win Vista, Win7 x32, Win8 x32, Win8 x64, Win10 x32, Win10 x64, Windows 8, Windows 10 • WAMP http://ampps.com/wamp <ul style="list-style-type: none"> • Compatible OS: Windows XP SP3+, Windows Vista SP2+, Windows Server 2003 SP2+, Windows 7, Windows Server 2008, Windows Server 2008 R2. 	

	<ul style="list-style-type: none"> • Space: Capacity of minimum 1.5GB Hard Disk space. • Memory: 1GB RAM 						
Bibliography	<p>Core</p> <ul style="list-style-type: none"> • Nixon, R. (2014). "<i>Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5 (Learning Php, Mysql, Javascript, Css & Html5)</i>", 4th Edition, NY: O'Reilly Media. • PureWa I, S. (2014). "<i>Learning Web App Development: Build Quickly with Proven JavaScript Techniques</i>", 1st Edition, NY: O'Reilly Media. <p>Recommended</p> <ul style="list-style-type: none"> • Libicki, M. (2009). "<i>Web Application Architecture: Principles, Protocols and Practices</i>", 2nd Edition, NY: O'Reilly Media. 						
Assessment Methods	Class Attendance & Participation, Quizzes, Project, Midterm, Final Exams.						
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>						
Weighting of Assessment	Class Attendance & Participation (10%), Weekly quizzes (5%), Project (15%) Mid-term (20%), Final Exams (50%).						
Lectures / Hours per week	<p>1 Lecture / 2 hours</p> <p>1 Lab / 2 hours</p>						
Indicative learning and teaching time	<p>This module is delivered through lectures and labs.</p> <p>Teaching Hours:</p> <table> <tr> <td>Lectures</td> <td>30 Hours</td> </tr> <tr> <td>Labs</td> <td>22 Hours</td> </tr> <tr> <td>Mid-term Exam</td> <td>2 Hours</td> </tr> </table>	Lectures	30 Hours	Labs	22 Hours	Mid-term Exam	2 Hours
Lectures	30 Hours						
Labs	22 Hours						
Mid-term Exam	2 Hours						

	<p>Final Exams 2 Hours</p> <p><u>Student Learning Time</u></p> <p>Student reading 88 Hours</p> <p>Midterm and Final Exams 4 Hours</p> <p>Preparation 40 Hours</p> <p>-----</p> <p>Total : 188 Hours</p>
Language	English

Course Title	Software Engineering Principles & Techniques				
Course Code	CSC202				
Course Type	Compulsory				
Level	Diploma				
Year / Semester	2nd / 3rd				
Lecturer's Name	George Georgiou				
E-mail:	george@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 15:00 – 18:00, Tue 13:00 – 14:30, Wed 11:00 - 14:30 & Thu 13:00 – 14:30.				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	2 / 2	Laboratories / week	0 / 0
Course Purpose and Objectives	<p>To present students with the principles of Software Engineering, the software development life cycle, including software requirements engineering (elicitation, modeling, analysis and specification), software design, software implementation and testing. To build student knowledge of various software development process models, methods and techniques for specifying requirements, architectural and detailed design specification, prototyping, top-down and bottom-up software implementation and testing. To introduce students to project management within the domain of software engineering, project documentation and oral presentation. To help students build an understanding of how to develop software by guiding them through the development process and equipping them with the fundamental principles of system development with object oriented technology.</p>				
Learning Outcomes	<p>After the successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> • Understand the main characteristics of software • Understand the advantages and disadvantages of well-established software engineering models, such as the waterfall model, the iterative model and the extreme-programming model • Discuss user roles in the software development process • Describe the main technical activities associated with software engineering • Explain a variety of techniques associated with the main activities of software engineering and practice their use • Explain the key characteristics of different kinds of software and 				

	<p>discuss the implications of these characteristics on the selection of development techniques</p> <ul style="list-style-type: none"> • Choose development techniques, tools, and life-cycle models for a given project • Understand the importance of quality assurance, human factors, professional issues and project management in software development • Understand the importance of user involvement throughout the software development process • Understand the significance of the main characteristics of software product in its development, and the application of the fundamental principles of software engineering process • Understand the differences between and benefits of various process models for software development, as well as the techniques for modeling the system and software requirements and their analysis and the application of selected techniques and tools • Understand both the larger issues of project management and specific approaches to software development from specification and design, through to implementation, testing, and documentation • Understand the managerial, engineering and technical activities of producing a software product • Understand the importance the knowledge and application of software development process model in a team environment • Understand the key differences between the structured and object-oriented approaches for software analysis and design 		
Prerequisites	None	Required	None
Course Content	<p><u>Weeks:</u></p> <p>Week 1</p> <p>Slot 1: Lecture 1 - Software Engineering</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course. It will explain the motivation behind the course and along with the idea of the course content. This will include an overview of a number of examples of real life, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. We will start with an introduction to software engineering and explaining what it is. Then we will compare programs vs. software products. Following we will analyze the evolution of software engineering.</p> <p>Outline</p> <ul style="list-style-type: none"> • What is Software Engineering? 		

- Programs vs. Software Products
- Evolution of Software Engineering

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand what Software Engineering is.
- Know the comparison between programs and software products
- Understand the evolution of Software Engineering

Slot 2: Lecture 2 - Software Engineering (II)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Software Engineering. We will carry on with the evolution of software engineering. Then we will continue with the notable changes in software development practices. On the last section of the lecture we will make an introduction to life cycle models followed by the lecture summary.

Outline

- Evolution of Software Engineering
- Notable Changes In Software Development Practices
- Introduction to Life Cycle Models
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know what Software Engineering is.
- Understand the evolution of Software Engineering
- Understand the notable changes in software development practices
- Understand the life cycle models

Week 2

Slot 1: Lecture 3 - Life Cycle Models

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of life cycle models. First we will start with the classical waterfall model. Then we will analyze all the phases of the model; feasibility study, requirements analysis and specification, design, implementation and maintenance. Following we will see the iterative waterfall model. Then we will check the importance of the prototyping model. Following we will analyze the evolutionary model. After that the next model will be the spiral model. On the last section of the lecture we will have

a comparison of different life cycle models.

Outline:

- Classical Waterfall Model
- Feasibility Study
- Requirements Analysis and Specification
- Design
- Implementation
- Maintenance
- Iterative Waterfall Model
- Prototyping Model
- Evolutionary Model
- Spiral Model
- Comparison of Different Life Cycle Models

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the classical waterfall model
- Understand the feasibility study phase
- Understand the Requirements Analysis and Specification phase
- Understand the Design phase
- Understand the Implementation phase
- Understand the Maintenance phase
- Understand the Iterative Waterfall Model
- Understand the importance of Prototyping Model
- Understand the Evolutionary Model
- Understand the Spiral Model
- Understand the comparison of Different Life Cycle Models

Slot 2: Lecture 4 - Requirements Analysis and Specification

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Requirements Analysis and Specification. First, we will start with a brief review of previous lectures. Then we will make an introduction to requirements analysis. Next, we will see the requirements specification. Following we will explain the SRS document. Decision table is the next section of the lecture. On the last section of the lecture we will analyze the decision tree followed by the lecture summary.

Outline:

- Brief review of previous lectures
- Introduction
- Requirements analysis
- Requirements specification

- SRS document

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the requirements analysis
- Know the requirements specification
- Understand the SRS document

Week 3

Slot 1: Lecture 5 - Requirements Analysis and Specification (II)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Requirements Analysis and Specification. First, we will carry on with the requirements analysis. Decision table is the next section of the lecture. On the last section of the lecture we will analyze the decision tree followed by the lecture summary.

Outline:

- Requirements analysis
- Decision table
- Decision tree
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the requirements analysis
- Understand the decision table
- Understand the decision tree

Slot 2: Lecture 6 - Software Design

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of software design. First we will start with a brief review of previous lectures. Then we will make an introduction to software design. On the last section of the lecture we will analyze cohesion and coupling.

Outline:

- Brief review of previous lectures
- Introduction to software design
- Cohesion and Coupling

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the software design
- Understand the cohesion and coupling

Week 4

Slot 1: Lecture 7 - Software Design (II)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of software design. First, we will start with the goodness of a design. Following we will explain the functional independence. On the last section of the lecture we will compare function-oriented design vs. object-oriented design followed by the lecture summary.

Outline:

- Goodness of a design
- Functional Independence
- Function-oriented design vs. Object-oriented design
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the software design
- Understand the goodness of a design
- Understand the functional independence
- Understand the function-oriented design vs. object-oriented design comparison

Slot 2: Lecture 8 - Function-Oriented Software Design

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of function-oriented software design. First, we will start with a brief review of previous lecture. We will carry on the introduction to function-oriented design. Then we will analyze structured analysis and structured design. Following we will review data flow diagrams. On the last section of the lecture we will review the examples of the DFD's followed by the lecture summary.

Outline

- Brief review of last lecture
- Introduction to function-oriented design
- Structured Analysis and Structured Design

- Data flow diagrams (DFDs)
- Examples
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the function-oriented design
- Understand the structured analysis and structured design
- Understand the data flow diagrams (DFDs)
- Develop DFD model for any problem.
- Know the DFD examples

Week 5

Slot 1: Lecture 9 - Function-Oriented Software Design (II)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of function-oriented software design. First we will start with a brief review of previous lectures. We will carry on with a larger example of structured analysis. Then we will analyze structured design. On the last section of the lecture we will review the examples of the structured design of DFD's followed by the lecture summary.

Outline

- Brief review of previous lectures
- A larger example of Structured Analysis
- Structured Design
- Examples
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand a larger example of Structured Analysis
- Understand structured design
- Develop structured design from any DFD model.
- Know structured design examples

Slot 2: Lecture 10 - User Interface Design

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of user interface design. We start with an introduction to user interface and explaining what it is. Then we will analyze the characteristics of good user interfaces. Following we will compare mode-based vs. modeless interface and graphical user interface

(GUI) vs. text-based user interface. On the last section of the lecture we will analyze the types of user interfaces followed by the lecture summary.

Outline:

- Introduction to UI
- Characteristics of good UI's
- Mode-Based vs. Modeless Interface
- Graphical User Interface (GUI) vs. Text-Based User Interface
- Types of User Interfaces
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand user interfaces
- Know the characteristics of good UI's
- Understand the mode-based vs. modeless interface comparison
- Understand the graphical user interface (GUI) vs. text-based user interface comparison
- Understand the types of user interfaces

Week 6

Slot 1: Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Slot 2: Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exam)

Midterm Exams

Week 8

Slot 1: Lecture 11 - GUI Design and Coding

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of GUI Design and Coding. We start with a review of last lecture. Then we will analyze the interface design considerations. Following we will review standard widgets. On the last section of the lecture we will analyze coding.

Outline:

- Review of last lecture
- Interface design considerations
- Standard widgets
- Coding

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand interface design considerations
- Know the standard widgets
- Understand coding

Slot 2: Lecture 12 - GUI Design and Coding (II)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of GUI Design and Coding. We carry on with the coding and documentation followed by the lecture summary.

Outline:

- Coding Standards and Guidelines
- Code inspection and walkthrough
- Documentation
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand coding standards and guidelines
- Understand code inspection and walkthrough
- Understand the documentation

Week 9

Slot 1: Lecture 13 – Software Project Management

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of software project management. We will start with an introduction to project planning. Then we will analyze software cost estimation. Then we will analyze in depth the cost estimation models. Following we will review the software size metrics. An empirical estimation comes next and heuristic estimation will follow. COCOMO will be the next section of the lecture. After that we will see the staffing level estimation. On the last section of the lecture we will analyse the effect of schedule compression on cost followed by the lecture summary.

Outline

- Introduction to Project Planning
- Software Cost Estimation
- Cost Estimation Models
- Software Size Metrics
- Empirical Estimation
- Heuristic Estimation
- COCOMO
- Staffing Level Estimation
- Effect of Schedule Compression on Cost
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand project planning
- Understand software cost estimation
- Understand cost estimation models
- Understand software size metrics
- Understand empirical estimation
- Understand heuristic estimation
- Understand COCOMO
- Understand staffing level estimation
- Understand effect of schedule compression on cost

Slot 2: Lecture 14 – Software Project Management (II)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of software project management. We will start with an overview of last lecture. Then we will analyze staffing. Then we will analyze scheduling. Following we will review the risk management. On the last section of the lecture we will analyse the configuration management followed by the lecture summary.

Outline

- Overview of Last Lecture
- Staffing
- Scheduling
- Risk Management
- Configuration Management
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the basics of project management
- Understand staffing
- Understand scheduling
- Understand risk management
- Understand configuration management

Week 10

Slot 1: Lecture 15: Testing and Debugging

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of testing and debugging. We will start with the important concepts in program testing. A review to black-box testing will follow. Following we will see equivalence partitioning and boundary value analysis. White-box testing will follow.

Outline

- Important concepts in program testing
- Black-box testing
- Equivalence partitioning
- Boundary value analysis
- White-box testing

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the important concepts in program testing
- Understand black-box testing
- Understand equivalence partitioning
- Understand boundary value analysis
- Understand white-box testing

Slot 2: Lecture 16: Testing and Debugging (II)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of testing and debugging. We will start with debugging. On the last section of the lecture we will analyze unit, integration, and system testing followed by the lecture summary.

Outline

- Debugging
- Unit, Integration, and System testing

- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand debugging
- Understand unit, integration and system testing

Week 11

Slot 1: Lecture 17: Software Maintenance and Computer Aided Software Engineering (CASE)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of software maintenance and computer aided software engineering (CASE). We will start with an introduction to the concept. A review to the causes for maintenance will follow. Following we will see the laws of maintenance. The next section will be about Software reverse engineering. Software maintenance process models will follow. Software reengineering comes next. On the last section of the lecture we will analyze Computer Aided Software Engineering (CASE) and its benefits followed by the lecture summary.

Outline

- Introduction
- Causes for maintenance
- Laws of maintenance
- Software reverse engineering
- Software Maintenance Process Models
- Software reengineering
- Computer Aided Software Engineering (CASE)
- Benefits of CASE
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand maintenance and its scope
- Understand the causes for maintenance
- Understand the laws of maintenance
- Understand software reverse engineering
- Understand software maintenance process models
- Understand software reengineering
- Understand Computer Aided Software Engineering (CASE)
- Understand the benefits of CASE

Slot 2: Lecture 18 – Software Reliability

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of software reliability. We will start with an introduction to the concept. A review to reliability metrics will follow. Then we will analyze reliability growth modelling. On the last section of the lecture we will analyze statistical testing followed by the lecture summary.

Outline

- Introduction
- Reliability metrics
- Reliability growth modelling
- Statistical testing
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand software reliability
- Understand reliability metrics
- Understand reliability growth modelling
- Understand statistical testing

Week 12

Slot 1: Lecture 19 – Software Quality Assurance

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of software quality assurance. We will start with an introduction to quality engineering. A review to quality control and quality assurance will follow. On the last section of the lecture we will analyze ISO9000.

Outline

- Introduction Quality Engineering.
- Quality control and Quality Assurance
- ISO 9000

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand quality engineering
- Understand quality control and quality assurance

- Understand ISO 9000

Slot 2: Lecture 20 – Software Quality Assurance (II)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of software quality assurance. We will analyze SEI CMM followed by the lecture summary.

Outline

- SEI CMM
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand SEI CMM

Week 13

Slot 1: Lecture 21 – Software Reuse

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of software reuse. We will start with an introduction to the concepts. A review to the basic issues will follow. Then we will analyze domain analysis. On the last section of the lecture we will analyze reuse at organization level followed by the lecture summary.

Outline

- Introduction
- Basic issues
- Domain analysis
- Reuse at organization level
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand software reuse
- Understand the basic issues
- Understand domain analysis
- Understand reuse at organization level

Slot 2: Lecture 22 – Software Safety and Halstead’s Software Science

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of software safety and Halstead's software science. We will start with an introduction to Software safety. A review to general concepts will follow. Then we will analyze fault avoidance. Fault detection comes next. Fault-tolerance will be the next section. On the last section of the lecture we will analyze Halstead's software science followed by the lecture summary.

Outline

- Software safety
- General concepts
- Fault avoidance
- Fault detection
- Fault-tolerance
- Halstead's software science
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand software safety
- Understand the general concepts
- Understand fault avoidance
- Understand fault detection
- Understand fault-tolerance
- Understand Halstead's software science

Week 14

Slot 1: Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Slot 2: Revision part2

(2 hours Lecture + 14 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 15

(2 hours exam)

Final Examination

-
- The software process – prescriptive process models and agile development

	<ul style="list-style-type: none"> • System engineering, analysis modeling, design engineering • Architectural, component-level, and user interface designs • Software testing strategies and techniques and product metrics for software • Web engineering, formulation, and planning • Analysis and Design Modeling for Web Applications • Testing Web Applications • Managing Software projects • Risk management, quality management, process management, and change management in software management projects • Formal methods in software engineering • Cleanroom and Component-based software engineering • Reengineering
Teaching Methodology	Lectures/Group discussions
Bibliography	<p>Core</p> <ul style="list-style-type: none"> • Roger S. Pressman, <i>Software Engineering: a Practitioner's Approach</i>, 6th Edition, McGraw-Hill, 2005. <p>Recommended</p> <ul style="list-style-type: none"> • Ghezzi, C., Jazayeri, M., and Mandrioli, D., 2002. <i>Fundamentals of Software Engineering</i>. Prentice Hall • Pfleeger, Sh. And Atlee, J., 2009. <i>Software Engineering Theory and Practice</i>. 4th ed. Prentice Hall • Schach, S., 2002. <i>Object-Oriented and Classical Software Engineering</i>. 5th ed. McGraw-Hill • Sommerville, I., 2010. <i>Software Engineering</i>. 9th ed. Addison-Wesley
Assessment Methods	Class Attendance & Participation, Midterm and Final Exams, Flipped teaching, Minute paper.
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module.</p>

	Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.
Weighting of Assessment	Class Attendance & Participation (10%), Mid-term (40%), Final Exams (50%).
Lectures / Hours per week	2 Lecture / 2 hours
Indicative learning and teaching time	<p>This module is delivered through lectures, group discussions, and project.</p> <p><u>Teaching Hours:</u></p> <p>Lectures 40 Hours Case studies 4 Hours Mid-term Exam 2 Hours Group Discussions 8 Hours Final Exams 2 Hours</p> <p><u>Student Learning Time</u></p> <p>Student reading 56 Hours Homework/ Projects 44 Hours Midterm and Final Exams Preparation 20 Hours</p> <p>-----</p> <p>Total: 188 Hours</p>
Language	English

Course Title	Cloud Computing ACCREDITED				
Course Code	MW302				
Course Type	Elective				
Level	Diploma				
Year / Semester					
Lecturer's Name	Alexis Marcou				
E-mail:	alexis@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 13:30 – 14:30, Tue 9:00 – 12:00, Wed 09:00 - 10:00, Thu 16:00 – 18:00 and Fri 9:00-10:00.				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	2/ 4	Laboratories / week	None
Course Purpose and Objectives	This module aims to introduce and examine the area of cloud computing. It provides a description of the software components from which cloud infrastructure and platforms are constructed while it also presents methods for building scalable cloud applications. Students are expected to get familiar with the concepts of data centres, virtualization, distributed storage, platform services, web services, and caching. They will also develop basic technical knowledge and skills in the area of designing for contemporary Cloud Computing platforms. Case studies drawn from industrial applications of cloud computing will be used throughout this course.				
Learning Outcomes	<p>After the successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> •Understand how businesses can integrate Cloud Computing into their IT infrastructure •Understand the key dimensions of the challenge of Cloud Computing •Assess the economic, financial, and technological implications for selecting cloud computing for different organizations •Acquire a technical understanding of the foundations of Cloud Computing as compared to traditional IT •Implement scalable applications and services that execute in a distributed computing environment •Evaluate the trade-offs and challenges in developing in the cloud • Describe current research issues and challenges in relation to cloud computing 				
Prerequisites	None	Required	None		

Course Content	<p><u>Weeks:</u></p> <p>Week 1</p> <p>Lecture 1 - What is Cloud Computing, Cloud Architecture</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>It will explain the rationale behind the course and along with a gist of the courses content. This will include an overview of cloud computing and cloud architecture.</p> <p>Outline</p> <ul style="list-style-type: none"> • Understanding what cloud computing is. • Understanding the cloud architecture. <p>Intended Learning Outcomes</p> <ul style="list-style-type: none"> • Get familiar with cloud computing • Knowing the cloud architecture. <p>Lecture 2 - Cloud Summary, Cloud Computing Characteristics</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>At this lecture will explain the cloud computing characteristics and how it works and also a summary about cloud</p> <p>Outline</p> <ul style="list-style-type: none"> • Understanding the cloud concept. • Understanding the cloud computing characteristics. <p>Intended Learning Outcomes</p> <ul style="list-style-type: none"> • Knowing the cloud concept • Knowing the cloud computing characteristics. <p>Week 2</p> <p>Lecture 3 - Cloud Service Models, Opportunities and Challenges</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This lecture will provide an overview of the Cloud Service Models alongside with the Opportunities and challenges that occurs.</p> <p>Outline:</p> <ul style="list-style-type: none"> • Understanding the Cloud Service Model • Understanding the Opportunities in Cloud
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- Understanding the Challenges in Cloud

Intended Learning Outcomes

- Knowing the Cloud Service Model
- Learn for the Opportunities in Cloud
- Learn for the Challenges in Cloud

Lecture 4 - Introduction to cloud context, Technology context: multi-core, virtualization

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview to cloud context, Technology context: multi-core, virtualization.

Outline:

- Understanding cloud context
- Understanding the Technology context
- Understanding the multicore in cloud
- Understanding the virtualization in cloud

Intended Learning Outcomes

- Knowing the cloud context
- Learn for the Technology context
- Learn the multicore in cloud
- Knowing the virtualization in cloud

Week 3

Lecture 5 - 64-bit processors, parallel computing models, big-data storages

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of 64-bit processors, parallel computing models, big-data storages

Outline

- Understanding the 64-bit processors
- Understanding the Parallel computing models
- What is Big-data storages

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing how 64-bit processors works

- Learn about the Parallel computing models
- Knowing about Big-data storages

Lecture 6 - Cloud models: IaaS (Amazon AWS), PaaS (Microsoft Azure), SaaS (Google App Engine)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Cloud models: IaaS, PaaS, SaaS. How it works with real examples (Amazon AWS, Microsoft Azure, Google App Engine) what the difference and the opportunities of it.

Outline

- Understanding the Cloud models
- Understanding the IaaS (Amazon AWS)
- Understanding the PaaS (Microsoft Azure)
- Understanding the SaaS (Google App Engine)

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing the Cloud models
- Learn about IaaS (Amazon AWS)
- Learn about PaaS (Microsoft Azure)
- Learn about SaaS (Google App Engine)

Week 4

Lecture 7 - Data and Computing models: MapReduce, Graph processing using amazon elastic mapreduce

(2 hours Lecture + 4 hours recommended reading)

This lecture will explain Data and Computing models: MapReduce, Graph processing using amazon elastic mapreduce

Outline:

- Understanding the Data and Computing models:
- Understanding the MapReduce
- Understanding the Graph processing using amazon elastic

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing the Data and Computing models:
- Knowing the MapReduce

- Knowing the Graph processing using amazon elastic

Lecture 8 - A case-study of real business application of the cloud

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide a case-study of real business application of the cloud.

Outline:

- Study a case study about the real business application of the cloud computing.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understanding from a real case study of a business application in cloud, how it works the advantages but also the disadvantages of this new era

Week 5

Lecture 9: Classification of Distributed Computing Systems, Peer-to-peer (P2P) Networks

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide a description about the Classification of Distributed Computing Systems, Peer-to-peer (P2P) Networks.

Outline:

- Understanding the classification of Distributed Computing Systems.
- Understanding the Peer-to-Peer Networks.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing the classification of Distributed Computing Systems.
- Knowing the Peer-to-Peer Networks.

Lecture 10 - Computational and Data Grids, Advantage of Clouds over Traditional Distributed Systems

(2 hours Lecture + 4 hours recommended reading)

This lecture will explain how Computational and Data Grids works, the Advantage of Clouds over Traditional Distributed Systems.

Outline:

- Understanding how Computational and Data Grids works
- Understanding the Advantage of Clouds over Traditional Distributed Systems.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing how Computational and Data Grids works
- Knowing the Advantage of Clouds over Traditional Distributed Systems.

Week 6

Lecture 11 - Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exam)

Midterm Exams

Week 8

Lecture 13 - Software Environments for Distributed Systems and Clouds: Service-Oriented Architecture (SOA) Layered Architecture

(2 hours Lecture + 4 hours recommended reading)

This lecture will explain the Software Environments for Distributed Systems and Clouds: Service-Oriented Architecture (SOA) Layered Architecture.

Outline:

- Understanding Software Environments for Distributed Systems and Clouds
- Understanding Service-Oriented Architecture (SOA) Layered Architecture.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing Software Environments for Distributed Systems and Clouds
- Knowing Service-Oriented Architecture (SOA) Layered Architecture.

Lecture 14: Cloud Computing & High-Performance Computing Definitions and Synergies

(2 hours Lecture + 4 hours recommended reading)

This lecture will explain the Cloud Computing & High-Performance Computing Definitions and Synergies

Outline:

- Understanding the Cloud Computing & High-Performance Computing Definitions and Synergies.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing the Cloud Computing & High-Performance Computing Definitions and Synergies.

Week 9

Lecture 15 Cloud Computing Impact on Future, Enterprise Architectures (EA).

(2 hours Lecture + 4 hours recommended reading)

This lecture will explain Cloud Computing Impact on Future, Enterprise Architectures (EA).

Outline:

- Understanding the Cloud Computing Impact on Future, Enterprise Architectures (EA).

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understanding the real demonstration of cloud capabilities
- Learn the Cloud models.

Lecture 16 - Cloud Service & Delivery Model Trade-offs, Cloud in Open Architecture Global Environment

(2 hours Lecture + 4 hours recommended reading)

This lecture will explain Cloud Service & Delivery Model Trade-offs, Cloud in Open Architecture Global Environment

Outline:

- Understanding the Cloud Service
- Understanding the Delivery Model Trade-offs
- Understanding Cloud in Open Architecture Global Environment

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing the Cloud Service
- Knowing the Delivery Model Trade-offs
- Knowing the Cloud in Open Architecture Global Environment

Week 10

Lecture 17 – High Performance Computing (HPC) in the Cloud- Are There Cost Savings, Security and privacy in the cloud?

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide information's about High Performance Computing (HPC) in the Cloud- Are There Cost Savings, Security and privacy in the cloud

Outline:

- Understanding the High-Performance Computing (HPC) in the Cloud
- Understanding the Cost Savings in the cloud
- Understanding the Security in the cloud
- Understanding the privacy in the cloud
- Real demonstration of cloud capabilities

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing the High-Performance Computing (HPC) in the Cloud
- Knowing the Cost Savings in the cloud
- Knowing the Security in the cloud
- Knowing the privacy in the cloud

- Understanding the real demonstration of cloud capabilities

Lecture 18 - Cloud Computing case studies

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide a various case studies about the cloud computing

Outline:

- Studying and understanding various case studies.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing and learn about the case studies achievements

Week 11

Lecture 19 - Differences between Software as a Service (SaaS), Platform as a Service (PaaS), Infrastructure as a Service (IaaS)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide Differences between Software as a Service (SaaS), Platform as a Service (PaaS), Infrastructure as a Service (IaaS)

Outline:

- Understanding the Differences between Software as a Service (SaaS)
- Understanding the Platform as a Service (PaaS)
- Understanding the Infrastructure as a Service (IaaS)

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing the Differences between Software as a Service (SaaS)
- Knowing the Platform as a Service (PaaS)
- Knowing the Infrastructure as a Service (IaaS)

Lecture 20 - Cloud Service & Delivery Model Trade-offs, Cloud in Open Architecture Global Environment

(2 hours Lecture + 4 hours recommended reading)

This lecture will explain Cloud Service & Delivery Model Trade-offs, Cloud in Open Architecture Global Environment

Outline:

- Understanding the Cloud Service & Delivery Model Trade-offs
- Understanding the Cloud in Open Architecture Global Environment

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing the Cloud Service & Delivery Model Trade-offs
- Knowing the Cloud in Open Architecture Global Environment

Week 12

Lecture 21 -A high-level discussion of the fundamental challenges and issues/characteristics of cloud computing

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide a high-level discussion of the fundamental challenges and issues/characteristics of cloud computing

Outline:

- Discussion of the fundamental challenges and issues/characteristics of cloud computing

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understanding the fundamental challenges and issues/characteristics of cloud computing

Lecture 22 - Identify a few security and privacy issues within this framework

(2 hours Lecture + 4 hours recommended reading)

This lecture will Identify a few security and privacy issues within this framework

Outline:

- Understanding security and privacy issues within this framework.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Learn to identify a few security and privacy issues within this framework.

Week 13

Lecture 23 - Propose some approaches to addressing these issues, Preliminary ideas to think about

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide some approaches to addressing these issues, Preliminary ideas to think about

Outline:

- Understanding some approaches to addressing these issues, Preliminary ideas to think.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understanding approaches to addressing these issues, Preliminary ideas to think.

Lecture 24 - Auditing, monitoring and risk management, Privacy breaches

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide Auditing, monitoring and risk management, Privacy breaches

Outline:

- Understanding the Auditing in cloud
- Understanding the Monitoring in cloud
- Understanding the Risk management in cloud
- Understanding the Privacy breaches in cloud

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Knowing the Auditing in cloud
- Knowing the Monitoring in cloud
- Knowing the Risk management in cloud
- Knowing the Privacy breaches in cloud

	<p>Week 14</p> <p>Lecture 25 - Revision</p> <p>(2 hours Lecture + 10 hours recommended reading)</p> <p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Lecture 26 - Revision</p> <p>(2 hours Lecture + 10 hours recommended reading)</p> <p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Week 15</p> <p>(2 hours exam)</p> <p>Final Examination</p>
Teaching Methodology	Lectures/Labs/group discussions/case studies.
Bibliography	<p>Core</p> <ul style="list-style-type: none"> Michael, K. (2014). <i>"Architecting the Cloud: Design Decisions for Cloud Computing Service Models (SaaS, PaaS, and IaaS)"</i>, 1st Edition, New Jersey: Wiley. <p>Recommended</p> <ul style="list-style-type: none"> Erl, T., Puttini, R., and Mahmoo, Z. (2013). <i>"Cloud Computing: Concepts, Technology & Architecture"</i>. London: Prentice Hall Publishing. Nayan, R. (2016). <i>"Cloud Computing (The MIT Press Essential Knowledge series)"</i>. Massachusetts: The MIT Press.
Assessment Methods	Class Attendance & Participation, Midterm, Final Exams.
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall</p>

	summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.
Weighting of Assessment	Class attendance & Participation (10%), Midterm (30%), Final Exams (60%).
Lectures / Hours per week	2 Lecture / 4 hours
Indicative learning and teaching time	<p>This module is delivered through lectures, group discussions and labs.</p> <p><u>Teaching Hours:</u></p> <p>Lectures 60 Hours</p> <p>Mid-term Exam 2 Hours</p> <p>Group Discussions/case studies 4 Hours</p> <p>Final Exams 2 Hours</p> <p><u>Student Learning Time</u></p> <p>Student reading 80 Hours</p> <p>Midterm and Final Exams</p> <p>Preparation 40 Hours</p> <p>-----</p> <p>Total: 188 Hours</p>
Language	English

Course Title	Content Development for Social Media and Search Engines Optimization (SEO) ACCREDITED				
Course Code	DM206				
Course Type	Elective				
Level	Diploma				
Year / Semester					
Lecturer's Name	Panayiotis Vorkas				
E-mail:	vorkas@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 15:00 – 18:00, Tue 13:00 – 14:30, Wed 11:00 - 14:30 & Thu 13:00 – 14:30				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	2/ 2	Laboratories / week	NONE
Course Purpose and Objectives	To aid students in developing content for Social Media and other web presence, aimed at the optimization of Search Engines results. To help students understand the new and complex real-time marketing and publishing landscape, as well as the emerging interdependency of search engines and social networks tactics and technologies. To build student knowledge about Social Networks Demographics in order to be able to help them target selected markets successfully. To equip students with the necessary skills needed to optimize their business use of search engines and social networks, and fill them with content that will be easily found and navigated through by target markets, as part of an effective marketing plan implementation. To provide students with simple and actionable step-by-step plan towards becoming effective real-time content marketers by using the basic integrated principles of search marketing, social media marketing, and content publishing, in order to be able to develop basic integrated real-time content marketing platforms.				
Learning Outcomes	<ul style="list-style-type: none"> • Possess an all-inclusive understanding of the context in which search engines and social networks exist and knowledge about Social Networks' Demographics. • Gain an understanding about the overlapping area of social media networks and search engines and learn how to optimize each of these. • Possess a thorough understanding of how real-time content users think and behave. • Acquire knowledge about the synergies between social networks 				

	<p>presence and search engines.</p> <ul style="list-style-type: none"> • Be able to optimize their future business performance through an integrated real-time content marketing platform. • Be able to develop basic real-time content marketing platform by themselves. • Be able to write digital content in a professional manner by also adopting the user perspective. • Be able to manage at an intermediate level Social Media Networks, Forums, Blogs, press releases, Google News and use Social Networks effectively for the benefit of the business they would be part of. 		
Prerequisites	None	Required	None
Course Content	<p><u>WEEKS:</u></p> <p>Week 1</p> <p>Lecture 1- Introduction to the module:</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course.</p> <p>Outline:</p> <ul style="list-style-type: none"> • Overview of the course • Our expectations, and were to find resources for this course. • Discussion concerning the recommended books/journals. • Description of Module Outline/assessment criteria/class hours. <p>Intended Learning Outcomes</p> <p>At the end of this lecture students should be able to:</p> <ul style="list-style-type: none"> • Explain the structure of course and course objectives/aims. • Understand the concept of Content Development for Social Media and Search Engines Optimization (SEO). <p>Lecture 2: Introduction to the module:</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This lecture will provide an overview of Content Development for Social Media and Search Engines Optimization (SEO) and why is Content Development for Social Media and Search Engines Optimization (SEO) important for companies.</p> <p>Outline:</p> <ul style="list-style-type: none"> • What to expect from Content Development for Social Media and Search Engines Optimization (SEO). • Definitions of key Content Development for Social Media and Search Engines Optimization (SEO) terms. 		

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Understand the concept of Content Development for Social Media and Search Engines Optimization (SEO).
- Understand and explain why companies should use digital branding
- Explain the benefits and Costs of digital branding.

Week 2:

Lecture 3- The importance of a organizations brand name

(2 hours Lecture + 4 hours recommended reading)

Coca-Cola. Kleenex. Netflix. Google. Brand names surround us, often to the point that they become a natural part of our everyday speech. There are countless components to creating a successful brand - the most important of which, of course, is providing a good product or service. The brand name itself carries more weight than you might think - and can mark the difference between a brand that gains traction and one that falls flat.

Outline:

- Branding provides a competitive advantage
- Brands provide a stable asset
- Brands provide economic value
- Brands set expectations

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Describe marketing uses of branding
- Describe marketing uses of packaging and labeling

Lecture 4 - The image and identity of a Brand Name

(2 hours Lecture + 4 hours recommended reading)

A company's brand identity is how that business wants to be perceived by consumers. The components of the brand (name, logo, tone, tagline, typeface) are created by the business to reflect the value the company is trying to bring to the market and to appeal to its customers. Brand identity is separate from brand image – the term for how consumers actually perceive the brand.

Outline:

- When Should You Brand?
- What Goes into a Brand?
- Building Brand Personality

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- How choice of brand name can connect with the intended audience.
- What qualities contribute to a powerful logo.

Week 3:

Lecture 5: What is an IP Addresses?

(2 hours Lecture + 4 hours recommended reading)

An IP address is a fascinating product of modern computer technology designed to allow one computer (or other digital device) to communicate with another via the Internet. IP addresses allow the location of literally billions of digital devices that are connected to the Internet to be pinpointed and differentiated from other devices. In the same sense that someone needs your mailing address to send you a letter, a remote computer needs your IP address to communicate with your computer.

Outline:

- The Format of an IP Address
- Static Versus Dynamic IP Addresses
- What is My IP Address?

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Describe the basics of IP protocol
- Students identify (A, B, C) classes of IP addresses

Lecture 6 - What is its significance of an IP?

(2 hours Lecture + 4 hours recommended reading)

IP addresses are one of the most critical resources that need to be managed in any network. Every networked application and device -- from e-mail and Web connectivity to file storage and networked printers -- depends on IP and requires address assignment. That presents a big enough challenge, but it's becoming an even bigger challenge as new core services like VoIP and mobile networks increase IP address assignment needs, requiring more robust allocation, classification, and tracking of addresses. This is known collectively as IP address management (IPAM).

Outline:

- IP address provides an identity to a networked device

- DNS servers and hostname to find its IP address
- How are IP addresses distributed?

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Understanding IP addresses
- Describe the purpose, functions, and characteristics of an IP address.

Week 4:

Lecture 7 - What is a Domain Name?

(2 hours Lecture + 4 hours recommended reading)

A domain name is your website name. A domain name is the address where Internet users can access your website. A domain name is used for finding and identifying computers on the Internet. Computers use IP addresses, which are a series of number. However, it is difficult for humans to remember strings of numbers. Because of this, domain names were developed and used to identify entities on the Internet rather than using IP addresses.

Outline:

- What is the purpose of a domain name?
- Domain name space
- Domain name registration

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Describe the purpose of a domain name.
- Understand the connection between a domain name and an IP address.

Lecture 8 - A brand as a Domain name

(2 hours Lecture + 4 hours recommended reading)

Using domains effectively for branding purposes means a lot more than just getting the brand name in the domain. As our jobs have transcended plain “SEO”, we are being asked increasingly strategic questions relating to broader online marketing and competitive strategies.

Outline:

- Brand Naming Strategy
- Brand considerations when choosing domain names.
- What Makes a Domain Brandable?

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Describe the importance of a domain name.
- Understand how to carry out a basic brand naming strategy.

Week 5:

Lecture 9- Domain name management.

(2 hours Lecture + 4 hours recommended reading)

Your domain name is one of the most important parts of your web presence. It's your "address" on the internet, and points to your digital home base: your company website. The domain name system is not terribly complex, but it's just complex enough that not everyone understands how it all works. For this reason, many organizations turn over all control of their domain name to an agency or web firm to manage.

Outline:

- How do you buy a domain name?
- How do you register a domain name?
- Who Should Control Your Domain Name Registration?

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Understand how a domain name should be managed.
- Understand step by step how to create and register a domain name.

Lecture 10 - How a brand name is protected.

(2 hours Lecture + 4 hours recommended reading)

The process of naming your business is a complex one. Not only must it reflect your brand but you need to find ways to protect it against name hijackers, scammers, impersonators, cybersquatting, and business identity theft. There are several ways to protect your business name – locally, nationally, and in global markets.

Outline:

- How to protect your web content?
- How to trademark your brand?
- How to monitor your brand and competitors?

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Protecting Your Brand with Trademarks.

Week 6:

Lecture 11 - Revision for Midterm

(2 hours Lecture + 10 hours recommended reading)

Revision of Weeks 1 to 5.

Lecture 12 – Revision for Midterm

(2 hours Lecture + 10 hours recommended reading)

Revision of Weeks 1 to 5.

Week 7: Midterm Exam week

(2 hours exams)

Week 8:

Lecture 13 - How to find out is a domain is available?

(2 hours Lecture + 4 hours recommended reading)

A domain name is an electronic address for a computer network. If there is a webpage you want to reach, you will get to it by typing the domain name into your computer. When creating a website, most people will choose a domain name that reflects the subject matter of the site. Check if a domain name is available by searching for it through any online domain registrar or web hosting platforms.

Outline:

- Understanding Domains
- Checking Registries
- Checking Hosting Companies

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Search the web for the availability of domain names.
- Know the difference between .com and .org

Lecture 14 - How to register a domain name.

(2 hours Lecture + 4 hours recommended reading)

Registering your domain name is the first step in establishing your online presence and reaching visitors. We'll show you how to create and register your domain, avoid some of the pitfalls that can arise, and choose the best domain name to make sure that your site reaches the

most people.

Outline:

- How do you buy a domain name?
- How much is it for a domain name?
- What is domain privacy?

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Registering a Domain name
- Choosing a Top-Level Domain

Week 9:

Lecture 15 - What is a search engine?

(2 hours Lecture + 4 hours recommended reading)

A search engine is a web-based tool that enables users to locate information on the World Wide Web. Popular examples of search engines are Google, Yahoo!, and MSN Search. Search engines utilize automated software applications (referred to as robots, bots, or spiders) that travel along the Web, following links from page to page, site to site. The information gathered by the spiders is used to create a searchable index of the Web.

Outline:

- How to access a search engine
- How a search engine works
- What is the difference between the search engines?

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Describe how a search engine works.
- Know the differences between the search engines.

Lecture 16 - The tree types of search engines and how and when they should be used.

(2 hours Lecture + 4 hours recommended reading)

Historically there have been three types of search engines, which can be described as follows:

Spiders, otherwise known as crawlers

Directories, which are usually driven by human submissions

Hybrids, which are a blend of the above

Outline:

- Crawler-Based Search Engines
- Human-Powered Directories
- “Hybrid Search Engines” Or Mixed Results

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Describe how each type of search engine works.
- What is each of the search engines types used for.

Week 10:

Lecture 17 - Search Engine Optimization (S.E.O.).

(2 hours Lecture + 4 hours recommended reading)

Search engine optimization (SEO) is the process of affecting the visibility of a website or a web page in a web search engine's unpaid results—often referred to as "natural", "organic", or "earned" results.

Outline:

- What Is SEO?
- Why does my website need SEO?
- Can I do SEO for myself?

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Know how SEO can be used as a marketing strategy
- Describe the functions of SEO.

Lecture 18 - How S.E.O. can help a website reach the top of a search engine.

(2 hours Lecture + 4 hours recommended reading)

SEO has become widely adopted as an online marketing strategy because of its effectiveness. It helps Increased Traffic, it is Cost effectiveness, Increases site usability and brand awareness.

Outline:

- Optimize your local presence
- What is the difference between paid and unpaid SEO?
- How can social media help boost SEO.

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Carry out a SEO marketing strategy
- How to stay at the top of the search engine.

Week 11:

Lecture 19 - real-life companies that have successfully developed their brand digitally.

(2 hours Lecture + 4 hours recommended reading)

In the ever-changing landscape of digital marketing it can be hard to truly examine what works and more importantly what doesn't. In our opinion, a great place to start is by looking at the brands at the forefront of the digital marketing world and analyze what worked for them. There is no need to reinvent the wheel. (coca-cola, Samsung, Toyota, Nike)

Lecture 20 - How did the real-life companies succeed in developing their brand digitally?

(2 hours Lecture + 4 hours recommended reading)

A look at the top brands (coca-cola, Samsung, Toyota, Nike) and how they managed to reach the top of their respected markets through their digital campaigns.

Week 12:

Lecture 21 - Group assignment. Create your own brand and provide a step-by-step analysis of how you would develop a digital foot print.

(2 hours Lecture + 4 hours recommended reading)

Lecture 22 - Group in class presentation.

(2 hours Lecture + 4 hours recommended reading)

Week 13:

Lecture 23 - How important it is to create a first impression with a consumer.

(2 hours Lecture + 4 hours recommended reading)

What potential customers think about you and how they judge you, is often determined by their first impression. A first impression based on your outward appearance. Things that are evident right away, before they dig deeper:

- Your website (professional looking as appropriate for your type, loads quickly, well laid out and easy to navigate, helpful content that is up-to-date, mobile optimized and easy to view and navigate on mobile devices, etc.)
- Your social networks (complete profile, high quality profile photo and cover image, up-to-date information, active with regularly shared content that is helpful and interesting)

Outline:

- Make first impressions a priority
- Why is the visual aspect the most important in first impressions?
- Brand Loyalty Shaped From the First Impression

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- The connection between first impressions & branding
- How the first impression must be part of the marketing strategy.

Lecture 24 - How to keep the consumer coming back to the web site.

(2 hours Lecture + 4 hours recommended reading)

Once you've converted a site visitor into a customer, it's time to take it a step further and keep them coming back – and turn them into brand advocates. Brand advocates are the people who are loyal users of your goods and services, and most importantly, will sing your praises to others

Outline:

- Keeping the website up to date.
- Website design simple and usable.
- Website and social media connection.

	<p>Intended Learning Outcomes:</p> <p>At the end of this lecture students should be able to:</p> <ul style="list-style-type: none"> • Attracted current and new customers to their websites. • Know all the steps needed to keep the website competitive. <p>Week 14:</p> <p>Lecture 25 - Revision for Final Exam</p> <p>(2 hours Lecture + 10 hours recommended reading)</p> <p>Revision of weeks 1 to 8.</p> <p>Lecture 26 - Revision for Final Exam</p> <p>(2 hours Lecture + 10 hours recommended reading)</p> <p>Revision of weeks 10 to 13.</p> <p>Week 15:</p> <p>Final Examination</p> <p>(2 hours exams)</p> <p>-----</p> <ul style="list-style-type: none"> • Context of digital branding and performance metrics • The elements of digital branding • Consistency in content displayed to audiences online • Brand positioning in the digital age • Online segmentation for branding purposes • Understanding the basics of a web-site that supports the brand • Involving your target audience • Basic software technology necessary for a strong brand presence online • Functionality of websites • Emotional Impact of branded websites • Case studies
Teaching Methodology	Lectures, group discussions, presentations.
Bibliography	<p>Core</p> <ul style="list-style-type: none"> • Garner, R. (2013). <i>Search & Social: The Definitive Guide to real-Time Content marketing</i>. John Wiley & Sons, Inc., Indianapolis, Indiana. <p>Recommended</p> <ul style="list-style-type: none"> • Amerland, D. (2013). <i>Google Semantic Search: Search Engine Optimization (SEO) Techniques That Get Your Company More Traffic, Increase Brand Impact, and Amplify Your Online Presence</i>. Que Publishing.

	<ul style="list-style-type: none"> Jones, K. (2012). <i>Search Engine Optimization: Your Visual blueprint for effective Internet Marketing</i>. 3rd Ed. John Wiley & Sons, Indianapolis, Indiana.
Assessment Methods	Class attendance & Participation, Midterm, Final Exams, Project and Presentation.
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>
Weighting of Assessment	Class attendance & Participation (10%), Midterm (25%), Final Exams (50%), Project (10%) and Presentation (5%).
Lectures / Hours per week	2 Lecture / 4 hours
Assignment details and Assessment	<p>Students will be required to deliver a course project on the below (or similar) subject:</p> <p><u>“Choose a real-life company that already has an online presence, including a presence on Social Networks. Present and analyse their real-time marketing platform strategy, by making reference to course-taught theory. Develop a critical assessment of their search and social presence, including evaluation, comparison to theory, and recommendations that you would make for improvement”.</u></p> <p>The final project should be between 10 to 15 A4 pages 1.5 spacing, Times New Roman 12 font, 2cm margins on each side, excluding appendices, tables, figures, charts, references. The project should also contain a REFERENCES part at the end, where you should list all sources used in the preparation of the project. The Harvard referencing system should be used.</p> <p><u>The project will be graded as follows:</u></p> <p>Effective use and reference to theory from the course and from external sources: 30%</p>

	<p>Strategic thinking and creative solutions: 20%</p> <p>Overall presentation: 10%</p> <p>Suggestions and recommendations for improvement: 10%</p> <p>Thorough, focused and insightful analysis: 10%</p> <p>The use of examples and data: 10%</p>
Indicative learning and teaching time	<p>This module is delivered through lectures, group discussions and labs.</p> <p><u>Teaching Hours:</u></p> <p>Lectures 56 Hours</p> <p>Mid-term Exam 2 Hours</p> <p>Group Discussions 8 Hours</p> <p>Final Exams 2 Hours</p> <p><u>Student Learning Time</u></p> <p>Student reading 50 Hours</p> <p>Project and Presentation 30 Hours</p> <p>Midterm and Final Exams</p> <p>Preparation 40 Hours</p> <p>-----</p> <p>Total : 188 Hours</p>
Language	English

Course Title	Social Media Marketing Management ACCREDITED				
Course Code	DM101				
Course Type	Elective				
Level	Diploma				
Year / Semester					
Lecturer's Name	Demetrios Melides				
E-mail:	d.melides@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 13:30 – 14:30, Tue 9:00 – 12:00, Wed 09:00 - 10:00, Thu 16:00 – 18:00 and Fri 9:00-10:00.				
Preferred style of contact:	Via e-mail for setting an appointment.				
ECTS	7.5	Lectures / week	2/2	Laboratories / week	None
Course Purpose and Objectives	<p>DM101 provides an introduction to social media marketing (SMM). It is built around a proven eight-step social media planning model provides you with a cumulative learning experience, showing you how to construct social media strategies that achieve desired marketing goals.</p> <p>These marketing goals shape the development of tailored social media strategies. Special attention is given to the most effective techniques for identifying targeted marketing on the social web, with emphasis on the creation of personas that represent the critical online market segments for a company.</p> <p>Students will discover how to put these well-defined personas to work in selecting the optimal social media platforms for reaching an organization's marketing goals.</p> <p>Students will be taught the rules of engagement and social media ethics for behaving properly as marketers on the social web. With these guidelines in mind, the most productive marketing tactics for each type of major social media platform are examined in depth.</p> <p>These platform-specific tactics are brought together in the final chapter to create a comprehensive social media marketing plan, with detailed explanations and illustrations from a real world plan.</p> <p>Extensive consideration is given to monitoring, evaluating, and tuning the implementation of social media marketing initiatives. In addition, you will be introduced to the most useful quantitative and qualitative social media measurements, along with various ways to estimate an organization's return</p>				

	on investment in social media marketing activities.		
Learning Outcomes	<p>By the end of this course, students will be able to:</p> <ul style="list-style-type: none"> • Define social media marketing goal setting necessary to achieve successful online campaigns. • Describe the history of social media marketing, its rapidly evolving role in public relations, advertising, and marketing, as well as the merging of social media marketing with all facets of business. • Explain how to develop effective social media marketing strategies for various types of industries and businesses. • Define target markets for specific social media platforms. • Use social media platforms (e.g., blogs, microblogs, social networks, wikis, Q&A sites, bookmarking, social news, image & video sharing, and podcasting) to influence consumer and promote a company, brand, product, service or person. • Track progress in achieving social media goals with a variety of powerful measurement tools, services, and metrics. • Put it all together in a social media marketing plan. 		
Prerequisites	None	Required	None
Course Content	<p><u>WEEKS</u></p> <p><u>Week 1:</u></p> <p>Lecture 1 - Introduction</p> <ul style="list-style-type: none"> • Introduction to the course • Overview of syllabus and requirements <p>(Lecture 2 hours)</p> <p>Lecture 2 –Why Social Media?</p> <p>Chapter 1: Why Social Media? (Barker et al, 2013)</p> <p>Outline:</p> <ul style="list-style-type: none"> • What is Social Media marketing? <p>Case study: “ Fiskars creates a social media community around scrapbooks”</p> <ul style="list-style-type: none"> • The history of social media marketing 		

- Why social media marketing is different?

(Lecture 2 hours, Student's Private Time 2 hours)

Week 2:

Lecture 3- What is Social Media Plan

Chapter 2: Goals and Strategies (Barker et al, 2013)

Outline:

- What is a social media marketing plan?
- Social media marketing planning cycle
- Listen and observe: Five stages
- Setting goals

Case study: "Dell Reinvents itself through social media"

- Determining strategies

Case study: "Hubspot gets results from strategic social media marketing"

- Linking goals with a call to action

(Lecture 2 hours, Student's Private Time 3 hours)

Lecture 4– Social Media Platforms

Outline:

Best time and days to post

Platforms preferred by audience

- Facebook marketing
- Twitter marketing
- LinkedIn
- Google+
- Pinterest

(Lecture 2 hours, Student's Private Time 4 hours)

Week 3:

Lecture 5- Identifying target audiences

Chapter 3 – Identifying target audiences (Barker et al, 2013)

Outline:

- Determining the optimal target audience
- The personal Development cycle

(Lecture 2 hours, Student's Private Time 4 hours)

Lecture 6 - The Rules of engagement

Chapter 4 – The Rules of engagement (Barker et al, 2013)

Outline:

- Permissions vs. Interruption marketing

Case study: “Pepsi’s transition from interruption to permission marketing”

- Principles for success

Case study: “Trials and tribulations Walmart’s struggle with social media marketing”

- Rules of engagement

(Lecture 2 hours, Student's Private Time 4 hours)

Week 4:

Lecture 7- The Ethics of Social Media

Chapter 4 – Rules of engagement for social media (Part B) (Barker et al, 2013)

Outline:

- Defining social media marketing ethics
- Making ethical decisions

(Lecture 2 hours, Student's Private Time 5 hours)

Lecture 8- What is Social Media Strategy?

Outline:

Chapter 1: Reality Check: The Permeating Trends of Social Media and Social Business. (Schaffer, 2013)

Chapter 2: A Social Media Strategy: The Framework for the Ever-Changing World of Social Media. (Schaffer, 2013)

Chapter 3: Determining Objectives and Background for Your Social Media Program. (Schaffer, 2013)

(Lecture 2 hours, Student's Private Time 4 hours)

Week 5:

Lecture 9– Social Media Marketing Plan

Chapter 15- Social media marketing plan(Barker et al, 2013)

Outline:

- Creating an informative and eye-catching title page
- Automatically generating a table of contents
- Writing a compelling executive summary
- Composing a brief overview
- Observing social media presence
- Conducting a competitive analysis
- Setting goals
- Determining strategies
- Identifying the target market
- Selecting tools implementing
- Monitoring

(Lecture 2 hours, Student's Private Time 6 hours)

Lecture 10- Case Study: XYZ Coffee company social media marketing plan.

Outline:

- Executive summary
- Brief overview
- Social media presence
- Competitive analysis
- Goals
- Strategies
- Target market
- Tools
- Implementation

- Monitoring
- Tuning
- Budget
- ROI

(Lecture 2 hours, Student's Private Time 8 hours)

Week 6:

Lecture 11 – Revision

Brief revise of the material taught.

(Lecture 2 hours, Student's Private Time 10 hours)

Lecture 12 – Revision

Brief revise of the material taught.

(Lecture 2 hours, Student's Private Time 10 hours)

Week 7:

Midterm Exams

(2 hours)

Week 8:

Lecture 13- Auditing Your Social Media Program

Chapter 4: Auditing Your Social Media Program (Schaffer, 2013)

(Lecture 2 hours, Student's Private Time 4 hours)

Lecture 14- Social Media Strategy Template

Chapter 5: Core Elements and Concepts in Your Social Media Strategy (Schaffer, 2013)

Chapter 6: Blogging as an Essential Part of Every Social Media Strategy (Schaffer, 2013)

(Lecture 2 hours, Student's Private Time 4 hours)

Week 9:

Lecture 15 – Blogging

Chapter 5: Publishing Blogs (Barker et al, 2013)

Outline:

- What is a blog?
- Marketing benefits of blogging
- Linking a blog to marketing objective
- Creating a content strategy
- Tips for successful blogging
- Monitoring the blog sphere

(Lecture 2 hours, Student's Private Time 6 hours)

Lecture 16 – Content Marketing

Part 1, E-marketing (Strauss et. al 2013)

Outline:

What is content marketing

Strategy of Content Marketing

Benefits

Content Audit

(Lecture 2 hours, Student's Private Time 5 hours)

Week 10:

Lecture 17 – Video Marketing

Part 3, E-marketing (Strauss et. al 2013)

Outline:

YouTube

Benefits of marketing with online videos

Six reasons why Marketers can't ignore Video

Mapping your Video to the buyer's journey

How to include video in your marketing strategy

Produce-Promote-Share your Video

(Lecture 2 hours, Student's Private Time 6 hours)

Lecture 18 – Mobile and Location Marketing

Part 1 and 4, E-marketing (Strauss et. al 2013)

Outline:

Why Mobile

Mobile search by type

Mobile Marketing evolution

Mobile: Influencing Purchase Process

Mobile advertising and Social Media

(Lecture 2 hours, Student's Private Time 5 hours)

Week 11:

Lecture 19– Viral Marketing

Part 1 and 4, E-marketing (Strauss et. al 2013)

Outline:

The concept of viral marketing

Common viral marketing messaging

Making it viral in social media

(Lecture 2 hours, Student's Private Time 4 hours)

Lecture 20 – Inbound Marketing

Part 1 and 3, E-marketing (Strauss et. al 2013)

Outline:

What is inbound marketing

The Inbound Methodology

Inbound Marketing and Social Media

(Lecture 2 hours, Student's Private Time 4 hours)

Week 12:

Lecture 21 – Monitoring Performance Measurement Analysis (Part A)

Chapter 14: Social media monitoring (Barker et al, 2013)

Outline:

- Tracking
- Measuring
- Qualitative key performance indicators

(Lecture 2 hours, Student's Private Time 4 hours)

Lecture 22 – Monitoring Performance Measurement Analysis (Part B)

Chapter 14: Social media monitoring (Barker et al, 2013)

Outline:

- ROI
- Evaluation
- Selecting social media monitoring

(Lecture 2 hours, Student's Private Time 4 hours)

Week 13:

Lecture 23– Management Tools

Chapter 10: Social networks (Barker et al, 2013)

Outline:

- Benefits of marketing with social networks
- Marketing with social networks

Case study: “ Quantivo uses LinkedIn for lead generation”

- What is a white label social network?

(Lecture 2 hours, Student's Private Time 5 hours)

Lecture 24 – Case Studies and Group Work

How to Convince Your Boss to Invest in Social Media Marketing- HubSpot

The 5 Best Social Media campaigns of 2017- Digital Marketing Institute

(Lecture 2 hours, Student's Private Time 5 hours)

Week 14:

Lecture 25- Revision

Brief revise of the material taught.

(Lecture 2 hours, Student's Private Time 10 hours)

Lecture 26 - Revision

Brief revise of the material taught.

(Lecture 2 hours, Student's Private Time 10 hours)

	<p>Week 15</p> <p>Final Examination (2 hours)</p>
<p>Teaching Methodology</p>	<p>During the last few minutes of class period, students will be asked to use a half-sheet of paper and write down the “Most important thing I learned today and what I understood least.”</p> <p>Students will be asked to leave notes about any class related issue in a suggestion box near the classroom door.</p> <p>A member of the faculty will attend a number of classes to take notes about his/her impression of the class, lecturer-students interaction and teaching methods. He/She will prepare an evaluation report.</p>
<p>Bibliography</p>	<p>Core:</p> <ul style="list-style-type: none"> • Barker, M., et al. (2013). “<i>Social media marketing a strategic approach</i>”. London: South- Western Cengage Learning. • McDonald, J. (2018), “<i>Social media marketing workbook</i>”. JM Internet Group. • Webb, N. (2017). “<i>What customers crave: Creating relevant and memorable experiences at every touchpoint</i>”. American Management Association. <p>Recommended:</p> <ul style="list-style-type: none"> • Anderson, A. (2016).” <i>Social Media: How to Skyrocket your Business through Social Marketing! Master Facebook, Twitter, YouTube, Instagram & LinkedIn</i>”. New York: Createspace Independent Publishing Platform. • Chaffey, D., Ellis-Chadwick, F., Myer, R., and Johnston, K. (2009). “<i>Internet marketing: Strategy, Implementation and Practice</i>”. 4th edition, Harlow Essex: Pearson Education. • Hanson, W. A. and Kalyanam, K. (2007). “<i>Internet marketing & e-commerce</i>”. Mason Ohio: Thomson South-Western. • Kelly, D. (2016). “<i>Social Media: Strategies to Mastering Your Brand-Facebook, Instagram, Twitter and Snapchat</i>”. New Jersey: Lulu.com. • McDonald, J. (2016). “<i>Social Media Marketing Workbook: 2017 Edition - How to Use Social Media for Business</i>”. New York: Createspace Independent Publishing Platform. • Moran, M. (2008). “<i>Do it wrong quickly: How the web changes the old marketing rules</i>”. Crawfordsville, Indiana: Pearson Education. • Roberts, M. L. (2008). “<i>Internet marketing: Integrating online and offline strategies</i>”.2nd edition. Mason Ohio: Atomic Dog, Thomson. • Williams, B. (2016). “<i>Social Media: Master and Dominate</i>”

	Social Media Marketing Using Facebook, Instagram, Twitter, YouTube, LinkedIn, Snap Chat, Pinterest, Google+, Vine, and Much more!”. New York: Churchill Templeton Publication.
Assessment Methods	Class Attendance & Participation, Midterm, Final Exams.
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>
Weighting of Assessment	10% (Class Attendance & Participation), 30% (Midterm), 60% (Final Exams).
Lectures/ Hours per week	2 Lectures / 4 hours
Indicative learning and teaching time	<p>This module is delivered through lectures, group discussions, presentations and case studies.</p> <p><u>Teaching Hours:</u></p> <p>Lectures 44 Hours</p> <p>Mid-term Exam 2 Hours</p> <p>Group Discussions/ Presentations/Case studies 4 Hours</p> <p>Final Exams 2 Hours</p> <p>-----</p> <p><u>Student Learning Time</u></p> <p>Student Reading 96 Hours</p> <p>Midterm and Final Exams Preparation 40 Hours</p>



	Total : 188 Hours
Language	English

Course Title	Mobile Computing Systems				
Course Code	CSC401				
Course Type	Compulsory				
Level	Diploma				
Year / Semester	2nd/ 4th				
Lecturer's Name	Alexis Marcou				
E-mail:	alexis@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 13:30 – 14:30, Tue 9:00 – 12:00, Wed 09:00 - 10:00, Thu 16:00 – 18:00 and Fri 9:00-10:00.				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	This course introduces the system architecture, technologies, and applications of mobile computing. Topics covered include mobile and wireless environment; mobile device technology; mobile computing architecture and protocols; mobile computing security; and applications in wireless and mobile computing including distribution applications, mobile middleware, mobile information and database access, mobile multimedia, and remote execution. A combination of lectures, reading, presentation and reports, case studies and group discussions is used.				
Learning Outcomes	<ul style="list-style-type: none"> • Possess an all-inclusive understanding of the process used to create a webpage • Possess an all-inclusive understanding of the process used to create a Social Media application • Be able to build a basic web and Social media application page by themselves • Be able to differentiate a business and give it a competitive advantage via its webpage and its Social Media applications by developing them from a user-friendly perspective • Have basic knowledge of JavaScript • Understand Cascading Style Sheets (CSS) and CSS techniques • Be able to create, format, edit, and improve web content including text, images, tables, forms, backgrounds, colors, shades, font as well as padding, borders, margins • Be able to assess the design of web page and of Social Media application at a basic level • Be able to create links to other websites, within a website, or mail links, as well as target new browser windows • Be able to add a competitive advantage to a business and increase its audience via a Social Media application. 				

Prerequisites	None	Required	None
Course Content	<p><u>Weeks:</u></p> <p>Week 1:</p> <p>Lecture 1 - Introduction to Mobile Computing & Technologies</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course. It will explain the motivation behind the course and along with the idea of the course content. This will include an overview of a number of examples of real life web applications, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. An Introduction to Mobile Computing & Technologies. We will start with What is Mobile Computing. Then we will analyze the Mobile Computing Applications. Following we will review the Mobile Computing Constraints. What Needs to be Reexamined will follow. On the last section of the lecture we will see adaptation.</p> <p>Outline</p> <ul style="list-style-type: none"> • What is Mobile Computing • Mobile Computing Applications • Mobile Computing Constraints • What Needs to be Reexamined <p>Intended Learning Outcomes</p> <p>At the end of this lecture students should be able to:</p> <ul style="list-style-type: none"> • Know what is Mobile Computing • Know the Mobile Computing Applications • Know Mobile Computing Constraints • Know what Needs to be Reexamined <p>Lecture 2 Introduction to Wireless Communication and Networking.</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This lecture will provide an introduction to Wireless Communication and Networking. An overview to the Wireless Networking Technologies. Then we will analyze the Wireless: Problems. Following we will review Satellite. Microwave will follow. As next step explaining to the class Cellular Phone Network. On the last section of the lecture we will see Wireless LANs.</p> <p>Outline:</p> <ul style="list-style-type: none"> • Wireless Networking Technologies • Wireless: Problems • Satellite 		

- Microwave
- Cellular Phone Network
- Wireless LANs

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand wireless Networking Technologies
- Know wireless: Problems
- Understand Satellite communication
- Understand Microwave communication
- Understand Cellular Phone Network
- Know Wireless LANs

Week 2

Lecture 3 - Introduction to Wireless Communication and Networking (part2)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an introduction to Wireless Communication and Networking (part2). An introduction to Bluetooth and its goals. Then we will analyze the RFID. On the last section of the lecture we will see Wireless Mobile Networking.

Outline

- Bluetooth
- RFID
- Wireless Mobile Networking

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Bluetooth
- RFID
- Wireless Mobile Networking

Lecture 4 - Mobile Computing Device & Technologies.

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Mobile Computing Device & Technologies. An introduction to the Mobile Computing Device Technologies. Then we will analyze Mobile Device Hardware. Following we will review the Characteristics of Mobile Devices. An analysis of the Mobile Computing Challenges will follow. As next step explaining to the class Smartphones. Next thing we will review is the PocketPCs. On the last section of the lecture we will see the Operating Systems for Mobile Device.

Outline

- Mobile Computing Device Technologies
- Mobile Device Hardware
- Characteristics of Mobile Devices
- Mobile Computing Challenges
- Smartphones
- PocketPCs
- Operating Systems for Mobile Device

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Mobile Computing Device Technologies
- Know Mobile Device Hardware
- Know Characteristics of Mobile Devices
- Know Mobile Computing Challenges
- Know Smartphones
- Know PocketPCs
- Know Operating Systems for Mobile Device

Week 3

Lecture 5 - Mobility Management

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Mobility Management. An introduction to the Mobility Management with the appropriate clarifications on its operation. Then we will analyze the Mobility Management Tasks.

Outline

- Mobility Management
- Mobility Management Tasks

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Mobility Management
- Know Mobility Management Tasks

Lecture 6 - Mobility Management (part2)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Mobility Management (part2). An overview to the Mobility management. Then we will analyze the Simple Location Management

Scheme. Following we will review the Mobility Binding of a Mobile Node. An analysis of the Registration Area-based Location Management will follow. As next step explaining to the class the Actual Address vs. Forwarding Pointer. On the last section of the lecture we will see Dynamic Update Schemes.

Outline

- Mobility Management
- Simple Location Management Scheme
- Mobility Binding of a Mobile Node
- Registration Area-based Location Management
- Actual Address vs. Forwarding Pointer
- Dynamic Update Schemes

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know Mobility Management
- Understand Simple Location Management Scheme
- Understand Mobility Binding of a Mobile Node
- Understand Registration Area-based Location Management
- Understand Actual Address vs. Forwarding Pointer
- Understand Dynamic Update Schemes

Week 4

Lecture 7 - Mobility Management (part3)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Mobility Management (part3). An introduction to mobility and explaining what it is. Then we will analyze the Mobility: approaches. Mobility: registration will follow. As next step we will see Mobility via Indirect Routing. On the last section of the lecture we will see Mobility via Direct Routing.

Outline

- What is mobility
- Mobility: approaches
- Mobility: registration
- Mobility via Indirect Routing
- Mobility via Direct Routing

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know What is mobility
- Know Mobility: approaches
- Know Mobility: registration
- Know Mobility via Indirect Routing
- Know Mobility via Direct Routing

Lecture 8 – IP Addressing

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of IP Addressing. An introduction to Classes of IP Addresses and explaining what it is and how it is working. Then we will analyze the Classful Addressing. On the last section of the lecture we will see CIDR.

Outline

- Classes of IP Addresses
- Classful Addressing
- CIDR

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know Classes of IP Addresses
- Understand Classful Addressing
- Understand CIDR

Week 5

Lecture 9 – Data Dissemination and Management

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Data Dissemination and Management. We start with an introduction to Data Dissemination and Management. Then we will analyze the challenges.

Outline

- Introduction
- Challenges

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the challenges

Lecture 10 – Data Dissemination and Management (part2)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Data Dissemination and Management (part2). We will analyze Data Dissemination in depth.

Outline

- Data Dissemination

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Data Dissemination

Week 6

Lecture 11 - Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exams)

Midterm Exams

Week 8

Lecture 13 - Data Dissemination and Management (part3)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Data Dissemination and Management (part3). Mobile Data Caching comes next and Mobile Cache Maintenance Schemes will follow. A review to Mobile Web Caching will be our next subject. On the last section of the lecture we will summarize.

Outline

- Mobile Data Caching
- Mobile Cache Maintenance Schemes

- Mobile Web Caching
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Mobile Data Caching
- Understand Mobile Cache Maintenance Schemes
- Understand Mobile Web Caching

Lecture 14 - Context-Aware Computing

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Context-Aware Computing. An introduction to Context-Aware Computing. Then we will analyze the 5 W's. Following we will see the applications. An overview of Requirements will follow.

Outline

- Context-Aware Computing
- The 5 W's
- Applications
- Requirements

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Context-Aware Computing
- Know the 5 W's
- Know applications
- Know the requirements

Week 9

Lecture 15 - Context-Aware Computing (part2)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Context-Aware Computing (part2). We will analyze the middleware support. We will summarize at the end of the lecture.

Outline

- Middleware Support
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Middleware Support

Lecture 16 - Middleware

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Middleware. An introduction to the middleware and explaining what it is. Then we will analyze mobile middleware for enterprise. Following we will review the three major types of middleware.

Outline

- What is Mobile Middleware
- Mobile Middleware for Enterprise
- Three major types of middleware

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know what is Mobile Middleware
- Know mobile Middleware for Enterprise
- Know the three major types of middleware

Week 10

Lecture 17 – Jini Architectural Overview

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Jini Architecture. We will start with an introduction to the architecture. As next step, a System Overview. On the last section of the lecture we will see an example.

Outline

- Introduction
- System Overview
- An Example

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the introduction
- Understand the system Overview

- Understand the example

Lecture 18 - Service Discovery

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Service Discovery. We will start with an introduction to what is service discovery. As next step, we review who is doing what. Dynamic Device Discovery comes next followed by • Service Discovery Capabilities. Then we will analyze Jini, UPnP, SSDP and SLP. On the last section of the lecture we will see interoperability.

Outline

- What?
- Who?
- Dynamic Device Discovery
- Service Discovery: Capabilities
- Jini
- UPnP
- SSDP
- SLP: Service Location Protocol
- Interoperability

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know What
- Know Who
- Understand Dynamic Device Discovery
- Know Service Discovery: Capabilities
- Know Jini
- Understand UPnP
- Understand SSDP
- Understand SLP: Service Location Protocol
- Understand Interoperability

Week 11

Lecture 19 - Understanding Universal Plug and Play

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Understanding Universal Plug and Play. We will start with an introduction to UPnP. As next step Understanding Universal Plug and Play. Then we will analyze the Components of an UPnP Network followed by the UPnP Protocol Overview. Then we will explain how UPnP works and its APIs. On the last section of the lecture we will summarize.

Outline:

- Introduction
- Understanding Universal Plug and Play
- Components of a UPnP Network
- UPnP Protocol Overview
- How UPNP Works
- UPnP APIs
- Summary

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Universal Plug and Play
- Know the Components of a UPnP Network
- Understand UPnP Protocol Overview
- Know How UPNP Works
- Know the UPnP APIs

Lecture 20 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from previous lectures, practicing in given exercises during the lab time.

Week 12

Lecture 21 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from previous lectures, practicing in given exercises during the lab time.

Lecture 22 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from previous lectures, practicing in given exercises during the lab time.

Week 13

Lecture 23 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught through the module, practicing in given exercises during the lab time.

Lecture 24 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught through the module, practicing in given exercises during the lab time.

Week 14

Lecture 25- Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 26 - Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 15

(2 hours exams)

Final Examination

-
- Webpage addresses (URLs) and browsers
 - Anatomy of a webpage
 - Responsive web design, progressive enhancement, standards of web design
 - The steps of the process for designing a web page
 - Launching a text editor
 - Elements of web pages: content, structure, text elements, images, look and style, validation
 - Organizing page content
 - Adding links to the webpage – links to other pages, internal links, mail links, targeting a new browser window
 - Adding images – image formats
 - Tables and forms – accessibility, layout, design
 - CSS – Cascading Style Sheets – orientation and functionality, page layout, techniques
 - Introduction to HTML5
 - Formatting text, colors and backgrounds, Element box, padding, borders, margins
 - Floating and positioning - properties

	<ul style="list-style-type: none"> • Transitions, transforms, and animation • Introduction to JavaScript and HTML5
Teaching Methodology	Lectures/Labs/Assignments
Bibliography	<p>Core</p> <ul style="list-style-type: none"> • Fundamentals of Mobile and Pervasive Computing, 2005, by Frank. Adelstein, Sandeep. K.S. Gupta, Golden G. Richard III, and Loren Schwiebert, from McGraw-Hill, ISBN 0-07-141237-9 <p>Recommended</p> <ul style="list-style-type: none"> • Mobile Computing Principles – Designing & Developing Mobile Applications with UML and XML, 2005, by Reza B'Far, published by Cambridge University Press, ISBN 0-521-81-733-1
Assessment Methods	Participation and Class Attendance, Midterm, Final Exams.
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office).The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>
Weighting of Assessment	Participation and Class Attendance (10%), Midterm, (40%), Final Exams (50%).
Lectures / Hours per week	<p>1 Lecture / 2 hours</p> <p>1 Lab / 2 hours</p>
Indicative learning and teaching time	<p>This module is delivered through lectures, group discussions, seminars, projects, presentations and case studies.</p> <p><u>Contact Hours:</u></p>

	<p>Lectures 56 Hours</p> <p>Mid-term Exam 2 Hours</p> <p>Group Discussions/Seminars/Presentations/Case studies 8 Hours</p> <p>Final Exams 2 Hours</p> <p>-----</p> <p><u>Student's Private Study</u></p> <p>Student self- initiated 56 Hours</p> <p>Homework/ Projects/Presentations 44 Hours</p> <p>Midterm and Final Exams Preparation 20 Hours</p> <p>-----</p> <p>Total: 188 Hours</p>
Language	English

Course Title	Foundations of Cyber Security ACCREDITED				
Course Code	CYB201				
Course Type	Elective				
Level	Diploma				
Year / Semester					
Lecturer's Name	Panayiotis Vorkas				
E-mail:	vorkas@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 13:30 – 14:30, Tue 9:00 – 12:00, Wed 09:00 - 10:00, Thu 16:00 – 18:00 and Fri 9:00-10:00.				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	<p>The Introduction to Cybersecurity course explores the field of cybersecurity. This exploratory course contains five chapters that introduce the students to:</p> <ul style="list-style-type: none"> • Safe on-line behaviors • Different types of malware and attacks • Protection strategies <p>The course also highlights the importance of cyber security professionals and outlines pathways to certification and cybersecurity careers. A Certificate of Completion will be awarded to each student after the completion of the course, the end-of-course assessment, and the end-of-course survey.</p>				
Learning Outcomes (PART 1)	Module		Learning Objectives		
	The Need for Cybersecurity		<ul style="list-style-type: none"> • Learn the need for and importance of cybersecurity. • Understand the characteristics and value of personal data, and data within an organization. 		

	Attacks, Concepts and Techniques	<ul style="list-style-type: none"> Recognize the characteristics and operation of a cyber-attack. Interpret the trends in the cyber threat landscape.
	Protecting Your Data and Privacy	<ul style="list-style-type: none"> Understand how to protect devices from threats. Master how to safeguard your privacy.
	Protecting the Organization	<ul style="list-style-type: none"> Learn techniques to protect organizations from cyberattacks. Recognize the behavior-based approach to cybersecurity. Explain Cisco's approach to cybersecurity.
	Will Your Future Be in Cybersecurity?	<ul style="list-style-type: none"> Explore the opportunities for pursuing an education and a career in cybersecurity
Learning Outcomes (PART 2)	Module	Learning Objectives
	Cybersecurity – A World of Wizards, Heros and Criminals	<ul style="list-style-type: none"> Describe the cybersecurity world, criminals, and professionals. Compare how cybersecurity threats affect individuals, business and countries. Explain the structure and efforts committed to expanding the security workforce.
	The Cybersecurity Sorcery Cube	<ul style="list-style-type: none"> Explain the three dimensions of the McCumber Cube. Detail the ISO cybersecurity model. Explain the principles of confidentiality, integrity, and availability as they relate to data states and cybersecurity countermeasures.
	Cybersecurity Threats, Vulnerabilities, and Attacks	<ul style="list-style-type: none"> Describe tactics, techniques and procedures used by cyber criminals. Explain the types of malware, malicious code and social engineering.
	The Art of Protecting Secrets	<ul style="list-style-type: none"> Outline technologies, products and procedures used to protect confidentiality. Explain encryption techniques and access control techniques. Present concepts of obscuring data.
	The Art of Ensuring Integrity	<ul style="list-style-type: none"> Explain technologies, products and procedures used to ensure integrity. Detail the purpose of digital signatures and certificates. Explain the need for database integrity enforcement.
	The Realm of Five Nines	<ul style="list-style-type: none"> Explain the concepts of five nines. Name the technologies, products, and procedures used to provide high availability. Represent how incident response plan and disaster recovery planning improves high availability and business continuity.
	Fortifying the Kingdom	<ul style="list-style-type: none"> Describe system, servers and data protection Explain network infrastructure and end device

		protection • Detail physical security measures used to protect network equipment	
	Joining the Order of Cybersecurity Specialists	• Discuss cybersecurity domains and controls • Explain ethics and cybersecurity laws. • Name the cybersecurity tools. • Explain how to become a cybersecurity professional.	
Prerequisites	None	Required	None
Course Content	<p><u>Weeks:</u></p> <p>Week 1: The Need for Cybersecurity (4 hours Lecture + 8 hours Recommended Studying)</p> <p>Learn what cybersecurity is and why the demand for cybersecurity professionals is growing. Module 1 presents:</p> <ul style="list-style-type: none"> • What your online identity and data is, where it is, and why it is of interest to cyber criminals. • What organizational data is, and why it must be protected. • What cyber warfare is and why organizations, nations, and governments need cybersecurity professionals to protect their citizens and infrastructure. <p>Week 2: Attacks, Concepts and Techniques (4 Hours Lecture + 8 Hours Recommended Studying)</p> <p>Learn how a cybersecurity professional analyzes a cyberattack. Module 2 details:</p> <ul style="list-style-type: none"> • Security vulnerabilities and the different types of vulnerabilities and malware. • The techniques used by attackers to infiltrate a system. • The characteristics and operation of a cyber-attack. • The trends in the cyber threat landscape. <p>Week 3: Protecting Your Data and Privacy (4 hours Lecture + 8 hours Recommended Studying)</p> <p>Become aware of your personal devices and data. Module 3 covers:</p> <ul style="list-style-type: none"> • Tips for protecting your personal devices and data by creating strong passwords and using wireless networks safely. • Authentication techniques helping you maintain your data securely with tips about what to do and what not to do online. • Protecting devices from threats. 		

- Safeguarding your privacy.

Week 4: Protecting the Organization

(4 Hours Lecture + 8 Hours Recommended Studying)

Learn about the technologies, processes, and best practices used when protecting an organization's network.

Module 4 presents:

- Equipment, data, and the commonly used security terms such as botnets, the kill chain, and behavior based security.
- Cisco's approach to cybersecurity using a CSIRT team and a security playbook.
- Techniques for protecting organizations from cyber attacks.
- The behavior-based approach to cybersecurity.
- Cisco's approach to cybersecurity.

Week 5: Will your future be in Cybersecurity?

(4 Hours Lecture + 8 Hours Recommended Studying)

Explore educational paths towards certifications with the Cisco Networking Academy (NetAcad).

Module 5 summarizes:

- Certification prerequisites for Specialization
- Certificates in many areas of networking, including cybersecurity.
- Explore the opportunities for pursuing an education and a career in cybersecurity.

Week 6: Cybersecurity – A world of wizards, heroes and criminals

(4 hours Lecture + 8 hours recommended reading)

Learn the characteristics of criminals and specialists in the cyber security realm.

Module 6 presents:

- The structure of the cybersecurity world and the reason it continues to grow with data and information as the prized currency.
- The role of cyber criminals and what motivates them.
- The factors that lead to the spread and growth of cybercrime.
- The structure and efforts committed to expanding the cybersecurity workforce.

Lecture 11 - Revision part1

(4 Hours Lecture + 5 Hours Recommended Studying)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(4 Hours Lecture + 5 Hours Recommended Studying)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 Hours Midterm)

Midterm Exams

Week 8: The Cybersecurity Sorcery Cube

(4 Hours Lecture + 8 Hours Recommended Studying)

Learn the principles of confidentiality, integrity, and availability as they relate to data states and cybersecurity countermeasures.

Module 7 details:

- The three dimensions of the McCumber Cube –the CIA Triad; the three states of data; the three categories of cybersecurity safeguards.
- The ISO cybersecurity model, an international framework standard for the management of information systems.

Week 9: Cybersecurity Threats, Vulnerabilities and Attacks

(4 Hours Lecture + 8 Hours Recommended Studying)

Threats, vulnerabilities, and attacks are the central focus of the cyber criminals. Learn tactics, techniques and procedures used by cyber criminals.

Module 8 covers:

- The types of malware and malicious code.
- The different methods used in social engineering.
- The different types of cyber attacks.

Week 10: The art of protecting secrets

(4 Hours Lecture + 8 Hours Recommended Studying)

Learn the technologies, products and procedures used to protect confidentiality.

Module 9 presents:

- The principles of cryptology used to secure communications. It explains and compares symmetric and asymmetric encryption algorithms and used examples.
- The access control models and techniques used to protect confidentiality.
- The concept of obscuring data, and how data obfuscation and steganography accomplishes data masking.

Week 11: The art of ensuring integrity Learn the technologies, products and procedures used to ensure data integrity.

(4 Hours Lecture + 8 hours Recommended Studying)

Module 10 covers:

- The types of data integrity controls.
- The purpose of digital signatures and certificates as tools for verifying authenticity of messages and documents.

- The need for database integrity enforcement to ensure stability, performance and maintainability of the database system.

Week 12: The Realm of Five Nines

(4 Hours Lecture + 8 hours Recommended Studying)

Learn the technologies, products, and procedures used to provide high availability.

Module 11 details

- The concepts of five nines, a high availability industry standard.
- The technologies, procedures and design used by organizations to provide high system availability, redundancy, and resiliency to ensure quick recovery and continual operation.
- Incident response plan and disaster recovery planning to improve high availability and business continuity.

Week 13: Fortifying the Kingdom Learn the technologies, processes and procedures used to defend all components of the network.

(4 Hours Lecture + 8 Hours Recommended Studying)

Module 12 presents:

- Host-hardening includes securing the operating system, implementing an anti-virus solution, and using host-based solutions such as firewalls and intrusion detection systems.
- Server hardening includes managing remote access, securing privileged accounts, and monitoring services.
- Data protection includes file access control and implementing security measure to ensure the confidentiality, integrity, and availability of data.
- Device hardening also involves implementing proven methods of physically securing network devices.

Week 14: Joining the order of cybersecurity specialist

(4 Hours Lecture + 8 Hours Recommended Studying)

Understand the cybersecurity domains and controls; laws and ethics, various roles in the cybersecurity profession.

Module 13 covers:

- The security domains and proper controls in each domain.
- The laws governing security, and ethical behavior
- The available cybersecurity tools
- The opportunities and roles in the cybersecurity profession.

Lecture 25- Revision part1

(2 hours Lecture + 5 Hours recommended Studying)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 26 - Revision part2

	<p>(2 Hours Lecture + 5 Hours Recommended Studying)</p> <p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Week 15</p> <p>(2 Hours Exams)</p> <p>Final Examination</p>
<p>Teaching Methodology</p>	<p>Lectures/Labs/Group Discussions, Flipped teaching</p>
<p>Bibliography</p>	<p>Core</p> <ul style="list-style-type: none"> Gollmann, D. (2011). "Computer Security", 3rd Edition, New York: Springer. Jajodia, S., Shakarian, P., Subrahmanian, V. S., Swarup, V., and Wang, C. (2015). "Cyber Warfare: Building the Scientific Foundation (Advances in Information Security)". New York: Springer. <p>Recommended</p> <ul style="list-style-type: none"> Anderson, R. (2008). "Security Engineering", 2nd Edition, NY: John Wiley & Sons. Charles, P., and Shari P. (2006). "Security in Computing by 2006", 4th Edition, London: Prentice Hall
<p>Introduction to Cybersecurity Additional Resources and Activities</p>	<p>Chapter 1 Resources</p> <p>Understanding Issues for the Banking Industries</p> <p>The Tapestry Network site states that members of the Financial Services Network developed these reports to address issues that are faced by financial institutions. Visit the following link and explore the topics in Financial Services issues: http://www.tapestrynetworks.com/issues/financial-services/</p> <p>Supply Chain Risk Management</p> <p>The following link points to a document that explains how a supplier can compromise network security and provides other resources regarding supply chain risk management: http://measurablesecurity.mitre.org/directory/areas/supplychainrisk.html</p> <p>Cybercrime or Cyberwarfare?</p> <p>Cybercrime is the act of committing a crime in a cyber environment; however, a cybercrime does not necessarily constitute an act of cyberwarfare. Cyberwarfare can include various forms of sabotage and espionage with the intent to exploit a nation or government. The following article describes the difference between cybercrime and cyberwarfare: http://www.pcworld.com/article/250308/when_is_a_cybercrime_an_act_of_cyberwar_.html</p> <p>Chapter 2 Resources</p> <p>How to Rob a Bank: A social engineering walkthrough http://www.csoonline.com/article/692551/how-to-rob-a-bank-a-social-engineering-walkthrough</p> <p>XSS with a Vulnerable WebApp</p> <p>In this tutorial, Dan Alberghetti demonstrates cross-site scripting (XSS) or injecting code into a website's web application that contains a known web app vulnerability. http://www.danscourses.com/Network-Penetration-Testing/xss-with-a-</p>

[vulnerable-webapp.html](#)

Google Hacking Pioneer

Johnny Long pioneered the concept of Google Hacking. A renowned security expert, he has authored and contributed to many books on computer security. His book *Google Hacking for Penetration Testers* is a must read for anyone serious about the field of Google Hacking. He also maintains a website devoted to providing assistance to non-profits and training for the world's poorest citizens.

<http://www.hackersforcharity.org>

Microsoft Malware Protection Center

This Microsoft site provides a search tool to find information about a particular type of malware.

<http://www.microsoft.com/security/portal/threat/threats.asp>

Flame Malware

Stuxnet is one of the most highly publicized pieces of malware developed for the purpose of cyberwarfare. However, many other lesser-known threats exist. This article discusses malware known as Flame, which was developed as an espionage tool for targeting machines primarily in Iran and other parts of the Middle East. To learn more about this malware, visit the following link: <http://www.wired.com/threatlevel/2012/09/flame-coders-left-fingerprints>

Duqu Malware

Another malware, thought to be related to Stuxnet, is Duqu. Duqu is a reconnaissance malware intended to gather information on an unknown industrial control system for the purpose of a possible future attack. To learn more about Duqu and the possible threat it imposed, visit the following link: <http://www.wired.com/threatlevel/2011/10/son-of-stuxnet-in-the-wild>

NSA's Catalog of Exploits

The United States National Security Agency (NSA) has developed and maintained a catalog of exploits for nearly every major software, hardware, and firmware. Using these tools and other exploits, the NSA is able to keep track of practically every level of our digital lives. To learn more about the NSA's catalog of exploits, visit the following link:

<http://leaksource.wordpress.com/2013/12/30/nsas-ant-division-catalog-of-exploits-for-nearly-every-majorsoftware-hardware-firmware/>

United States Computer Emergency Readiness Team (US-CERT)

As part of the Department of Homeland Security, the United States Computer Emergency Readiness Team (US-CERT) strives to improve the Nation's cybersecurity posture, share cyber information, and manage cyber risks while protecting the rights of Americans. To learn more about US-CERT, visit the following link: <https://www.us-cert.gov/>

If you want similar information for a specific country, visit the following link and search for the country.

<http://www.cert.org/incident-management/national-csirts/national-csirts.cfm>

Chapter 3 Resources

All Your Devices Can Be Hacked

The use of electronics within the human body turns that person's body into a cyber target, just like any computer or cell phone. At the TEDx MidAtlantic conference in 2011, Avi Rubin explained how hackers are compromising cars, smart phones, and medical devices. He warned us about the dangers of an increasingly "hackable" world. For more information, watch Mr. Rubin's presentation in the following link:

http://www.ted.com/talks/avi_rubin_all_your_devices_can_be_hacked.htm

OnGuard Online

This website provides a wealth of information regarding how to stay safe online, such as securing your computers, avoiding scams, being smart online, and protecting kids online.

<http://www.onguardonline.gov/>

National Institute of Standards and Technology (NIST)

President Obama issued Executive Order 13636 (EO), “Improving Critical Infrastructure Cybersecurity.” As part of this Executive Order, NIST was directed to work with stakeholders to develop a voluntary framework, to include standards, guidelines, and best practices, for the purpose of reducing cyber risks to critical infrastructure. To learn more about this Executive Order and the NIST framework in development, visit the following link: <http://www.nist.gov/cyberframewo>

Chapter 4 Resources

Computer Security Incident Response Team

To learn more about CSIRT, and how it is composed, visit the following link:

<https://tools.cisco.com/security/center/emergency.x?i=56#3>

CSIRT Monitoring for the Cisco House at the London 2012 Olympics Games

View the following YouTube video, which depicts CSIRT members in action at the 2012 Olympic Games:

<http://www.youtube.com/watch?v=Hx8iGQIJ-aQ>

Cisco Web Security Appliance

The Cisco Web Security Appliance (WSA) is an all-in-one solution that combines advanced malware protection, application visibility and control, acceptable use policies, insightful reporting, and secure mobility on a single platform. For more information on WSA, visit the following link:

<http://www.cisco.com/c/en/us/products/security/web-security-appliance/index.html>

Cisco IronPort Email Security Appliance Reputation Filtering

Cisco IronPort Reputation Filters provide spam protection for your email infrastructure. Acting as a first line of defense, these filters remove up to 80 percent of incoming spam at the connection level. For more information about Email Security Appliance (ESA) reputation filtering, visit the following link:

http://www.cisco.com/en/US/prod/vpndevc/ps10128/ps10154/rep_filters_index.html

Cisco Cyber Threat Defense

Cisco Cyber Threat Defense focuses on the most complex, dangerous information security threats, which lurk in networks for months or years, stealing vital information and disrupting operations. It exposes these threats by identifying suspicious network traffic patterns within the network interior. Then, it provides contextual information about the attack, users, identity, and more — all visible from a single pane of glass. For more information, visit the following link:

<http://www.cisco.com/en/US/netsol/ns1238/index.html>

Network-Based Intrusion Prevention Case Study

Intrusion prevention systems (IPS) are an important part of the defense-in-depth strategy at Cisco. There are two primary IPS implementations: Perimeter-based IPS deployments and Network-based IPS deployments. To learn more about the need for both deployment models to secure network traffic, access the case study at the following link:

http://www.cisco.com/web/about/ciscoatwork/security/csirt_networkbased_i

[ntusion_prevention_system_web.html](#)

Chapter 4 Activities

Using a Playbook Model

In a complex network, the data gathered from different monitoring tools can easily become overwhelming. In this activity, you will create your own playbook to organize and document this monitoring data.

Visit the following link to have a better understanding of a playbook:

<https://blogs.cisco.com/security/using-a-playbook-model-to-organize-your-information-security-monitoringstrategy/>

Create your own playbook by drafting its three main sections:

- Report ID and Report Type with Name
- Objective Statement
- Result Analysis

Hacking On a Dime

The “Hacking On a Dime” link explains how to use nmap (network mapper) to gather information about a target network.

<http://hackonadime.blogspot.com/2011/05/information-gathering-using-nmap-and.html>

Note: nmap is an extremely popular and powerful port scanner that was first released in 1997. Originally it was Linux only; however, it was later ported to numerous platforms, including Windows and Mac OS X. It is still provided as free software; for more information, see <http://nmap.org/>.

Other Reconnaissance Tools

The following links to “danscourses.com” provide additional practice using reconnaissance tools.

From a security or reconnaissance point of view, the Domain Name System (DNS) can be exploited, and offer a means of discovery of an organization’s public and possibly private servers, services, and the corresponding IP address locations.

<http://www.danscourses.com/Network-Penetration-Testing/dns-reconnaissance.html>

Another protocol, known as Whois, can be used as a reconnaissance tool to gather contact information such as domain names, IP address blocks, and autonomous system numbers.

<http://www.danscourses.com/Network-Penetration-Testing/whois-reconnaissance.html>

Chapter 5 Resources

Cisco Learning Network

At the Cisco Learning Network, you can explore your potential career possibilities, obtain study materials for certification exams, and build networking relationships with other networking students and professionals.

For more information, visit the following link:

<https://learningnetwork.cisco.com>

Training and Certifications

Information regarding training and the latest Cisco certifications can be found in the Training & Certifications section on Cisco’s website:

<http://www.cisco.com/web/learning/training-index.html>

Career and Salary Information

Now that you have completed all the modules, it is time to explore the career and salary potential in the networking field. Below are two links to sites that give job listings and potential salary information. There are many sites like this on the Internet.

<https://www.cisco.apply2jobs.com>

	<p>http://www.indeed.com/salary?q1=Network+Security&l1 CompTIA Certifications The Computing Technology Industry Association (http://www.comptia.org) offers several popular certifications including the Security+. This video from CompTIA focuses on cybersecurity. https://www.youtube.com/watch?v=up9O44vEsDI</p>
Assessment Methods	Class Attendance & Participation, Midterm, Final Exams.
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>
Weighting of Assessment	Class Attendance & Participation (10%), Midterm (30%), Final Exams (60%).
Lectures / Hours per week	<p>1 Lecture / 2 hours 1 Lab / 2 hours</p>
Indicative learning and teaching time	<p>This module is delivered through lectures, group discussions, presentations and case studies.</p> <p><u>Contact Hours:</u></p> <p>Lectures + Revisions 36 Hours</p> <p>Mid-term Exam 2 Hours</p> <p>Final Exams 2 Hours</p> <p>Case studies 10 Hours</p> <p>In class activities 6 Hours</p> <p>Presentations 2 Hours</p> <p>Group Discussions 10 hours</p> <p>-----</p> <p>Subtotal: 68 Hours</p>

	<u>Student's Private Time</u>	
	Student's Private Studying	70 Hours
	Homework	20 Hours
	Presentations Preparation	10 Hours
	Midterm Exams Preparation	10 Hours
	Final Exams Preparation	10 Hours

	Subtotal:	120 Hours

	Total:	188 Hours
Language	English	

Course Title	Introduction to Networks ACCREDITED				
Course Code	CYB103				
Course Type	Elective				
Level	Diploma				
Year / Semester					
Lecturer's Name	Anastasia Kalli				
E-mail:	anastasia@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 13:30 – 14:30, Tue 9:00 – 12:00, Wed 09:00 - 10:00, Thu 16:00 – 18:00 and Fri 9:00-10:00.				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	This course aims to introduce computer networks to students, to allow them to obtain an understanding of data communication and computer networks. The course introduces computer communication network design and its operations, as well as the following topics: Open Systems Interconnection (OSI) communication model, LANs & WANs; bridges, routers and gateways; network naming and addressing; and local and remote procedures. On completion of the course, students should be able to explain the fundamentals of network design and implementation.				
Learning Outcomes	<ul style="list-style-type: none"> • Describe the general principles of data communication. • Describe how computer networks are organized with the concept of layered approach. • Describe how signals are used to transfer data between nodes. • Understand hubs, bridges and switches. • Describe how packets in the Internet are delivered. • Analyze the contents in a given Data Link layer packet, based on the layer concept. • Design logical sub-address blocks with a given address block. • Decide routing entries given a simple example of network topology • Describe the differences between LANs & WANs • Describe how routing protocols work. 				
Prerequisites	None	Required	None		
Course Content	<u>Weeks:</u> Week 1:				

Lecture 1 - Network the Basics, Data Communications Networks, Network Types

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the Network basics, Data Communication Networks and Network Types. It will explain the rationale behind the course and along with a gist of the courses content. This will include an overview of a number of examples of networks, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. An introduction to Networks and their listing their capabilities and explaining how they are working. We will review data communication networks and explain the Network types.

Outline

- Introduction to Networks
- Data communication networks
- Network types

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Explain the structure of course and the course objectives/aims
- Understand the Network basics
- Understand the Data Communication networks
- Understand the network types

Lecture 2 - The LAN-BN-MAN-WAN hierarchy, Intranets and Extranets

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the types of Networks. We will explain the Local Area Network. Following we will explain the Backbone Network. Then the Metropolitan Area Network. On the last section, we will analyze the Wide Area Network.

Outline

- LAN
- BN
- MAN
- WAN

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the different types of networks

Week 2

Lecture 3 - The OSI Model, Open Systems Interconnection

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the OSI model. It will explain the OSI model and analyze the 7 layers of the model.

Outline

- Overview OSI model
- Physical layer
- Link layer
- Network layer
- Transport layer
- Session layer
- Presentation layer
- Application layer

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the OSI model and what is the task of each layer

Lecture 4 - Standard Model for Data Communications, Specified by International Standards Organization (ISO), Adopted by CCITT/ITU, Official Model Explained in X.200 Series

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the Standard Model for Data Communications, specified by International Standards Organization (ISO) and Adopted by CCITT/ITU, and Official Model Explained in X.200 Series. It will explain in depth the model.

Outline

- Standard model for Data communication

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the standard model for data communications

Week 3

Lecture 5 - Computer network, Servers, Internet Connections

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of a Computer network, Servers and Internet Connections. At the start, it will explain the computer network. Then it will follow an overview of the servers. On the last section, it will analyze the internet connections.

Outline

- Computer network and components
- Servers
- Internet connections

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the term computer network and its components
- Understand what server is and its task and capabilities
- Know the internet connections

Lecture 6 - Packet Switching, Open Systems, Network Protocols, TCP/IP

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Packet Switching, Open Systems, Network Protocols and TCP/IP. It will explain the term packet switching. This will include an overview of a number of examples of real life scenarios, where we shall high light the main problems and questions that we shall seek to address and answer through the lecture series. Following we will analyze open systems. An introduction to network protocols will follow, listing the protocols capabilities and explaining how they are working. On the last section, we will analyze the TCP/IP protocol.

Outline

- Overview of packet switching
- Open systems
- Network protocols
- TCP/IP

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Packet switching
- Understand open systems
- Understand the network protocols and their capabilities
- Know the TCP/IP protocol

Week 4

Lecture 7 - MIME Types, Firewalls

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of MIME Types and the Firewalls. It will explain the various MIME types. An overview to firewalls listing their capabilities and explaining how they are working. An assignment will be given to students at the end of the lecture. Assignment subjects are DNS, TCP/IP, IP security and students will choose one subject.

Outline

- MIME types
- Firewalls

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the MIME types
- Understand the term firewall

Lecture 8 - Network Addresses, Domain Name System

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Network addresses and domain name system. It will explain the network addressing. This will include an overview of a number of examples and real life scenarios, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. An overview to the domain name system will follow listing the capabilities of the system and explaining how it's working.

Outline

- Network addresses
- Domain Name System

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand network addressing
- Know the domain name system

Week 5

Lecture 9 - Interconnecting LANs, Hubs, Bridges, Spanning Tree

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Interconnecting LANs, Hubs, Bridges and Spanning Tree. It will explain the way of interconnecting networks. This will include an overview of a number of examples of real life scenarios, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. Following we will analyze hubs and bridges. An overview to spanning tree listing its capabilities and explaining how it's working.

Outline

- Interconnecting LANs
- Hubs
- Bridges
- Spanning tree

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know how we interconnect networks
- Know how to use hubs and bridges, and when we need them
- Understand the Spanning Tree

Lecture 10 - Bridges vs. Routers, Ethernet Switches

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide a comparison of Bridges vs. Routers and an overview to Ethernet Switches. It will explain how bridges operate in comparison with routers. This will include an overview of a number of examples of real life scenarios, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. We will intent to identify their capabilities and limitations. An overview to Ethernet switches will follow listing their capabilities and explaining how they are working.

Outline

- Bridges vs. Routers
- Ethernet switches

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the comparison of Bridges vs. Routers
- Know what Ethernet switches are

Week 6

Lecture 11 - Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exam)

Midterm Exams

Week 8

Lecture 13: Forwarding techniques in classless addressing, Routing table, Router

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Forwarding techniques in classless addressing, Routing table and Router. It will explain forwarding techniques in classless addressing. This will include an overview of a number of examples, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. Following we will analyze the routing table and how it works. An overview of router will follow listing their capabilities, explaining how they are working and its structure.

Outline

- Forwarding techniques in classless addressing,
- Routing table
- Router

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand forwarding techniques in classless addressing
- Understand how a routing table works
- Understand the structure of a router

Lecture 14: IPv4 ADDRESSES, Classes and Blocks

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of IPv4 ADDRESSES, Classes and Blocks. It will explain IPv4 addresses. This will include an overview of a number of examples, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. Following we will analyze the classes and blocks and how they work.

Outline

- IPv4 ADDRESSES
- Classes
- Blocks

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand IPv4 addressing
- Understand Classes and Blocks

Week 9

Lecture 15- Routing in IPv4, Network Address Translation (NAT)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Routing in IPv4 and Network Address Translation (NAT). It will explain the way routing is achieved in IPv4. This will include an overview of a number of examples, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. An introduction to Network Address Translation will follow listing its capabilities and explaining how it's working.

Outline

- Routing in IPv4
- Network Address Translation (NAT)

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand routing in IPv4
- Know the NAT

Lecture 16- IPv6 ADDRESSES, Structure of IPv6 Address

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of IPv6 ADDRESSES and Structure of IPv6 Address. It will explain the IPv6 addressing. This will include an overview of a number of examples, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. An introduction to the structure of IPv6 addressing will follow listing its capabilities and explaining how it's working.

Outline

- IPv6 ADDRESSES
- Structure of IPv6 Address

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the IPv6 addressing
- Know the IPv6 structure

Week 10

Lecture 17 - Multicast address in IPv6, Local addresses in IPv6

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Multicast address in IPv6 and Local addresses in IPv6. It will explain the multicasting addresses in IPv6. This will include an overview of a number of examples of, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. An overview to local addressing in IPv6 will follow listing the capabilities and explaining how it's working.

Outline

- Multicast address in IPv6
- Local addresses in IPv6

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the multicast addressing in IPv6
- Understand the local addressing in IPv6

Lecture 18 - Internet

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the Internet. It will explain what the Internet is. This will include an overview of a number of examples of real life scenarios, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. An introduction to the Internet listing the capabilities and explaining how it's working.

Outline

- Internet
- Examples of Internet web applications
- The main issues, concerns and problems
- Internet Capabilities
- How Internet works

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the term Internet
- Give examples of internet applications
- Know the main issues and concerns
- Identify internet capabilities
- Know how internet works

Week 11

Lecture 19 - Client/Server Networking

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Client/Server Networking. It will explain what client/server model is. This will include an overview of a number of examples of real life scenarios, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. Listing the capabilities and explaining how it's working.

Outline

- Client/Server Networking
- Examples of Client/Server
- The main issues, concerns and problems in Client/Server Networking
- Client/Server Capabilities
- How Client/Server works

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the Client/Server networking
- List different examples of client/server applications
- Identify the main topics and points of concern of client/server applications
- Know the client/server capabilities
- Know how client/server works

Lecture 20 - Internet Functions

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the Internet Functions. It will explain what internet function is. This will include an overview of a number of examples of real life web applications, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. Listing the capabilities and explaining how it's working.

Outline

- Internet functions
- Examples of Internet functions
- The main issues, concerns and problems in Internet functions
- Internet functions capabilities
- How Internet functions work

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Explain the term internet functions
- List different examples of internet functions
- Identify the main topics and points of concern
- Know internet functions capabilities
- Know how internet functions works

Week 12

Lecture 21 - Intranet, Extranet and comparison

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Intranet, Extranet and comparison. It will explain the terms Intranet and Extranet. This will include an overview of a number of examples of real life scenarios, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. A comparison of the two will follow listing their capabilities and explaining how they are working.

Outline

- Intranet
- Extranet
- Comparison

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the term Intranet
- List different examples of Intranet applications
- Understand the term Extranet
- List different examples of Extranet applications
- Know the comparison of the two

Lecture 22 - LAN & WAN comparison

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of LAN, WAN and comparison. It will explain the terms LAN and WAN. This will include an overview of a number of examples of real life scenarios, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. A comparison of the two will follow listing their capabilities and explaining how they are working.

Outline

- LAN
- WAN
- Comparison

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the term LAN
- List different examples of LAN applications
- Understand the term WAN
- List different examples of WAN applications
- Know the comparison of the two

Week 13

Lecture 23 - Forwarding, Some definitions, Policy options, Routing Protocols

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Forwarding, Some definitions, Policy options and Routing Protocols. It will explain the forwarding and its necessity. This will include an overview of a number of examples of real life scenarios, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. Listing the capabilities and explaining how it's working. Some definitions will follow and then we will analyze policy options. On the last section of the class we will analyze the routing protocols.

Outline

- Forwarding
- Definitions
- Policy options
- Routing protocols

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the term forwarding
- Know some basic definitions
- Understand the policy options
- Understand the routing protocols

Lecture 24 - IPv4, Routing

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of IPv4, Routing. It will explain what IPv4 is. Following an overview of routing with examples of real life scenarios, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. Listing the capabilities and explaining how it's working.

Outline

- IPv4
- Routing

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the term IPv4
- Understand what Routing is
- Identify the main topics and points of concern of routing
- Know the routing capabilities and limitations
- Know how routing works

Week 14

Lecture 25- Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 26 - Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 15

(2 hours exams)

Final Examination

-
- The business of networking
 - The OSI networking model
 - Network topologies
 - Network design
 - Network hardware & cabling
 - LANs & WANs
 - Network protocols
 - Directory services
 - Network security basics & DR

Lab Hardware and Software - Lab Hardware Specification

10 x DELL Laptop Inspiron 15-N5050	6 x Lenovo Ideapad G50-80
Intel Pentium B950 (2.10 GHz)	Intel Pentium i3 500U5 (2.0 GHz)
4 GB RAM / 500 GB HDD	4GB RAM / 500GB
Intel HD Graphics	Intel HD Graphics
802.11b/g/n Wireless LAN	802.11b/g/n Wireless LAN
Windows 7 Professional x64	Windows 7 Professional x64

	HPE Proliant ML10 Server 838124-425 + Windows Server 2012 R2
	Intel Xeon E3-1225v5 (3.3GHz/4-core/80W) Processor Kit
	HPE 8GB Single Rank x8 PC4-17000P-E (DDR-2133) Unbuffered CAS-15 Standard Memory Kit
	2 x HP 1TB 6G 7.2k rpm SATA (3.5in)
	HPE 300W Multi-Output Power
	HP 9.5mm SATA DVD-RW JackBlack Gen9 Optical Drive
	Intel Ethernet Connection I219-LM
	2x display port, 1 Network RJ-45, 4x USB 3.0, 3x USB 2.0
Teaching Methodology	Lectures/Labs/Group discussions/Weekly Quizzes/Flipped Teaching

Bibliography	<p>Core</p> <ul style="list-style-type: none"> Odom, W. (2013). "<i>Introduction to Networking: Creating the Modern Connected World</i>". Essex: Pearson. <p>Recommended</p> <ul style="list-style-type: none"> Kurose, J. (2016). "<i>Computer Networking: A Top-Down Approach</i>", 7th Edition, Essex: Pearson. Irving, P.(2010). "<i>Computer Networks</i> ", 3rd Edition, Essex: Pearson. West, J., Dean, T., and Andrews, J. (2015). "<i>Network+ Guide to Networks</i>", 7th Edition, Boston: Course Technology. 										
Assessment Methods	<p>Class Attendance & Participation, Quizzes, Project, Midterm, Final Exams.</p>										
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>										
Weighting of Assessment	<p>Class Attendance & Participation (10%), Midterm (20%), Final Exams (50%), Weekly Quizzes (5%) Project (15%).</p>										
Lectures / Hours per week	<p>1 Lecture / 2 hours 1 Lab / 2 hours</p>										
Indicative learning and teaching time	<p>This module is delivered through lectures, group discussions and labs.</p> <p>Teaching Hours:</p> <table> <tr> <td>Lectures</td> <td>30 Hours</td> </tr> <tr> <td>Labs- Collaboration with CISCO Academy</td> <td>30 Hours</td> </tr> <tr> <td>Mid-term Exam</td> <td>2 Hours</td> </tr> <tr> <td>Group Discussions</td> <td>4 Hours</td> </tr> <tr> <td>Final Exams</td> <td>2 Hours</td> </tr> </table>	Lectures	30 Hours	Labs- Collaboration with CISCO Academy	30 Hours	Mid-term Exam	2 Hours	Group Discussions	4 Hours	Final Exams	2 Hours
Lectures	30 Hours										
Labs- Collaboration with CISCO Academy	30 Hours										
Mid-term Exam	2 Hours										
Group Discussions	4 Hours										
Final Exams	2 Hours										

	<p><u>Student Learning Time</u></p> <p>Student reading 60 Hours</p> <p>Project 20 Hours</p> <p>Midterm and Final Exams</p> <p>Preparation 40 Hours</p> <p>-----</p> <p>Total: 188 Hours</p>
<p>Project details and assessment</p>	<p>Students will be required to deliver a course project on the below (or similar) subject:</p> <p><u>“The OSI Model and the Relationship with TCP/IP”</u></p> <p>The final project should be between 10 to 15 A4 pages 1.5 spacing, Times New Roman 12 font, 2cm margins on each side, excluding appendices, tables, figures, charts, references. The project should also contain REFERENCES part at the end, where you should list all sources used in the preparation of the project. The Harvard referencing system should be used.</p> <p><u>The project will be graded as follows:</u></p> <p>Effective use and reference to theory from the course and from external sources: 30%</p> <p>Strategic thinking and creative solutions: 20%</p> <p>Overall presentation: 10%</p> <p>Suggestions and recommendations for improvement: 10%</p> <p>Thorough, focused and insightful analysis: 10%</p> <p>The use of examples and data: 10%</p> <p>Persuasion: 10%</p>
<p>Language</p>	<p>English</p>

Course Title	Project Management				
Course Code	MW405				
Course Type	Elective				
Level	Diploma				
Year / Semester					
Lecturer's Name	Giorgos Malekkos				
E-mail:	malekkos@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 15:00 – 18:00, Tue 13:00 – 14:30, Wed 11:00 - 14:30 & Thu 13:00 – 14:30				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	2 / 1	Laboratories / week	0 / 1
Course Purpose and Objectives	As organizations continue to look for ways to reduce costs, managers are often expected to oversee special projects in addition to their traditional responsibilities. When a project is too complex for one person to handle, the project manager is expected to lead a team of diverse employees to complete the assignment. This course will assist the project manager to break down a complex project into manageable segments, lead a diverse project team, and use effective tools to ensure that the project meets its deliverables and is completed within budget and on schedule. Over the course of the mini, students will complete a plan for an actual project, giving them valuable experience with the relevant tools and skills, including Microsoft Project software.				
Learning Outcomes	<p>Upon completion of this course, the student will be able to:</p> <ul style="list-style-type: none"> • Understand the growing need for better project management, especially for information technology projects and investigate project management principles • Explain what a project is and provide examples of information technology projects • Describe what project management is and discuss key elements of the project management framework ie. examine project processes and procedures • Examine project organization and people • Discuss how project management relates to other disciplines • Understand the history of project management • Describe the project management profession, including recent trends in project management research, certification, and software products 				

Prerequisites	None	Required	None
Course Content	<p><u>Weeks:</u></p> <p>Week 1:</p> <p>Lecture 1 - Introduction to Project Management</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course. It will explain the motivation behind the course and along with the idea of the course content. This will include an overview of a number of examples of real life web applications, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. An introduction to the Project management and explaining every detail about it. We will start with the project definition. Then we will analyze the Triple Constraint of Project Management. Following we will review what is Project Management. The History of Project Management will follow. On the last section of the lecture we will see ethics in project management.</p> <p>Outline</p> <ul style="list-style-type: none"> • What Is a Project? • The Triple Constraint of Project Management • What is Project Management? • History of Project Management • Ethics in Project Management <p>Intended Learning Outcomes</p> <p>At the end of this lecture students should be able to:</p> <ul style="list-style-type: none"> • Understand the term project • Know the Triple Constraint of Project Management • Understand what is Project Management • Know the history of Project Management • Understand the Ethics in Project Management <p>Lecture 2 - Planning a Project</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This tutorial lecture will provide an overview of Planning a Project. Tutorial 1 to help students understand what we have covered so far.</p> <p>Outline</p> <ul style="list-style-type: none"> • Lab Practical 		

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Learn about project goals and management
- Learn project management terminology
- Understand the benefits of project management
- Understand how Project 2007 supports project management
- Learn the basic setup of Project 2007

Week 2

Lecture 3 The Project Management and Information Technology Context

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Recognize the Importance of Project Stakeholders. An introduction to the Recognize the Importance of Project Stakeholders and explaining how it's working. Then we will analyze the recognition of the Importance of Project Stakeholders. Following we will discuss what helps Projects to succeed. Project Phases and the Project Life Cycle will follow. On the last section of the lecture we will see the suggested Skills for Project Managers.

Outline

- Three Sphere Model for Systems Management
- Recognize the Importance of Project Stakeholders
- What Helps Projects Succeed?
- Project Phases and the Project Life Cycle
- Suggested Skills for Project Managers

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the systems view of project management and how it applies to information technology projects
- Analyze a formal organization using the structural, human resources, political, and symbolic organizational frames
- Explain the differences among functional, matrix, and project organizational structures
- Explain why stakeholder management and top management commitment are critical for a project's success
- Understand the concept, development, implementation, and close-out phases of the project life cycle
- Distinguish between project development and product development
- Discuss the unique attributes and diverse nature of information technology projects

- List the skills and attributes of a good project manager in general and in the information technology field

Lecture 4 - The Project Management Process Groups

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the Project Management Process Groups. An introduction to the developing an IT Project Management Methodology. Then we will analyze the Project Initiation. Following we will review the Project Planning. The analysis of Project Controlling will follow. On the last section of the lecture we will see the Project Closing.

Outline

- Developing an IT Project Management Methodology
- Project Initiation
- Project Planning
- Project Controlling
- Project Closing

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Describe the five project management process groups, the typical level of activity for each, and the interactions among them
- Understand how the project management process groups relate to the project management knowledge areas
- Discuss how organizations develop information technology project management methodologies to meet their needs
- Review a case study of an organization applying the project management process groups to manage an information technology project
- Understand the contribution that effective project initiation, project planning, project execution, project control, and project closing makes to project success

Week 3

Lecture 5 - Creating a Project Schedule

(2 hours Lecture + 4 hours recommended reading)

This tutorial lecture will provide an overview of Creating a Project Schedule. Tutorial 2 to help students understand what we have covered so far.

Outline

- Lab Practical

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Start a new project
- Examine scheduling defaults
- Change a project and task calendar
- Enter and edit tasks, durations, and task dependencies
- Enter and edit recurring tasks and milestones
- Enter lag and lead times
- View project statistics
- Create and manipulate summary tasks
- Develop a work breakdown structure

Lecture 6 - Project Integration Management

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Project Integration Management. An introduction to the The Key to Overall Project Success which is a Good Project Integration Management. Then we will analyze the Project Plan Development. Following we will review the Attributes of Project Plans. An analysis of What the Winners Do will follow. As next step explaining to the class the Project Plan Execution. On the last section of the lecture we will see the Change Control on Information Technology Projects.

Outline

- The Key to Overall Project Success: Good Project Integration Management
- Project Plan Development
- Attributes of Project Plans
- What the Winners Do
- Project Plan Execution
- Change Control on Information Technology Projects

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Describe an overall framework for project integration management as it relates to the other project management knowledge areas and the project life cycle
- Describe project plan development, including project plan content, using guidelines and templates for developing plans, and performing a stakeholder analysis to help manage relationships
- Explain project plan execution, its relationship to project planning, the factors related to successful results, and tools and techniques to assist in project plan execution
- Understand the integrated change control process, planning for and

- managing changes on information technology projects, and developing and using a change control system
- Describe how software can assist in project integration management

Week4

Lecture 7 - Project Scope Management

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Project Scope Management. An introduction to the Project Manager's Responsibilities and explaining its role. Then we will analyze visually Perception vs. Reality. Following we will review the seven phases of a project. An analysis of What is Project Scope Management will follow. As next step explaining to the Return on Investment. On the last section of the lecture we will see The Work Breakdown Structure.

Outline

- Project Manager's Responsibilities
- Perception V's Reality
- The seven phases of a project
- What is Project Scope Management?
- Return on Investment
- The Work Breakdown Structure

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the elements that make good project scope management important
- Describe the strategic planning process, apply different project selection methods, such as a net present value analysis, a weighted scoring model, and a balanced scorecard, and understand the importance of creating a project charter
- Explain the scope planning process and contents of a scope statement
- Discuss the scope definition process and construct a work breakdown structure using the analogy, top-down, bottom-up, and mind mapping approaches
- Understand the importance of scope verification and scope change control to avoid scope creep on information technology projects
- Describe how software can assist in project scope management

Lecture 8 – Practical lecture

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Project Scope Management. An introduction to Net Present Value. Then we will analyze NPV examples. Following we will determine why the return on investment is a very important part of any investment. On the last section of the lecture we will calculate return on investment.

Outline

- Calculating return on investment
- Determining your return on investment is a very important part of any investment review
- Net Present Value
- NPV Examples

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know to calculate return on investment
- Determining your return on investment is a very important part of any investment review
- Know the Net Present Value
- Understand NPV Examples

Week 5

Lecture 9 - Project Time Management

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Project Time Management. An introduction to the Importance of Project Schedules. Then we will analyze the Project Time Management Processes. Following we will review the Activity Duration Estimating. An analysis of the Gantt Charts will follow. As next step explaining to the class the Milestones. Next thing we will review is the Critical Path Method. On the last section of the lecture we will see Program Evaluation and Review Technique.

Outline

- Importance of Project Schedules
- Project Time Management Processes
- Activity Duration Estimating
- Gantt Charts
- Milestones
- Critical Path Method
- Program Evaluation and Review Technique

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the importance of project schedules and good project time management
- Define activities as the basis for developing project schedules
- Describe how project managers use network diagrams and dependencies to assist in activity sequencing
- Explain how various tools and techniques help project managers perform activity duration estimating and schedule development
- Use a Gantt chart for schedule planning and tracking schedule information
- Understand and use critical path analysis
- Describe how to use several techniques for shortening project schedules
- Explain the basic concepts behind critical chain scheduling and Program Evaluation and Review Technique (PERT)
- Discuss how reality checks and people issues are involved in controlling and managing changes to the project schedule
- Describe how software can assist in project time management

Lecture 10 - Communicating Project Information

(2 hours Lecture + 4 hours recommended reading)

This tutorial lecture will provide an overview of Communicating Project Information. Tutorial 3 to help students understand what we have covered so far.

Outline

- Lab Practical

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Review Project 2007 reports
- Examine the critical path
- Filter tasks
- Format a Gantt Chart
- Work with the Network Diagram
- Analyze task constraints

Week 6

Lecture 11 - Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exams)

Midterm Exams

Week 8

Lecture 13 - Project Quality Management

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Project Quality Management. An introduction to Quality and explaining what we mean. Then we will analyze the Quality Planning. A quick tour to the Quality Assurance will follow. As next step, we will see Quality Assurance Plan. Then we present the Shewhart Cycle. We will explain Testing and The Cost of Quality will follow. On the last section of the lecture we will see the Project Management Maturity Model.

Outline

- What is Quality
- Quality Planning
- Quality Assurance
- Quality Assurance Plan
- Shewhart Cycle
- Testing
- The Cost of Quality
- Project Management Maturity Model

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the importance of project quality management for information technology products and services
- Define project quality management and understand how quality relates to various aspects of information technology projects
- Describe quality planning and its relationship to project scope

management

- Discuss the importance of quality assurance
- List the three outputs of the quality control process
- Understand the tools and techniques for quality control, such as Pareto analysis, statistical sampling, Six Sigma, quality control charts, and testing
- Describe important concepts related to Six Sigma and how it helps organizations improve quality and reduce costs
- Summarize the contributions of noteworthy quality experts to modern quality management
- Understand how the Malcolm Baldrige Award and ISO 9000 standard promote quality in project management
- Describe how leadership, cost, organizational influences, and maturity models relate to improving quality in information technology projects
- Discuss how software can assist in project quality management

Lecture 14 - Assigning Resources and Costs

(2 hours Lecture + 4 hours recommended reading)

This tutorial lecture will provide an overview of Assigning Resources and Costs. Tutorial 4 to help students understand what we have covered so far.

Outline

- Lab Practical

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Work with resource and cost data.
- Edit task information based on the relationship between work, duration, and units.
- Create fixed work and fixed duration tasks.
- Examine the critical path and slack.
- Level over allocations and set resource contours

Week 9

Lecture 15 – Project HR Management

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Project Human Resource Management. An introduction to the Importance of Human Resource Management. Then we will analyze Motivation. On the last section of the lecture we will see the Empathic Listening and Rapport.

Outline

- The Importance of Human Resource Management
- Motivation
- Empathic Listening and Rapport

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Explain the importance of good human resource management on projects, especially on information technology projects
- Define project human resource management and understand its processes
- Summarize key concepts for managing people by understanding the theories of Abraham Maslow, Frederick Herzberg, David McClelland, and Douglas McGregor on motivation, H. J. Thamhain and D. L. Wilemon on influencing workers, and Stephen Covey on how people and teams can become more effective
- Discuss organizational planning and be able to create a project organizational chart, responsibility assignment matrix, and resource histogram
- Understand important issues involved in project staff acquisition and explain the concepts of resource assignments, resource loading, and resource leveling
- Assist in team development with training, team-building activities, and reward systems
- Describe how project management software can assist in project human resource management

Lecture 16 – Project Communications Management

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the Project Communications Management. We will analyze the Importance of Good Communications. Then we will review some key points of Performance Reporting. On the last section of the lecture we will see Running Effective Meetings.

Outline

- Importance of Good Communications
- Performance Reporting
- Running Effective Meetings

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the importance of good communication on projects and

describe the major components of a communications management plan

- Discuss the elements of project communications planning, including information distribution, performance reporting, and administrative closure
- Discuss various methods for project information distribution and the advantages and disadvantages of each
- Understand individual communication needs and how to determine the number of communications channels needed for a project
- Understand how the main outputs of performance reporting help stakeholders stay informed about project resources
- Recognize how the main outputs of administrative closure are used to formally end a project
- List various methods for improving project communications, such as managing conflicts, running effective meetings, using e-mail effectively, and using templates
- Describe how software can enhance project communications

Week 10

Lecture 17 – Project Risk Management

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Project Risk Management. We will review the Importance of Project Risk Management. Then we will analyze What is Risk. On the last section of the lecture we will analyze in deep what is Project Risk Management.

Outline

- The Importance of Project Risk Management
- What is Risk?
- What is Project Risk Management?

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand what risk is and the importance of good project risk management
- Discuss the elements involved in risk management planning
- List common sources of risks on information technology projects
- Describe the risk identification process and tools and techniques to help identify project risks
- Discuss the qualitative risk analysis process and explain how to calculate risk factors, use probability/impact matrixes, the Top Ten Risk Item Tracking technique, and expert judgment to rank risks
- Explain the quantify risk analysis process and how to use decision trees and simulation to quantitative risks
- Provide examples of using different risk response planning strategies

- such as risk avoidance, acceptance, transference, and mitigation
- Discuss what is involved in risk monitoring and control
 - Describe how software can assist in project risk management
 - Explain the results of good project risk management

Lecture 18 - Project Procurement Management

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Project Procurement Management. An introduction to the Importance of Project Procurement Management. Then we will analyze the Project Procurement Management Processes. Following we will review the Make-or Buy Example. An analysis of the Types of Contracts will follow on the last section of the lecture.

Outline

- Importance of Project Procurement Management
- Project Procurement Management Processes
- Make-or Buy Example
- Types of Contracts

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the importance of project procurement management and the increasing use of outsourcing for information technology projects
- Describe the procurement planning process, procurement planning tools and techniques, types of contracts, and statements of work
- Discuss what is involved in solicitation planning and the difference between a request for proposal and a request for quote
- Explain what occurs during the solicitation process
- Describe the source selection process and different approaches for evaluating proposals or selecting suppliers
- Discuss the importance of good contract administration
- Describe the contract close-out process
- Discuss types of software available to assist in project procurement management

Week 11

Lecture 19 - Tracking Progress and Closing the Project

(2 hours Lecture + 4 hours recommended reading)

This tutorial lecture will provide an overview of Assigning Resources and Costs. Tutorial 5 to help students understand what we have covered so far.

Outline

- Lab Practical

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Set a baseline and create an interim plan.
- Review baseline, interim, actual, and scheduled dates.
- Work with the Variance and Tracking tables.
- Update and split tasks.
- Analyze variance, slack, and slippage

Lecture 20 - Tracking Progress and Closing the Project, cont.

(2 hours Lecture + 4 hours recommended reading)

This tutorial lecture will provide an overview of Assigning Resources and Costs. Tutorial 5 to help students understand what we have covered so far.

Outline

- Lab Practical

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Create a custom table.
- Use the Detail and Tracking Gantt Chart to track progress.
- Create a custom view and a custom report.
- Add progress lines.
- Close a project.

Week 12

Lecture 21 - Sharing Project Information with Other People & Applications

(2 hours Lecture + 4 hours recommended reading)

This tutorial lecture will provide an overview of Sharing Project Information with Other People & Applications. Tutorial 6 to help students understand what we have covered so far.

Outline

- Lab Practical

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Copy, import and export Project 2007 data to other Microsoft Office applications.
- Review an earned value analysis.
- Create a link between Project 2007 information and Excel.
- Use the Drawing tool.
- Use and create Project 2007 templates.
- Use the Project 2007 global template and Organizer tool.

Lecture 22 - Sharing Project Information with Other People & Applications, cont.

(2 hours Lecture + 4 hours recommended reading)

This tutorial lecture will provide an overview of Sharing Project Information with Other People & Applications. Tutorial 6 to help students understand what we have covered so far.

Outline

- Lab Practical

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Create and share a resource pool.
- Consolidate multiple projects with a master project.
- Create a hyperlink between a Project 2007 file and a Word document.
- Analyze and work with multiple critical paths.
- Create a custom field and a custom form.
- Create and use a macro.

Week 13

Lecture 23 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught through the module, practicing in given exercises during the lab time.

Lecture 24 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

	<p>This is a practical lecture in lab and it is based on the material taught through the module, practicing in given exercises during the lab time.</p> <p>Week 14</p> <p>Lecture 25- Revision part1</p> <p>(2 hours Lecture + 10 hours recommended reading)</p> <p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Lecture 26 - Revision part2</p> <p>(2 hours Lecture + 14 hours recommended reading)</p> <p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Week 15</p> <p>(2 hours exams)</p> <p>Final Examination</p>
Teaching Methodology	Lectures/Labs/Assignments
Bibliography	<p>Core</p> <ul style="list-style-type: none"> • Schwalbe, K., <i>Information Technology Project Management 5e</i>, Thomson Course Technology, 2007, ISBN 1-4239-0145-2 <p>Recommended</p> <ul style="list-style-type: none"> • Rachel Biheller Bunin, <i>New Perspectives on Microsoft Office Project 2007 Introductory</i>, Cengage Learning, 2008, ISBN 1-4239-0594-6 • Gido, J. and Clements, J.P., <i>Successful Project Management 2e</i>, Thomson South-Western, 2003, ISBN 0-324-07168-X • Meredith, J.R. and Mantel, S.J., <i>Project Management: A Managerial Approach</i>, 4th Edition, John Wiley, 2000 3rd Edition. • Mike Field and Laurie Keller, <i>Project Management</i> (available on library)
Assessment Methods	Participation and Class Attendance, Midterm, Final Exams.
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office).The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it</p>

	<p>affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>
<p>Weighting of Assessment</p>	<p>Participation and Class Attendance (10%), Midterm, (40%), Final Exams (50%).</p>
<p>Lectures / Hours per week</p>	<p>2 Lecture / 2 hours</p>
<p>Indicative learning and teaching time</p>	<p>This module is delivered through lectures, group discussions, seminars, projects, presentations and case studies.</p> <p><u>Contact Hours:</u></p> <p>Lectures 26 Hours</p> <p>Lab Practice 26 Hours</p> <p>Mid-term Exam 2 Hours</p> <p>Final Exams 2 Hours</p> <p>-----</p> <p><u>Student's Private Study</u></p> <p>Student self- initiated 56 Hours</p> <p>Homework/ Projects/Presentations 56 Hours</p> <p>Midterm and Final Exams Preparation 20 Hours</p> <p>-----</p> <p>Total : 188 Hours</p>
<p>Language</p>	<p>English</p>

Course Title	Modern Public Relations and Mobile Advertising ACCREDITED				
Course Code	DM102				
Course Type	Elective				
Level	Diploma				
Year / Semester					
Lecturer's Name	Vasiliki Moti				
E-mail:	vasiliki@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 13:30 – 14:30, Tue 9:00 – 12:00, Wed 09:00 - 10:00, Thu 16:00 – 18:00 and Fri 9:00-10:00.				
Preferred style of contact:	Via e-mail for setting an appointment.				
ECTS	7.5	Lectures / week	2/2	Laboratories / week	None
Course Purpose and Objectives	<p>To enable students to develop basic PR plans forming the main part of the marketing campaign based on the knowledge they will gain of the PR process and the PR Code of Conduct. To equip them with the knowledge needed to react promptly and effectively in crisis situations.</p> <p>To build a sound student knowledge base with various examples of real-life PR campaigns used in the past by multiple companies around the world; the aim is that these examples will prevent known mistakes, and will also help students easily decide what type of PR plan works well in certain circumstances, and what kind in other situations by identifying similarities with known case studies.</p> <p>To equip students with the necessary knowledge needed to enable them to develop a successful mobile advertising campaign, taking into consideration this emerging market's opportunities and capabilities. To be able to point out structural obstacles currently in the way of this potential market and suggest possible remedies and solutions.</p>				
Learning Outcomes	<p>After the successful completion of this course, students should:</p> <ul style="list-style-type: none"> • Understand the importance of Public Relations in today's Global marketplace. • Possess an all-inclusive knowledge of the context in which modern PR exists today. • Be able to develop basic PR plans and Crisis plans. • Feel confident to name various un/successful PR campaigns of leading companies/people and of crisis situations and use them constructively for their own PR plans. 				

	<ul style="list-style-type: none"> • Understand the way society interprets PR campaigns and the power of PR. • Be able to analyze any company's environment from a PR perspective. • Be able to point out mistakes in PR campaigns of competitors and predict their success or failure. • Have knowledge of multiple mobile advertising models. • Be able to suggest a plan for Mobile Advertising campaign for any product/service. 		
Prerequisites	None	Required	None
Course Content	<p><u>Weeks:</u></p> <p>Week 1</p> <p>Lecture 1 - Introduction to the course-module outline: Assessment Methods, Aims and Learning Outcomes.</p> <p>(2 Hours Lecture + 1 Hour Recommended Studying)</p> <p>This session will give a basic introduction to the module providing students with all the necessary information about lectures and assessment.</p> <p>Lecture 2 – Public Relations Origins: Definitions and History</p> <p>(1 Hour Lecture +1 Hour Class Activity + 3 Hours Recommended Studying)</p> <p>What is public relations (PR)? And when did PR begin? This lecture briefly reviews why it has proved so difficult to define PR work or reach a universally agreed definition of what the job entails. It then outlines what is known about the emergence of PR as a modern occupation, drawing primarily on the histories of the USA, Britain and Germany. The discussion of both definitions and histories reflects the social nature of the profession.</p> <p>Intended Learning Outcomes</p> <p>At the end of these sessions students will be able to:</p> <ul style="list-style-type: none"> • Identify the key definitions of PR used in practice today. • Recognise the debates around the nature of PR and what it means. • Understand the origins of PR in the science of public opinion. • Describe the key features of the history of PR in the USA, Britain and Germany. • Understand the social and cultural dynamics that led to the emergence of the profession in these countries. <p>Outline:</p> <ul style="list-style-type: none"> • Public Relations definitions • Public Opinion: Justifying PR • Business, Politics and PR: Country case studies. • <u>In class activities:</u> will encourage students to take their learning 		

further by conducting web research and engaging in discussion with others.

Week 2

Lecture 3 – The Evolution of PR

(1 Hour Lecture + 1 Hour Class Activity + 3 Hours Recommended Studying)

Intended Learning Outcomes

At the end of these sessions students will be able to:

- Understand the evolution of public relations from ancient empires to today's practice.
- Appreciate the contributions of visionaries such as Ivy Lee and Edward Bernays, who laid the foundation of today's practice.
- Be knowledgeable about current developments and trends in the field.

Outline:

- Early beginnings.
- The 1800s: The golden age of press agency.
- 1900 to 1950: The age of Pioneers.
- 1950 to 2000: PR comes of age.
- 2000 to the present: PR enters the digital age.
- **In class activities:** will encourage students to take their learning further by conducting web research and engaging in discussion with others.

Lecture 4– Public Relations Theories: an overview

(1 Hour Lecture + 1 Hour Case Study+ In Class Activity+ 3 Hours Recommended Studying)

PR research and practice have traditionally been closely linked. Systems theory, which emerged in the second half of the 20th century as PR education was established and was initially the dominant approach to PR theory, took the view that theory development should improve practice first and foremost.

This lecture examines a range of theoretical approaches to PR, beginning with a brief summary of findings in the systems tradition and continuing with an examination of alternative approaches.

Furthermore, this lecture will examine the four stages of Grunig and Hunt's models.

Intended Learning Outcomes

At the end of these sessions students will be able to:

- Describe and evaluate the main principles of systems theories in relation to PR.
- Contrast different theoretical approaches to “publics”
- Consider different theoretical views of the role of PR practitioner.
- Describe and evaluate the main principles of relationship management theory.
- Compare different approaches to PR, including critical, rhetorical, feminist and diversity perspectives.
- Evaluate the key debates within PR research traditions.
- Understand the four PR models of Grunig and Hunt's.

Outline:

- Systems theories: emergence of PR research
- Extending the systemic view
- Developing theory: alternative approaches
- Feminist views of PR
- Diversity in PR
- **Mini case studies:** will illustrate issues and concepts with specific reference to real-life scenarios.
- **In class activities:** will encourage students to take their learning further by conducting web research and engaging in discussion with others.
- The four models of Grunig and Hunt's :
 1. Press agency
 2. Public Information
 3. Asymmetrical PR
 4. Symmetrical PR

Week 3: The Process of Public Relations

The major objective of the following sessions is to help students to understand the process of PR.

Effective public relations include four essential steps: (1) research, (2) planning, (3) communication, and (4) measurement.

- Research gets the process started. It provides the information required to understand the needs of publics and to develop powerful messages.
- Planning, the process of setting goals and objectives and determining ways to meet them is referred to as the central function of management.
- Communication is related to message strategy— making a message more appealing and persuasive to the public.
- Measurement (or evaluation) is becoming increasingly important in the public relations profession. Executives justifiably demand accountability from public relations practitioners. Measurement

techniques provide a means for demonstrating to management that public relations is achieving objectives and contributing in a meaningful way to the organization.

Lecture 5– The Importance of PR Research (PART 1)

(2 Hours Lecture + 3 Hours Recommended Studying)

Research plays a crucial role for many different reasons in PR. This lecture will explore the research process, the most commonly used research methods in PR.

Intended Learning Outcomes

At the end of these sessions students will be able to:

- Understand the importance of research in public relations planning.
- Identify the role of research in PR practice.
- Define and describe both qualitative and quantitative research methods.
- Apply relevant methods.

Outline

- Defining the research role.
- Context of research in PR.
- Designing research
- Qualitative vs. Quantitative Research.
- Research methods.
- Designing research instruments.
- Research applications.

Lecture 6 - The Importance of PR Research (PART 2)

(1 Hour Lecture + 1 hour Case Study + Class Activity+ 3 Hours Recommended Studying)

Intended Learning Outcomes

At the end of these sessions students will be able to:

- Conduct online and database research
- Organize a focus group.
- Design a scientific survey.
- Write a survey questionnaire.
- Determine the best method of reaching respondents.
- Conduct basic Web and social media analytics.

Outline:

- Questionnaire construction.
- How to reach respondents.

- Digital Analytics for PR.
- Web analytics.
- Social media monitoring tools.
- **Mini case studies.**
- **In class activities.**

Week 4:

Lecture 7– PR Action Plan - (Planning)

(2 Hours Lecture + 3 Hours Recommended Studying)

Successful PR programmes do not just happen. They are the result of sound research, meticulous planning and careful implementation. This lecture will provide an overview of the planning process. It will introduce each stage involved in planning PR programmes and examine some of the theories that underlie the process.

Intended Learning Outcomes

At the end of these sessions students will be able to:

- Debate why planning is important for PR programmes.
- Identify what research is required to underpin sound programmes.
- Determine appropriate programme objectives.
- Select and justify chosen strategy and tactics.
- Determine required timescales and recourses.
- Evaluate the effectiveness of the campaign and review future direction.

Outline:

- Why planning is important.
- Systems context of planning.
- Approaches to the planning process.
- Analysis.
- Setting objectives.
- Identifying publics.
- Message or content.
- Strategy and tactics.
- Timescales and resources.
- Evaluation and review.

Lecture 8- The Tactics of Public Relations

(2 Hours Lecture + 3 Hours Recommended Studying)

In PR, tactics unavoidably shine the spotlight on values. Tactics tend to show our values as well as our knowledge of our targeted public's values.

This lecture will discuss about the tactics of PR – everything from low-tech bulletin boards to high-tech blogs. Moreover, it will examine how we can accomplish values-driven tactics to improve their effectiveness and efficiency.

Intended Learning Outcomes

At the end of these sessions students will be able to:

- Understand what makes a tactic effective.
- Discuss traditional and social media tactics in PR.
- Select tactics that seem particularly appropriate for specific publics.
- Describe how to carry tactics efficiently and effectively.

Outline:

- Tactics as messages and channels.
- Tactics and traditional publics.
- Accomplishing the tactics.

Week 5:

Lecture 9– Audiences, Stakeholders, Publics

(2 Hours Lecture + 3 Hours Recommended Studying)

How we plan and do public relations depends on our understanding of the nature of audiences, stakeholders or publics, e.g. the theories of audiences, stakeholders or publics that we hold.

This lecture contrasts the concepts of passive and active audiences before considering stakeholder theory and situational theory of publics. A case study is presented which reflects on how publics have been or could be regarded. This lecture will conclude by considering some new thinking about publics and their role in communication campaigns.

Intended Learning Outcomes

At the end of this lecture students will be able to:

- Describe the compare various concepts of the audience.
- Evaluate and compare theories of stakeholders and publics.
- Evaluate and contrast competing versions of these concepts, as used in PR campaigns.

Outline:

- The passive audience
- The active audience
- Stakeholders and publics

- New thinking on publics

Lecture 10 - Communication Concepts and Practice in Public Relations

(2 Hours Lecture + 3 Hours Recommended Studying)

The third step in the public relations process, after research and planning, is communication. This step, also called execution, is the most visible part of public relations work.

Intended Learning Outcomes

At the end of this lecture students will be able to:

- Recognize the components of how audiences receive messages and process them.
- Understand the five stages of how individuals adopt a new product or idea.
- Understand the role of effective communication in the public relations process.
- Identify the characteristics of various media channels.
- Be familiar with the communication objectives of a campaign.

Outline:

- Implementing the Plan
- A PR Perspective
- Five Communication Elements
- The Importance of Two-Way Communication
- Paying Attention to the Message
- Other Attention –Getting Concepts
- Understand the Message
- Effective Use of Language
- Writing for Clarity
- Believing the Message
- Remembering the Message
- Acting on the Message
- The Time Factor
- How Decisions are Influenced
- Word of- Mouth Campaigns
- Case Study: A New Campaign to Combat Heart Disease

Week 6

Lecture 11 - Revision (Part 1)

(2 Hours Lecture + 5 Hours Recommended Studying)

Brief revise of the material taught.

Lecture 12 – Revision (Part 2)

(2 Hours Lecture + 5 Hours Recommended Studying)

Brief revise of the material taught.

Week 7 (2 Hours Exams)

Midterm Exams

Week 8:

Lecture 13: Evaluation and Measurement of Public Relations Programs

(1 Hour Lecture + 1 Hour in Class Activity+ 3 Hours Recommended Studying)

The fourth step of the public relations process is evaluation. It is the measurement of results against established objectives set during the planning process.

Evaluation involves the systematic assessment of a program, particularly focusing on communication results. It is a means for practitioners to offer accountability to clients—and to themselves.

Evaluation provides the opportunity to learn what was done right and what was done wrong, both as a look backward at performance and as a look forward at the improvement of performance.

They want to know whether the money, time, and effort expended on public relations are well spent and contribute to the realization of an organizational objective, such as attendance at an open house, product sales, or increased awareness of obesity in children.

Intended Learning Outcomes

At the end of this lecture students will be able to:

- Know the key elements of objectives
- Understand the purpose of evaluation
- Distinguish the measurement of different communication components

Outline:

- The Purpose of Evaluation
- Objectives: A Prerequisite for Evaluation
- Checklist
- Current Status of Measurement and Evaluation
- Methods for Evaluation PR Efforts

- **In class Activity:** Evaluation the success of Tourism Promotion.

Lecture 14: Real- Life PR Campaigns (PART 1)

(1 Hour Lecture + 1 Hour Presentation+ 3 Hours Recommended Studying)

This lecture will examine real-life PR campaigns, used in the past by multiple companies around the world.

The major aim of these PR campaigns is to prevent known mistakes, and help students to decide what type of PR plan works well in certain circumstances, and what kind in other situations by identifying similarities with known case studies.

In class presentation

Week 9

Lecture 15 – Real- Life PR Campaigns (PART 2)

(1 Hour Lecture + 1 Hour Presentation+ 3 Hours Recommended Studying)

This lecture will examine real-life PR campaigns, used in the past by multiple companies around the world.

The major aim of these PR campaigns is to prevent known mistakes, and help students to decide what type of PR plan works well in certain circumstances, and what kind in other situations by identifying similarities with known case studies.

In class presentation

Lecture 16 – Public Opinion: Role, Scope, and Implications

(1 Hour Lecture + 1 Hour in Class Activity+ 3 Hours Recommended Studying)

The most common definition of public opinion: “Public opinion is the sum of individual opinions on an issue affecting those individuals.” Another popular definition states: “Public opinion is a collection of views held by persons interested in the subject.”

Intended Learning Outcomes

At the end of this lecture students will be able to:

- Understand the implications of public opinion for public relations.
- Explain the crucial role of opinion leaders in public discourse.
- Describe key theories explaining the role of mass media.
- Understand the pervasive role of persuasion in modern life.

- Enumerate key factors in persuasion.
- Identify major considerations in conducting ethical persuasive campaigns.

Outline:

- What is Public Opinion?
- Opinion leaders as catalysts
- The role of mass media
- The dominant vies of PR
- Factors in persuasive communication
- The limits of persuasion
- The ethics of persuasion

In Class Activity:

- ✓ You have been elected philanthropic chair for your sorority or fraternity. Past fund-raising events have been well attended by your members, but lacked buy-in from alumni and community members. Your organization is planning to host a barbecue picnic during homecoming to raise money for the local Boys and Girls Club.
- ✓ Your task is to persuade not only students, but also alumni attending homecoming to participate in your fundraiser. What persuasive techniques would you employ to encourage students to attend? What different techniques would you need to use to reach alumni?

Week 10

Lecture 17 – Crisis Public Relations Management

(2 Hours Lecture + 3 Hours Recommended Studying)

Crisis PR management is one of the most critical aspects of modern communications. Effective crisis management protects companies, their reputations and, at times, can salvage their very existence. The key to PR crisis management is preparedness. It is vital to effective crisis management that a crisis is identified before it happens and, when it does, that it does not get out of control. In this “information and communications” age, when a crisis does happen, it is crucial to understand the role of communication plays and particularly the role of the internet.

This lecture will look at examples of effectively managed crisis situations as well as some of those badly handle crises. It will explore, in some detail, the characteristics of a crisis. Likewise, this lecture will examine the key principles for managing any crisis situation using variety of case studies of both good and bad practice.

Intended Learning Outcomes

At the end of this lecture students will be able to:

- Define and describe crisis PR.
- Recognize how crises occur.
- Identify the key principles of crisis PR planning and management.
- Apply this understanding to simple, personally meaningful scenarios.
- Apply crisis PR planning and management principles to real-life scenarios.

Outline:

- Crisis PR management: The context
- Crisis PR management vs. operational
- Where do crises come from?
- Communicating during a crisis.
- The internet and PR crisis management.
- How to prepare for a crisis.
- Key principles in crisis management.

Lecture 18 – Crisis Management: Case studies

(2 Hours Case Studies + 4 hours Recommended studying)

- “The London bombings of 2005: a case in crisis communication management at Leeds Metropolitan University”.
- “Coca-cola Belgium”.
- In class presentation

Week 11:

Lecture 19– Crisis Management: Case studies

(2 Hours Case Studies + 4 hours Recommended studying)

- “Melbourne Gas Crisis”.
- “Peperami”
- “TaGenero”
- In class presentation

Lecture 20 – Ethics and Professionalism in PR

(2 Hours Lecture + 3 Hours Recommended Studying)

Recent corporate and political scandals, such as Enron, the activities of Conrad Black, the UK and US governments’ presentation of a case for a war in Iraq, have brought ethics very much into the spotlight.

This lecture will examine ethics and professionalism. It looks at the various ethical traditions and professional codes of conduct, as the responsibilities of communication professionals and it provides some models for sound ethical decision making.

Intended Learning Outcomes

At the end of this lecture students will be able to:

- Articulate why ethical practice and professionalism are important.
- Describe the various ethical traditions and theories and apply them to PR situations.
- Analyse the responsibilities that practitioners have to self, organisation, profession and society and identify potential conflicts.
- Describe some of the typical PR dilemmas facing practitioners and point to appropriate resolution.
- Construct principles on which to build an ethical framework based on current theory and practice.
- Choose and use ethical decision-making models.

Outline:

- Importance of ethics and professionalism in PR.
- Definitions of ethics and morality.
- Ethical theories (traditions).
- Duty to whom?
- Ethical issues in PR.
- Ethical decision-making models and their application.

Week 12

Lecture 21 – Case Studies : Ethics - Code of conducts

(2 Hours Case Studies + 4 hours Recommended studying)

Lecture 22 –Case studies: Ethics – Code of conducts

(2 Hours Case Studies + 4 hours Recommended studying)

Week 13:

Lecture 23– Community and Society: CSR

(2 Hours Lecture + 4 Hours Recommended Studying)

Enron, Shell UK, Union Carbide, Wal-Mart and Exxon Corporation are just a few of the major international corporations that have been under the worldwide media spotlight for their corporate actions and activities.

This lecture will explore the role of organizations in society and how, irrespective of the profit or not for profit imperatives, many are taking a

critical view of their roles and responsibilities.

This lecture will describe in detail the relationships between an organisation and the community within which it operates. It will explore the complex issue of business ethics with guidelines on how to promote ethical decision making in practice.

Intended Learning Outcomes

At the end of this lecture students will be able to:

- Critically evaluate the role of organizations in their society/societies.
- Define the concept of CSR in the context of relevant regulatory frameworks.
- Define and critically evaluate the role of ethics in business policy and practice.
- Diagnose ethical problems and identify strategies for making ethical decisions in organizational/cultural contexts.
- Appreciate the environmental complexities that influence organizational communication and PR strategies.

Outline:

- Social and economic change.
- Sustainable business: CSR.
- Business case for CSR: why be socially responsible?
- Organizational responsibilities to society.
- Corporate responsibility and irresponsibility.
- Regulatory frameworks.
- Ethics and business practice.
-

Lecture 24 – Mobile Advertising

(2 Hours Lecture + 4 Hours Recommended Studying)

This lecture will explain students how they can develop a successful mobile advertising campaign.

Outline:

- A Brief History of Advertising.
- A Digital Revolution.
- A Five-Points Framework.
- Introduction to Mobile Advertising.
- Challenges and Accelerators for Mobile Advertising.
- Mobile Advertising Models.
- Case Studies from Around the World.
- Technology-The Lifeblood of Digital Advertising.

	<ul style="list-style-type: none"> • What is a mobile ad? • Mobile advertising types. • The growth of mobile advertising. • Mobile ads vs. Traditional Media ads. • Mobile ads: A value chain analysis. • The 5cs. • The top 5 mobile advertising companies. <p>Week 14</p> <p>Lecture 25- Revision (PART 1)</p> <p>(2 Hours Lecture + 5 Hours Recommended Studying)</p> <p>Brief revise of the material taught.</p> <p>Lecture 26 - Revision (PART 2)</p> <p>(2 Hours Lecture + 5 Hours Recommended Studying)</p> <p>Brief revise of the material taught.</p> <p>Week 15 (2 Hours Exams)</p> <p>Final Examination.</p> <hr style="border-top: 1px dashed black;"/> <ul style="list-style-type: none"> • Public Relations Origins: Definitions and History • The Evolution of PR • PR theories • The process of PR • PR action plan • The Tactics of PR • Audience, Stakeholders, Publics • Communication Concepts & Practice in PR • Evaluation and Measurement of PR programs • Public Opinion • Crisis PR management • Ethics and Professionalism in PR • Community and Society: CSR • Mobile Advertising
<p>Teaching Methodology</p>	<p>Lectures/Group Discussions/ In class presentations/ Case Studies/ Weekly Quizzes/ Flipped Teaching using online platform such as Moodle https://www.bookwidgets.com/</p> <p>Flipped teaching is the process of moving lecture content from face-to-face class time to before class by assigning it as homework. This course will use flipped teaching because it allows more interactive forms of learning to take place during class. Moreover, this course will involve students watching lecture videos as homework.</p>

	<ul style="list-style-type: none"> • Mini case studies: will illustrate issues and concepts with specific reference to real-life scenarios. • Case Studies: will provide a range of exciting material for seminar or private study. • In class activities: will encourage students to take their learning further by conducting web research and engaging in discussion with others.
<p>Assessment Methods</p>	<p>Class Attendance & Participation, Weekly Quizzes, Midterm and Final Exams.</p>
<p>Bibliography</p>	<p>Core:</p> <ul style="list-style-type: none"> • Guth, D. W., and Marsh, C. (2016). <i>“Public Relations – A Values-Driven Approach”</i>. 6th edition, New York: Pearson Education, Inc. • Sharma, CH., Herzog, J., and Melfi, V. (2008). <i>“Mobile Advertising: Supercharge your brand in the Exploding Wireless Market”</i>. Hoboken, New Jersey: John Wiley & Sons, Inc. • Tench, R., and Yeomans, L. (2017). <i>“Exploring Public Relations: Global Strategic Communication”</i>. 4th Edition, Harlow: Pearson Education. • Wilcox, D., and Cameron, G. (2015). <i>“Public Relations: Strategies and Tactics. Study Edition”</i>. 11th edition, London: Pearson Education. <p>Recommended:</p> <ul style="list-style-type: none"> • Aronson, M., Spetner, D., and Ames, C. (2007). <i>“The Public Relations Writer’s Handbook: The Digital Age”</i>, 2nd edition, San Francisco, California: Jossey-Bass. • Bobbitt, R. (2013). <i>“Developing the PR Campaign”</i>, 3rd edition, NY: Pearson Education. • Scott, D. (2015). <i>“The New Rules of Marketing & PR: How to Use Social Media, Online Video, Mobile Applications, Blogs, News Releases, and Viral Marketing to Reach Buyers Directly”</i>, 5th edition, Hoboken, New Jersey: John Wiley & Sons, Inc. • Seitel, F. (2010). <i>“The Practice of Public Relations”</i>, 11th edition, London: Prentice Hall.
<p>Class Attendance</p>	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%.</p>

	<p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>
Weighting of Assessment	<p>Class Attendance & Participation (10%), Weekly Quizzes (10%), Midterm (20%), Final Exams (60%).</p>
Lectures/ Hours per week	<p>2 Lectures / 4 hours</p>
Indicative learning and teaching time	<p>This module is delivered through lectures, group discussions, presentations and case studies.</p> <p><u>Contact Hours:</u></p> <p>Lectures + Revisions 36 Hours</p> <p>Mid-term Exam 2 Hours</p> <p>Final Exams 2 Hours</p> <p>Case studies 10 Hours</p> <p>In class activities 6 Hours</p> <p>Presentations 2 Hours</p> <p>Group Discussions 10 hours</p> <p>-----</p> <p>Subtotal: 68 Hours</p> <p><u>Student's Private Time</u></p> <p>Student's Private Studying 70 Hours</p> <p>Homework 20 Hours</p> <p>Presentations Preparation 10 Hours</p> <p>Midterm Exams Preparation 10 Hours</p> <p>Final Exams Preparation 10 Hours</p> <p>-----</p> <p>Subtotal: 120 Hours</p>



	Total: 188 Hours
Language	English

Course Title	Web Analytics, Data Mining and Key Performance Indicators for Social Media ACCREDITED				
Course Code	DM 203				
Course Type	Elective				
Level	Diploma				
Year / Semester					
Lecturer's Name	Demetrios Melides				
E-mail:	d.melides@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Tue 12:00 – 14:00, Wed 1:00 - 15:00 & Thu 13:00 – 15:00				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	2 / 2	Laboratories / week	None
Course Purpose and Objectives	To enable students to collect, measure, and analyze important web metrics and produce structured reports based on them, regarding the degree to which web performance achieves the goals and objectives of any form of online business presence, including websites and Social Media. To equip them with the knowledge necessary to differentiate which are the Key Performance Indicators (KPIs) for websites and Social Media, so that they can concentrate on primarily on these in their reports, in order for the reports to be meaningful and to provide constructive critique and advice. To create student ability to make suggestions for improvement and general recommendations based on the findings of web analytics, and KPIs in Social Media. To present to students various Data Mining techniques, to be used for the KPIs monitoring and Web Analytics reporting.				
Learning Outcomes	<p>After the successful completion of this course, students should:</p> <ul style="list-style-type: none"> • How to recognise the role of web analytics within the digital marketing landscape. • How to identify, define and interpret commonly used web metrics and KPIs. • More effectively manage a web metrics programme within an organisational context. • Understand the concept of data mining. 				
Prerequisites	None	Required	None		
Course Content	<p><u>Weeks:</u></p> <p>Week 1:</p>				

Lecture 1: Introduction to the module:

(Lecture: 2 hours, Student's private time: 2 hours)

This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course.

Outline:

- Overview of the course
- Our expectations, and were to find resources for this course
- Discussion concerning the recommended books/journals.
- Description of Module Outline/assessment criteria/class hours

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Explain the structure of course and course objectives/aims.
- Understand the concept of web analytics

Lecture 2: Introduction to the module:

This lecture will provide an overview of the web analytics and why companies should use web analytics.

(Lecture: 2 hours, Student's private time: 2 hours)

Outline:

- What to expect form web analytics
- Definitions of key web analytics terms

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Understand the concept of web analytics
- Understand and explain why companies should use web analytics
- Explain the benefits and Costs of web analytics

Week 2: Google analytics

Lecture 3: Google analytics

(Lecture-2 hours, Student's private time-2 hours)

In this lecture, we will review Google Analytics, how it works and its limitations.

Outline:

- Definition of google analytics
- Benefits of google analytics
- Costs of google analytics

Intended Learning Outcomes:

- Understand the concept of google analytics.
- Understand the metrics behind web analytics.
- Understand the metrics behind web analytics

Lecture 4: Google analytics

(Lecture-2 hours, Student's private time-2 hours)

In this lecture students will implement Google Analytics and perform analysis by using standard reports.

Outline:

- Implementing google analytics
- Managing google analytics account

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Examine and overview google analytics
- Create a Google Analytics Account

Week 3: Data Mining

(Lecture 5: Machine Learning and Data Mining)

(Lecture-2 hours, Student's private time-4 hours)

In this lecture students will understand the concept of Data mining.

Outline:

- Data Flood
- Data Mining Application Examples
- Data Mining and Knowledge Discovery
- Data Mining Tasks

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the concept of data mining
- Understand data mining from an analytical perspective and its application to business decision making;

Lecture 6: Data Mining

(Lecture: 2 hours, Student's private time: 4 hours)

This lecture introduces many of the important new ideas in data mining and business analytics, explains them as statistical framework, and describes some of their applications in Business, Finance, Marketing, and

Management.

Outline:

- Text Mining
- Business Analytics

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Develop analytical and computer modeling skills necessary to analyse big data.
- Apply the data and resources available on the web of relevance to business analytics

Week 4: Data Mining

Lecture 7: Data Warehousing and Data Mining

(Lecture: 2 hours, Student's private time: 4 hours)

This module covers the organisation, analysis and mining of large data sets to support business intelligence applications.

Outline:

- Data mining concepts, tasks and algorithms.
- Data mining technologies and implementations. Techniques for mining large data sets, stream mining, architecture trends, standards, products.
- Research trends in data warehousing and data mining.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the concept of data mining.
- Understand and implement data mining technologies

Lecture 8: Data Warehousing and Data Mining

(Lecture: 2 hours, Student's private time-4 hours)

During this lecture, Students will study the principles and commercial application of the technologies, as well as research results and emerging architectures underpinning the analysis and mining of "big data".

Outline:

- Data warehouse construction: data extraction, transformation, loading and refreshing. Warehouse metadata. Continuous ETL.

- Data warehouse architecture trends. MapReduce and warehouse architectures: Pig, Hive, Spark.

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand advanced aspects of data warehousing and data mining.
- Encompassing the principles, research results and commercial application of the technologies.

Week 5:

Lecture 9: Case-study

(Lecture: 2 hours, Student's private time/ recommended reading: 4 hours)

The class will be divided into 3-4 small groups and students will be given a case-study. Students will be given the opportunity to present their results.

Case study: Dell International Web Analytics case study

Lecture 10: Case-study

(Lecture: 2 hours, Student's private time/ recommended reading: 4 hours)

The class will be divided into 3-4 small groups and students will be given a case-study. Students will be given the opportunity to present their results.

Case-study: Assessing Loan Risks: A Data Mining Case Study

Week 6:

Lecture 11-Revision part1

(Lecture: 2 hours/ Student's private time/ recommended reading: 10 hours)

Brief revise of the material taught and supplementary examples/exercises

Lecture 12-Revision part2

(Lecture: 2 hours/ Student's private time/ recommended reading: 10 hours)

Brief revise of the material taught and supplementary examples/exercises

Week 7

(Exam: 2 hours)

Midterm Exams

Week 8:

Lecture 13: Introduction to KPI's

(Lecture: 2 hours, Student's private time: 4 hours)

This lecture helps students to understand and define **basic social media**

metrics and KPI's

Outline:

- Setting the right goals
- KPI's for social media

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Understand strategic goals
- Understand mobility and engagement KPI's

Lecture 14: Introduction to KPI's

(Lecture: 2 hours, Student's private time: 4 hours)

This lecture will provide an overview of the number of other KPI's that should be tracking in order to execute a more successful social media campaign.

Outline:

- ROI
- Incremental Sales
- Traffic Sources

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Understand the importance of ROI as a KPI.
- Understand the importance of incremental Sales

Week 9

Lecture 15: Social Interactions

(Lecture: 2 hours, Student's private time: 4 hours)

This lecture will help students to understand how to measure the engagement levels of their social media campaigns.

Outline:

- Social Interactions Definition
- Social Interactions Challenges
- Social Interactions Best Practices

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Understand the role of Social Interactions KPI
- Understand the Social Interactions Challenges

Lecture 16: Social media KPIs to help measure engagement

(Lecture: 2 hours, Student's private time: 4 hours)

This lecture will provide an overview of Social Media KPIs that marketers can't ignore

Outline:

- Key Social Media KPIs to Track
- Social Media Presence

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Understand the valuable KPI's
- Understand what customers think about your brand

Week 10:

Lecture 17 & 18: Students will be required to deliver two assignments for the successful completion of this course:

(Student preparation for the project/research: 20 hours)

1. Based on the hypothetical company situation provided, what web metrics and web analytical tools would you recommend in order to track the degree to which performance achieves the objectives and goals? Why would you choose these metrics over others? Discuss in detail.

2. Based on the provided case study, with raw results from web analytics, prepare an official report to represent visually the findings, include an analytical part, and also conclusions and recommendations, as well as a short action plan.

Week 11:

Lecture 19: Designing KPI's

Lecture: 2 hours, Student's private time: 4 hours)

This lecture will help students to recognize different types of KPI and the consequences of using these different types of KPI's.

Outline:

- Understand the attributes of well designed KPI
- Recognise different types of KPI and the consequences of using different types.
- Develop KPI for given goals.

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Understand the role of KPI in a quality assurance system.
- Understand the attributes of well designed KPI.

Lecture 20: Key Performance Indicators (KPIs) to Measure Customer Service

(Lecture: 2 hours, Student's private time: 4 hours)

This lecture will discuss the basic KPI's in order to measure customer service.

Outline:

- Overall Satisfaction
- Satisfaction Improvement
- Conversion Rate

Intended Learning Outcomes:

At the end of this lecture students should be able to:

- Understand the different KPIs you can use to measure customer service and the success of your business's customer service strategy.

Week 12:

Lecture 21: Case-study

(Lecture: 2 hours, Student's private time: 4 hours)

The class will be divided into 3-4 small groups and students will be given a case-study. Students will be given the opportunity to present their results. Case study: Managing Key Performance Indicators (KPIs): A Case Study at an Aerospace Manufacturing Facility

	<p>Lecture 22: Case-Study (Lecture: 2 hours, Student's private time: 4 hours)</p> <p>Students will have the opportunity to present and discuss their results in front of the class. Effective feedback will be given to students.</p> <p>Week 13:</p> <p>Lecture 23: Grade and return of assignments (Lecture: 2 hours)</p> <p>Students will be given effective feedback concerning their assignments. The feedback should target individual needs, be linked to specific assessment criteria, and be received by a student in time to benefit subsequent work.</p> <p>Lecture 24: Case-Study (Lecture: 2 hours, Student's private time: 2 hours)</p> <p>The class will be divided into 3-4 small groups and students will be given a case-study. Students will be given the opportunity to present their results. Case-study: Accuwather Google analytics</p> <p>Week 14:</p> <p>Lecture 25: -Revision part1 (Lecture: 2 hours, student's private time:10 hours) Brief revise of the material taught and supplementary examples/exercises</p> <p>Lecture 26: -Revision part1 (Lecture: 2 hours, student's private time:10 hours) Brief revise of the material taught and supplementary examples/exercises</p> <p>Week 15: (2 hours) Final Examination</p>
Teaching Methodology	<p>During the last few minutes of class period, students will be asked to use a half-sheet of paper and write down the "Most important thing I learned today and what I understood least."</p> <p>Students will be asked to leave notes about any class related issue in a suggestion box near the classroom door.</p> <p>A member of the faculty will attend a number of classes to take notes about his/her impression of the class, lecturer-students interaction and teaching methods. He/She will prepare an evaluation report.</p>

Bibliography	<p>Core:</p> <ul style="list-style-type: none"> • Aggarwal, C.C. (2015). "Data Mining. The textbook", 1st Edition, Switzerland: Springer International Publishing. • Mokalis, A., Davis, J. (2018). "Google analytics demystified". 4th edition, CreateSpace Independent Publishing Platform. • The KPI Institute. (2016). "Top 25 Marketing KPIs: 2016 Extended Edition". 2nd edition, CreateSpace Independent Publishing Platform. <p>Recommended:</p> <ul style="list-style-type: none"> • Witten I.H., Frank E., Hall M.A. (2011). "Data Mining". Burlington: Morgan Kaufmann Publishers.
Assessment Methods	Class Attendance & Participation, Midterm, Final Exams.
Attendance percentage	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office). The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>
Weighting of Assessment	10% (Class Attendance and Participation), 25 % (Midterm Examination), 50% (Final Examination), 15% (Project)
Lectures / Hours per week	2 Lectures / 4 hours
Assignment details and assessment	<p>Students will be required to deliver two assignments for the successful completion of this course:</p> <ol style="list-style-type: none"> 1. <u>Based on the hypothetical company situation provided, what web metrics and web analytical tools would you recommend in order to track the degree to which performance achieves the objectives and goals? Why would you choose these metrics over others? Discuss in detail.</u>

	<p>2. <u>Based on the provided case study, with raw results from web analytics, prepare an official report to represent visually the findings, include an analytical part, and also conclusions and recommendations, as well as a short action plan.</u></p> <p>Each assignment should be between 5 to 7 A4 pages 1.5 spacing, Times New Roman 12 font, 2cm margins on each side, excluding appendices, tables, figures, charts, references.</p> <p><u>The assignments will be graded as follows:</u> Effective use and reference to theory from the course and from external sources: 30% Strategic thinking and creative solutions: 20% Overall presentation: 10% Suggestions and recommendations for improvement: 10% Thorough, focused and insightful analysis: 10% The use of examples and data: 10% Persuasion: 10%</p>																		
Indicative learning and teaching time	<p>This module is delivered through lectures, case-studies, group discussions, and project.</p> <p><u>Teaching Hours:</u></p> <table> <tr> <td>Lectures</td> <td>60 Hours</td> </tr> <tr> <td>Mid-term Exam</td> <td>2 Hours</td> </tr> <tr> <td>Case-studies</td> <td>4 Hours</td> </tr> <tr> <td>Final Exams</td> <td>2 Hours</td> </tr> </table> <p><u>Student Learning Time</u></p> <table> <tr> <td>Student reading</td> <td>60 Hours</td> </tr> <tr> <td>Project</td> <td>20 Hours</td> </tr> <tr> <td>Midterm and Final Exams Preparation</td> <td>40 Hours</td> </tr> <tr> <td colspan="2">-----</td> </tr> <tr> <td>Total:</td> <td>188 Hours</td> </tr> </table>	Lectures	60 Hours	Mid-term Exam	2 Hours	Case-studies	4 Hours	Final Exams	2 Hours	Student reading	60 Hours	Project	20 Hours	Midterm and Final Exams Preparation	40 Hours	-----		Total:	188 Hours
Lectures	60 Hours																		
Mid-term Exam	2 Hours																		
Case-studies	4 Hours																		
Final Exams	2 Hours																		
Student reading	60 Hours																		
Project	20 Hours																		
Midterm and Final Exams Preparation	40 Hours																		

Total:	188 Hours																		
Language	English																		

Course Title	Advanced Web Development				
Course Code	MW304				
Course Type	Compulsory				
Level	Diploma				
Year / Semester	2nd / 4th				
Lecturer's Name	Panayiotis Vorkas				
E-mail:	vorkas@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 13:30 – 14:30, Tue 9:00 – 12:00, Wed 09:00 - 10:00, Thu 16:00 – 18:00 and Fri 9:00-10:00.				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	<p>This course teaches how to develop applications for iOS mobile devices such as iPhones and iPads. Students will leverage Swift, the iOS SDK, and Apple developer tools. With iOS as the platform, students will learn object oriented programming, design patterns, type systems, functional language features, user interface design, best practices in programming, and problem analysis. You will learn the basics of the Swift and Swift programming languages, how to use the libraries to build applications that have the proper look and feel, how to design and handle user input, and important software design patterns.</p>				
Learning Outcomes	<p>After the successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> • Efficiently produce and maintain websites by applying production techniques such as external style sheets, include files, and database integration. • Use an authoring tool to create forms and insert scripts (WYSIWYG-generated or provided by a book or website) for simple behaviors such as form validation, pull-down menus, and tabbed panels. • Use advanced authoring tool features to develop database integrated web pages. Web forms will allow the user to query the database, use a login name and password to authenticate, and display, navigate, insert, edit and delete database records. • Describe usability and accessibility concepts and terminology. 				

	<ul style="list-style-type: none"> Synthesize design concepts to create websites that are usable and accessible. 		
Prerequisites	MW202	Required	None
Course Content	<p><u>Weeks:</u></p> <p>Week 1</p> <p>Lecture 1 - Customizing Your Workspace</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>In this lesson, you'll familiarize yourself with the Dreamweaver CC (2017 release) program interface and learn how to do the following: • Use the program Welcome screen • Switch document views • Work with panels • Select a workspace layout • Adjust toolbars • Personalize preferences • Create custom keyboard shortcuts • Use the Property inspector • Use the Extract workflow.</p> <p>Outline</p> <ul style="list-style-type: none"> Use the program Welcome screen Switch document views Work with panels Select a workspace layout Adjust toolbars Personalize preferences Create custom keyboard shortcuts Use the Property inspector Use the Extract workflow <p>Lecture 2 - Lab practice</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This is a practical lecture in lab and it is based on the material taught from lecture1, practicing in the code from the examples in lecture notes and with exercises during the lab time.</p> <p>Outline</p> <ul style="list-style-type: none"> Touring the workspace Using the Start Screen Exploring New Feature guides Working with toolbars Switching and splitting views Selecting a workspace layout Working with panels Personalizing Dreamweaver 		

- Working with Extract
- Creating custom keyboard shortcuts
- Using the Property inspector
- Using the Related Files interface
- Using tag selectors
- Using the CSS Designer
- Using the Visual Media Query interface
- Using the DOM Viewer
- Using the heads-up displays
- Exploring, experimenting, and learning

Week 2

Lecture 3–Web Design Basics/ Create a Page Layout

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the first steps needed to create a website. Analyzing and explaining the purpose of the website, who is going to be the audience and how do they going to get here (webpage). After that will examine the best practices for choosing the best predefine page layout of Dreamweaver. Also, will work with the Visual Media Query interface in order to create a new layout using the Bootstrap framework. At the end, we will modify the layout structure to use HTML5 semantic

Outline:

- What is semantic web design?
- Where did semantic web design begin?
- Frequently used HTML elements
- HTML character entities

Lecture 4 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 3, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Outline

- How to create page thumbnails and wireframes
- How to use Adobe Photoshop to generate site image assets automatically
- Evaluating page design options
- Working with predefined layouts

Week 3

Lecture 5–Working with a Web Framework.

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview on how to insert and format new content and components into a Bootstrap-based layout How the use the CSS Designer to identify applied CSS formatting and be able to create advanced CSS background and gradient effects.

Outline

- How to create a navigation menu
- How to create header content
- How to build semantic content
- Managing Bootstrap component width
- Inserting HTML entities
- How to create global type styles

Lecture 6 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 5 and solving exercises found in the lecture notes.

Outline:

- Access and use web-hosted fonts
- Creating a navigation menu
- Creating header content
- Building semantic content
- Managing Bootstrap component width
- Inserting HTML entities
- Creating global type styles

Week 4

Lecture 7: Designing for Mobile Devices

(2 hours Lecture + 4 hours recommended reading)

This lecture will analyze the responsive design alongside with the addictiveness of the site to different screen sizes. Also, will briefly analyze how to work with media queries and information about them.

Outline

- Bootstrap framework - adapt to different types of mobile devices
- media query for mobile and handheld devices, such as tablets and smartphones
- Select and target CSS rules within specific media queries
- Page components to work with mobile devices
- Preview this page in Dreamweaver

Lecture 8: Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 7 and solving exercises found in the lecture notes.

Outline:

- Edit and manipulate a Bootstrap framework to adapt to different types of mobile devices.
- Create and edit a media query for mobile and handheld devices, such as tablets and smartphones
- Select and target CSS rules within specific media queries
- Configure page components to work with mobile devices
- Preview this page in Dreamweaver.

Week 5

Lecture 9 – Working with Templates

(2 hours Lecture + 4 hours recommended reading)

A template is a type of master page from which you can create related child pages. Templates are useful for setting up and maintaining the overall look and feel of a website while providing a means for quickly and easily producing site content. A template is different from a regular HTML page; it contains areas that are editable and other areas that are not. Templates enable a workgroup environment in which page content can be created and edited by several team members while the web designer controls the page design and the specific elements that must remain unchanged.

Outline

- How to create a Dreamweaver template
- How to insert editable regions
- How to produce child pages
- How to update templates and child page

Lecture 10 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 9, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Outline:

- Creating a template from an existing layout
- Inserting editable regions
- Inserting metadata
- Producing child pages

Week 6

Lecture 11 - Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours Exam)

Midterm Exams

Week 8

Lecture 13–Working with Text, Lists, and Tables

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Dreamweaver’s template. How can be created, insert any editable regions. Also, an overview how child pages can be produced alongside the update of templates.

Outline

- How to create a Dreamweaver template
- How to insert editable regions
- Can produce child pages
- Update templates and child pages

Lecture 14 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 13, practicing in the code from the examples in lecture notes and answering all students' questions based on the lecture material during the lab time.

Outline:

- Previewing the completed file
- Creating and styling text
- Creating lists
- Creating and styling tables
- Copying and pasting tables
- Spell-checking web pages
- Finding and replacing text
- Optional self-paced exercise

Week 9

Lecture 15 - Working with Images and Navigation

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of introduction to New JavaScript APIs, Canvas JavaScript API. As starting point we will make an introduction to New JavaScript API. Following that we will see how we are connecting and disconnecting to New JavaScript APIs. Then we will review and explain the basic queries. Following we will learn how to use, create/manipulate a database with coding examples.

Outline

- Web image basics
- Previewing the completed file
- Inserting an image
- Adjusting image positions with CSS classes
- Working with the Insert panel

- Using the Insert menu
- Inserting non-web file types
- Working with Photoshop Smart Objects (optional)
- Copying and pasting images from Photoshop (optional)
- Inserting images by drag and drop
- Optimizing images with the Property inspector

Lecture 16 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 15, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Outline:

- Insert an image into a webpage
- Use Photoshop Smart Objects
- Copy and paste an image from Photoshop
- Make images responsive to different device and screen sizes
- Use tools in Dreamweaver to resize, crop, and resample web-compatible images

Week 10

Lecture 17 -Working with Navigation

(2 hours Lecture + 4 hours recommended reading)

This lecture will analyze the navigation panel of the website. From how to create a text link or linking to another page until the creation of email link, image-based link and link to a location within a page. Also, will provide an overview of creating and styling a Bootstrap drop-down menu.

Outline

- Hyperlink basics
- Previewing the completed file
- Creating internal hyperlinks
- Creating an external link
- Setting up email links
- Creating an image-based link
- Targeting page elements

- Checking your page
- Adding destination links to the same page (optional)

Lecture 18 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 17 and practicing in the code from the examples in lecture notes and answering all student's questions based on the lecture material during the lab time.

Outline:

- Creating a text link to a page within the same site
- Creating a link to a page on another website
- Creating an email link
- Creating an image-based link
- Creating a link to a location within a page
- Creating and styling a Bootstrap drop-down menu

Week 11

Lecture 19 - Adding Interactivity

(2 hours Lecture + 4 hours recommended reading)

The term Web 2.0 was coined to describe a major change in the user experience on the Internet—from mostly static pages, featuring text, graphics, and simple links, to a new paradigm of dynamic webpages filled with video, animation, and interactive content. Dreamweaver has always led the industry in providing a variety of tools to drive this movement, from its tried-and-true collection of JavaScript behaviors, jQuery, jQuery Mobile, and Bootstrap widgets. This lesson explores two of these capabilities: Dreamweaver behaviors and Bootstrap widgets

Outline

- Learning about Dreamweaver behaviors
- Previewing the completed file
- Working with Dreamweaver behaviors
- Working with Bootstrap Accordion widgets

Lecture 20 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from previous lecture and practicing in the code from the examples in lecture notes and answering all student's questions based on the lecture material during the lab time.

Outline

- Use Dreamweaver behaviors to create an image rollover effect
- Insert a Bootstrap Accordion widget

Week 12

Lecture 21- Publishing to the Web

(2 hours Lecture + 4 hours recommended reading)

Outline

- How meta information works
- How to validate a code
- Understand the browser issues

Lecture 22 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from previous lecture and practicing in the code from the examples in lecture notes and answering all student's questions based on the lecture material during the lab time.

Outline

- Defining a remote site
- Cloaking folders and files
- Wrapping things up
- Putting your site online (optional)
- Synchronizing local and remote sites

Week 13

Lecture 24- Working with Code

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the code using hinting and Emmet shorthand. Will explain how to setup a CSS preprocessor and create SCSS styling. Provide information how to use the live code to test and troubleshoot

their code.

Outline

- Write code using code hinting and Emmet shorthand
- Set up a CSS preprocessor and create SCSS styling
- Use multiple cursors to select and edit code
- Collapse and expand code entries
- Use Live Code to test and troubleshoot dynamic code
- Use the Inspect mode to identify HTML elements and associated styling
- Access and edit attached files using the Related Files interface

Lecture 25 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from previous lecture and practicing in the code from the examples in lecture notes and answering all student's questions based on the lecture material during the lab time.

Outline:

- Creating HTML code
- Working with multicursor support
- Commenting your code
- Working with CSS preprocessors
- Selecting code
- Collapsing code
- Expanding code
- Accessing split Code view
- Previewing assets in Code view

Week 14

Lecture 21- Working with Web Animation and Video Bonus Online Lesson

	<p>(2 hours Lecture + 4 hours recommended reading)</p> <p>In this lecture, you'll learn how to incorporate web-compatible animation and video components into your webpage and do the following: •Insert web-compatible animation • Insert web-compatible vide</p> <p>Outline</p> <ul style="list-style-type: none"> • Understanding web animation and video • Previewing the completed file • Adding web animation to a page • Adding web video to a page • Don't host your own videos <p>Lecture 2 - Revision</p> <p>(2 hours Lecture + 20 hours recommended reading)</p> <p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Week 15 (2 hours exam)</p> <p>Final Examination</p> <hr style="border-top: 1px dashed black;"/> <ul style="list-style-type: none"> • Web Design Basics • Creating a Page Layout • Working with a Web Framework • Designing for Mobile Devices • Working with Templates • Working with Text, Lists, and Tables • Working with Images • Working with Navigation • Adding Interactivity • Publishing to the Web • Working with Code • Working with Web Animation and Video
Teaching Methodology	Lectures/Labs/Assignments/Project
Bibliography	<p>Core</p> <ul style="list-style-type: none"> • Adobe Dreamweaver CC Classroom in a Book® (2017 release) • Nixon,R.(2014)."<i>Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5 (Learning Php, Mysql, Javascript, Css & Html5)</i>", 4th Edition,NY:O'Reilly Media. <p>Recommended</p> <ul style="list-style-type: none"> • Adobe Dreamweaver CS6 Classroom in a Book by Adobe Creative Team, Adobe Publishing, 2012 • Dreamweaver CS6 Bible by Joseph W. Lowery, John Wiley & Sons Publishing, 2012

	<ul style="list-style-type: none"> • Adobe Official Dreamweaver Developer documentation, available at: https://helpx.adobe.com/cy_en/dreamweaver/tutorials.html 																		
Assessment Methods	Class Attendance & Participation, Project, Midterm, Final Exams.																		
Attendance percentage	The students get a portion of their attendance percentage (10%) based on their attendances & participation in class.																		
Weighting of Assessment	Class Attendance & Participation (10%), Project (15%), Midterm (25%), Final Exams (50%).																		
Lectures/ Hours per week	1 Lecture / 2hours 1 Lab / 2 hours																		
Indicative learning and teaching time	<p>This module is delivered through lectures, group discussions and labs.</p> <p><u>Teaching Hours:</u></p> <table> <tr> <td>Lectures</td> <td>30 Hours</td> </tr> <tr> <td>Labs</td> <td>22 Hours</td> </tr> <tr> <td>Mid-term Exam</td> <td>2 Hours</td> </tr> <tr> <td>Group Discussions</td> <td>4 Hours</td> </tr> <tr> <td>Final Exams</td> <td>2 Hours</td> </tr> </table> <p><u>Student Learning Time</u></p> <table> <tr> <td>Student reading</td> <td>88 Hours</td> </tr> <tr> <td>Midterm and Final Exams Preparation</td> <td>40 Hours</td> </tr> <tr> <td colspan="2">-----</td> </tr> <tr> <td>Total :</td> <td>188 Hours</td> </tr> </table>	Lectures	30 Hours	Labs	22 Hours	Mid-term Exam	2 Hours	Group Discussions	4 Hours	Final Exams	2 Hours	Student reading	88 Hours	Midterm and Final Exams Preparation	40 Hours	-----		Total :	188 Hours
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Total :	188 Hours																		
Language	English																		

Course Title	Mobile Applications Security				
Course Code	MW404				
Course Type	Elective				
Level	Diploma				
Year / Semester					
Lecturer's Name	Alexis Marcou				
E-mail:	alexis@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 15:00 – 18:00, Tue 13:00 – 14:30, Wed 11:00 - 14:30 & Thu 13:00 – 14:30				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	<p>This course analyses the subject of mobile security, across the complex industry of multiple players, threats and technologies. The main goal of the course is to improve knowledge and awareness of security issues faced by mobile application developers. Students are expected to gain the necessary skills to implement an effective mobile device security strategy, identify potential flaws in proprietary and third-party iOS and Android applications (and some other well-known platforms), and learn about mobile security's best practices. Students will learn how to implement a systematic security approach in mobile application development, in order to protect their applications against vulnerabilities and threats of the mobile world.</p>				
Learning Outcomes	<p>After the successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> • describe the threat landscape for mobile devices and applications, and be able to map its co-evolution with security controls and safeguards • understand the main sources of vulnerabilities in mobile applications • manage security risks to mobile applications and devices • understand the differing security and privacy requirements of different users and be able to implement privacy and security elements by design into mobile applications • form a coherent design strategy for usable security in mobile applications • identify potential flaws in developed and downloaded applications • use emulators, debuggers, and third-party security tools identify and eliminate threats from Bluetooth, SMS, and GPS services 				

Prerequisites	None	Required	None
Course Content	<p><u>Weeks:</u></p> <p>Week 1:</p> <p>Lecture 1 - Global System for Mobile Communications</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This lecture will provide an overview of the course aims, intended learning outcomes and the design of the course. It will explain the motivation behind the course and along with the idea of the course content. This will include an overview of a number of examples of real life web applications, where we shall highlight the main problems and questions that we shall seek to address and answer through the lecture series. An introduction Global System for Mobile Communications. Then we will analyze the GSM Bandwidth Allocation. Following we will review GSM System Architecture. The analysis of GSM Transmission Network Architecture will follow. On the last section of the lecture we will see the Signaling Channels on the Air Interface and GSM Security Architecture.</p> <p>Outline</p> <ul style="list-style-type: none"> • GSM Bandwidth Allocation • GSM System Architecture • GSM Transmission Network Architecture • Signaling Channels on the Air Interface • GSM Security Architecture <p>Intended Learning Outcomes</p> <p>At the end of this lecture students should be able to:</p> <ul style="list-style-type: none"> • Understand the GSM Bandwidth Allocation • Understand the GSM System Architecture • Understand the GSM Transmission Network Architecture • Know the signaling Channels on the Air Interface • Know the GSM Security Architecture <p>Lecture 2 - Lab practice</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>This is a practical lecture in lab and it is based on the material taught from lecture1, practicing in the code from the examples in lecture notes and with exercises during the lab time.</p>		

Week 2

Lecture 3 - cdmaOne IS-95A Technology

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the cdmaOne IS-95A Technology. An introduction to the Reverse CDMA Channel. Then we will analyze the Forward CDMA Channel.

Outline

- Reverse CDMA Channel
- Forward CDMA Channel

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Reverse CDMA Channel
- Understand Forward CDMA Channel

Lecture 4 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture3, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 3

Lecture 5 - General Packet Radio Service (GPRS)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of General Packet Radio Service (GPRS). An introduction to the GPRS System Architecture. Then we will analyze GPRS Logical Functions. Following we will review the Layered Protocol Architecture of Transmission Plane. On the last section of the lecture we will see the GPRS Ciphering Algorithm.

Outline

- GPRS System Architecture
- GPRS Logical Functions
- Layered Protocol Architecture of Transmission Plane
- GPRS Ciphering Algorithm

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the GPRS System Architecture
- Understand the GPRS Logical Functions
- Understand the Layered Protocol Architecture of Transmission Plane
- Understand the GPRS Ciphering Algorithm

Lecture 6–Lab Practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture5, practicing in the code from the examples in lecture notes and with exercises

Week 4

Lecture 7 - Third-generation Partnership Projects (3GPP and 3GPP2)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Third-generation Partnership Projects (3GPP and 3GPP2). An introduction to 3G Partnership Projects. Then we will review Evolution of Mobile Radio Technologies. As next step we will analyze Cryptographic Protocols Applicable to Wireless Security Technologies.

Outline

- 3G Partnership Projects
- Evolution of Mobile Radio Technologies
- Cryptographic Protocols Applicable to Wireless Security Technologies

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the 3G Partnership Projects
- Know the evolution of Mobile Radio Technologies
- Understand Cryptographic Protocols Applicable to Wireless Security Technologies

Lecture 8 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture7, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 5

Lecture 9–Universal Mobile Telecommunication System (UMTS)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the Universal Mobile Telecommunication System (UMTS). We will analyze UMTS Standardization. Then we will review FDD/TDD Modes for UTRA Operation. UMTS Architecture comes next followed by UTRAN Architecture. Next subject will be UTRAN Terrestrial Interface followed by UTRAN-CN Interface via Iu. Next in queue will be UMTS Security Related Features accompanied by UTRAN Overall Functions. On the last section of the lecture we will see the UTRAN Iub Interface Protocol Structure and UTRAN Iur Interface Protocol Structure.

Outline

- UMTS Standardization
- FDD/TDD Modes for UTRA Operation
- UMTS Architecture
- UTRAN Architecture
- UTRAN Terrestrial Interface
- UTRAN-CN Interface via Iu
- UMTS Security Related Features
- UTRAN Overall Functions
- UTRAN Iub Interface Protocol Structure
- UTRAN Iur Interface Protocol Structure

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand UMTS Standardization
- Understand FDD/TDD Modes for UTRA Operation
- Understand UMTS Architecture
- Understand UTRAN Architecture
- Understand UTRAN Terrestrial Interface
- Understand UTRAN-CN Interface via Iu
- Understand UMTS Security Related Features
- Understand UTRAN Overall Functions
- Understand UTRAN Iub Interface Protocol Structure

- Understand UTRAN Iur Interface Protocol Structure

Lecture 10–Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 9, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 6

Lecture 11 - Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

(2 hours exams)

Midterm Exams

Week 8

Lecture 13 - High Speed Downlink Packet Access (HSDPA)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of High Speed Downlink Packet Access (HSDPA). An introduction to the Basic Structure of HS-DSCH. An Overview of HSDPA Enhancement Technologies will follow. Then we will analyze HS-DSCH MAC Architecture—UE Side and HS-DSCH MAC Architecture—UTRAN Side. An Overview of HSDPA Techniques to Support UTRA comes next. Following we will review Orthogonal Frequency Division Multiplexing (OFDM) and Prospect of OFDM-based Applications.

Outline

- Basic Structure of HS-DSCH
- Overview of HSDPA Enhancement Technologies
- HS-DSCH MAC Architecture—UE Side
- HS-DSCH MAC Architecture—UTRAN Side
- Overview of HSDPA Techniques to Support UTRA
- Orthogonal Frequency Division Multiplexing (OFDM)
- Prospect of OFDM-based Applications

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know Basic Structure of HS-DSCH
- Understand HSDPA Enhancement Technologies
- Understand HS-DSCH MAC Architecture—UE Side
- Know HS-DSCH MAC Architecture—UTRAN Side
- Understand HSDPA Techniques to Support UTRA
- Understand Orthogonal Frequency Division Multiplexing (OFDM)
- Know Prospect of OFDM-based Applications.

Lecture 14 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture13, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 9

Lecture 15 - CDMA2000 1x High Rate Packet Data System (1xEV-DO)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of CDMA2000 1x High Rate Packet Data System (1xEV-DO). We will analyze Architectural Reference Protocol Model. Then we will review Air Interface Layering Protocol. Stream Layer Protocol comes next followed by Session Layer Protocol. Following we will review Connection Layer Protocol and Security Layer Protocols. On the last section of the lecture we will see MAC Layer Protocols and Physical Layer Protocol.

Outline

- Architectural Reference Protocol Model
- Air Interface Layering Protocol
- Stream Layer Protocol
- Session Layer Protocol
- Connection Layer Protocol
- Security Layer Protocols
- MAC Layer Protocols
- Physical Layer Protocol

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand Architectural Reference Protocol Model

- Understand Air Interface Layering Protocol
- Understand Stream Layer Protocol
- Understand Session Layer Protocol
- Understand Connection Layer Protocol
- Understand Security Layer Protocols
- Understand MAC Layer Protocols
- Understand Physical Layer Protocol

Lecture 16 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 15, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 10

Lecture 17 - CDMA2000 1x Evolution-Data and Voice (1xEV-DV)

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of CDMA2000 1x Evolution-Data and Voice (1xEV-DV). We will start with UMTS (WCDMA) Versus CDMA2000—Physical Layer Harmonization. As next step Reverse CDMA Channel. Forward CDMA Channel comes next. CDMA2000 Entities and Service Interface.

Outline

- UMTS (WCDMA) Versus CDMA2000—Physical Layer Harmonization
- Reverse CDMA Channel
- Forward CDMA Channel
- CDMA2000 Entities and Service Interface

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the UMTS (WCDMA) Versus CDMA2000—Physical Layer Harmonization
- Know the Reverse CDMA Channel
- Know the Forward CDMA Channel
- Know the CDMA2000 Entities and Service Interface

Lecture 18 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture17, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 11

Lecture 19–Advanced Encryption Standard and Elliptic Curve Cryptosystems

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide Advanced Encryption Standard and Elliptic Curve Cryptosystems. An essence to Advanced Encryption Standard (AES). Then we will analyze Elliptic Curve Cryptosystem (ECC). Following we will review Elliptic Curve Cryptosystem versus Public-Key Cryptosystems.

Outline

- Advanced Encryption Standard (AES)
- Elliptic Curve Cryptosystem (ECC)
- Elliptic Curve Cryptosystem versus Public-Key Cryptosystems

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Have an essence of Advanced Encryption Standard (AES)
- Know Elliptic Curve Cryptosystem (ECC)
- Elliptic Curve Cryptosystem versus Public-Key Cryptosystems

Lecture 20 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture19, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 12

Lecture 21 - Hash Function, Message Authentication Code, and Data Expansion Function

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of Hash Function, Message Authentication Code, and Data Expansion Function. We will start with the

MD5 Message-Digest Algorithm. Then we will analyze Secure Hash Algorithm (SHA-1). Following we will review Hashed Message Authentication Codes (HMAC) and Data Expansion Function.

Outline

- MD5 Message-Digest Algorithm
- Secure Hash Algorithm (SHA-1)
- Hashed Message Authentication Codes (HMAC)
- Data Expansion Function

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Know the MD5 Message-Digest Algorithm
- Know Secure Hash Algorithm (SHA-1)
- Understand Hashed Message Authentication Codes (HMAC)
- Understand Data Expansion Function

Lecture 22 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture21, practicing in the code from the examples in lecture notes and with exercises during the lab time.

Week 13

Lecture 23 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught through the module, practicing in given exercises during the lab time.

Lecture 24 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught through the module, practicing in given exercises during the lab time.

Week 14

Lecture 25- Revision part1

(2 hours Lecture + 10 hours recommended reading)

	<p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Lecture 26 - Revision part2</p> <p>(2 hours Lecture + 10 hours recommended reading)</p> <p>Brief revise of the material taught and supplementary examples/exercises.</p> <p>Week 15</p> <p>(2 hours exams)</p> <p>Final Examination</p> <hr style="border-top: 1px dashed black;"/> <ul style="list-style-type: none"> • Introduction to Mobile Applications Security • The mobile threat landscape • End-to-end mobile security • Secure software development on mobile • Mobile Security Design and Management Considerations • Mobile platforms security • Mobile Malware • Android, iOS and other OS security • WAP and Mobile HTML Security • Bluetooth & SMS Security • Enterprise security on mobile OS • Mobile Security Penetration Testing tools and techniques
Teaching Methodology	Lectures/Labs/Assignments
Bibliography	<p>Core</p> <ul style="list-style-type: none"> • Mobile communication systems and security, 3/E"by Man Young Rhee, Publisher: John Wiley & Sons (Asia) Pte Ltd, ISBN: 978-0-470-82336-1 (HB) <p>Recommended</p> <ul style="list-style-type: none"> • Mobile Application Security by Himanshu Dwivedi, Chris Clark, and David Thiel, McGraw-Hill Osborne Publishing, 2010 • Hacking and Securing iOS Applications: Stealing Data, Hijacking Software, and How to Prevent It by Jonathan Zdziarski, O'Reilly Media Publishing, 2012 • Application Security for the Android Platform: Processes, Permissions, and Other Safeguards by Jeff Six, O'Reilly Media Publishing, 2011 • Hacking Exposed Mobile Security Secrets & Solutions by Neil Bergman et al, McGraw-Hill Osborne Publishing, 2013
Assessment Methods	Participation and Class Attendance, Midterm, Final Exams, Assignments.

<p>Class Attendance</p>	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office).The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>
<p>Weighting of Assessment</p>	<p>Participation and Class Attendance (10%), Midterm, (25%), Final Exams (50%), Assignments (15%).</p>
<p>Lectures/ Hours per week</p>	<p>1 Lecture / 2hours 1 Lab / 2 hours</p>
<p>Project details and Assessment</p>	<p>Students will be required to build a basic user experience program.</p> <p><u>Putting together a real estate investment app and it will do two things:</u></p> <ol style="list-style-type: none"> 1. <u>Evaluate a potential buy fix and sell property by calculating potential profit.</u> 2. <u>Provide a utility to manage the rehab project once the property is bought.</u> <p><u>It's sort of two apps in one. The opening screen would be a UINavigationController that asks the user if they want to evaluate a property or manage a property. If they tap manage a property it would take them to a tab controller with tabs for budget, repairs, to-do list and notes. The user would be able to navigate away from the tab controller if they go back to the main screen.</u></p> <p>The final project should be between 7 to 8 A4 pages 1.5 spacing, Times New Roman 12 font, 2cm margins on each side, excluding appendices, tables, figures, charts, references. The project should also contain a REFERENCES part at the end, where you should list all sources used in the preparation of the project. The Harvard referencing system should be used.</p>

	<p>The paper-based supportive justification of the project will be graded as follows:</p> <p>Effective use and reference to theory from the course and from external sources: 30%</p> <p>Strategic thinking and creative solutions: 20%</p> <p>Overall presentation: 10%</p> <p>Suggestions and recommendations for improvement: 10%</p> <p>Thorough, focused and insightful analysis: 10%</p> <p>The use of examples and data: 10%</p> <p>Persuasion: 10%</p>														
<p>Indicative learning and teaching time</p>	<p>This module is delivered through lectures, group discussions, seminars, projects, presentations and case studies.</p> <p><u>Contact Hours:</u></p> <table> <tr> <td>Lectures</td> <td>56 Hours</td> </tr> <tr> <td>Mid-term Exam</td> <td>2 Hours</td> </tr> <tr> <td>Group Discussions/Seminars/Presentations/Case studies</td> <td>8 Hours</td> </tr> <tr> <td>Final Exams</td> <td>2 Hours</td> </tr> </table> <p>-----</p> <p><u>Student's Private Study</u></p> <table> <tr> <td>Student self- initiated</td> <td>56 Hours</td> </tr> <tr> <td>Homework/ Projects/Presentations</td> <td>44 Hours</td> </tr> <tr> <td>Midterm and Final Exams Preparation</td> <td>20 Hours</td> </tr> </table> <p>-----</p> <p>Total: 188 Hours</p>	Lectures	56 Hours	Mid-term Exam	2 Hours	Group Discussions/Seminars/Presentations/Case studies	8 Hours	Final Exams	2 Hours	Student self- initiated	56 Hours	Homework/ Projects/Presentations	44 Hours	Midterm and Final Exams Preparation	20 Hours
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Student self- initiated	56 Hours														
Homework/ Projects/Presentations	44 Hours														
Midterm and Final Exams Preparation	20 Hours														
<p>Language</p>	<p>English</p>														

Course Title	iOS Mobile Application Development				
Course Code	MW407				
Course Type	Compulsory				
Level	Diploma				
Year / Semester	2nd / 4th				
Lecturer's Name	Giorgos Malekkos				
E-mail:	malekkos@ledra.ac.cy				
Telephone:	22514044				
Office Hours:	Mon 15:00 – 18:00, Tue 13:00 – 14:30, Wed 11:00 - 14:30 & Thu 13:00 – 14:30				
Preferred style of contact:	Via e-mail for setting an appointment				
ECTS	7.5	Lectures / week	1 / 1	Laboratories / week	1 / 1
Course Purpose and Objectives	<p>This course teaches how to develop applications for iOS mobile devices such as iPhones and iPads. Students will leverage Swift, the iOS SDK, and Apple developer tools. With iOS as the platform, students will learn object oriented programming, design patterns, type systems, functional language features, user interface design, best practices in programming, and problem analysis. You will learn the basics of the Swift and Swift programming languages, how to use the libraries to build applications that have the proper look and feel, how to design and handle user input, and important software design patterns.</p>				
Learning Outcomes	<p>After the successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> • Define key programming terms relevant to Swift and iOS programming. • Describe the process of creating iOS apps. • State the purpose of the Apple developer tools, such as Xcode, Instruments, debugger, analyzer, and iOS Simulator. • Distinguish well-written code from poorly written code. • Employ the Apple developer tools to create an iOS app. • Demonstrate programming best practices in Swift. 				

	<ul style="list-style-type: none"> Examine and subdivide app functionality into properly designed components. Explain and summarize iOS API features including location, mapping, sensors, gestures, multimedia and user interface components. Plan, prepare and build an original iOS app, from concept to working program. 		
Prerequisites	MW207	Required	None
Course Content	<p><u>Weeks:</u></p> <p>Week 1:</p> <p>Lecture 1 - Introduction to iOS development methods</p> <p>(2 hours Lecture + 4 hours recommended reading)</p> <p>iOS is the operating system that runs on iPad, iPhone, and iPod touch devices. The operating system manages the device hardware and provides the technologies required to implement native apps. The operating system also ships with various system apps, such as Phone, Mail, and Safari, which provide standard system services to the user. The iOS Software Development Kit (SDK) contains the tools and interfaces needed to develop, install, run, and test native apps that appear on an iOS device's Home screen. Native apps are built using the iOS system frameworks and Swift language and run directly on iOS. Unlike web apps, native apps are installed physically on a device and are therefore always available to the user, even when the device is in Airplane mode. They reside next to other system apps, and both the app and any user data is synced to the user's computer through iTunes.</p> <p>Outline</p> <ul style="list-style-type: none"> About the iOS Technologies iOS Software Development Kit (SDK) The iOS Architecture Is Layered iOS Technologies Are Packaged as Frameworks The Developer Library <p>Intended Learning Outcomes</p> <p>At the end of this lecture students should be able to:</p> <ul style="list-style-type: none"> Understand the iOS Technologies Understand the iOS Software Development Kit (SDK) Understand the iOS Architecture Is Layered 		

- Understand the iOS Technologies Frameworks
- Understand the Developer Library

Lecture 2 - Swift introduction and Xcodes basics.

(2 hours Lecture + 4 hours recommended reading)

Swift is the primary programming language you use when writing software for OS X and iOS. It's a superset of the C programming language and provides object-oriented capabilities and a dynamic runtime. Swift inherits the syntax, primitive types, and flow control statements of C and adds syntax for defining classes and methods. It also adds language-level support for object graph management and object literals while providing dynamic typing and binding, deferring many responsibilities until runtime.

Outline

- An App Is Built from a Network of Objects
- Categories Extend Existing Classes
- Protocols Define Messaging Contracts
- Values and Collections Are Often Represented as Swift Objects
- Blocks Simplify Common Tasks
- Error Objects Are Used for Runtime Problems
- Swift Code Follows Established Conventions
- XCode
- Difference Between XCode and Swift

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the Network of Objects
- Understand the Categories Extend Existing Classes
- Understand the Protocols Define Messaging Contracts
- Understand the Values and Collections Are Often Represented as Swift Objects
- Understand the Blocks Simplify Common Tasks
- Understand the Error Objects Are Used for Runtime Problems
- Understand the Swift Code Follows Established Conventions
- Understanding the XCode platform

Week 2

Lecture 3 - Lab assignment

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the individual assignment that will be given to students, practicing on the material taught from the

previous two lectures.

Lecture 4 - TabBar and Navigation Based Apps

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of the HTML basics. An introduction to the HTML and its history. Then we will analyze the HTML syntax. Following we will review the semantic markup. The analysis of structure of HTML will follow. Next step is a quick tour of HTML explaining to the class its capabilities. On the last section of the lecture we will see the HTML semantic elements.

Outline

- UITabBarController
- UIViewController
- UINavigationController
- DetailViewController
- Adding Additional Tabs
- Bottom Navigation

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understanding the UITabBarController
- Understanding the UIViewController
- Understanding the UINavigationController
- Understanding the DetailViewController
- Understanding the Additional Tabs
- Understanding the Bottom Navigation

Week 3

Lecture 5 - Data Persistence

(2 hours Lecture + 4 hours recommended reading)

There are several strategies for storing application data on disk. The options described in this lecture shouldn't be considered as interchangeable. Each strategy has benefits and drawbacks. We are going to analyze some of them through their advantages and disadvantages.

Outline

- User Defaults
- File System and Application Sandboxing
- Sandboxing and Directories
- Data Persistence Options
- Defaults system

- XML
- Text
- Property lists
- SQLite
- Core Data

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the User Defaults
- Understand the File System and Application Sandboxing
- Understand the Sandboxing and Directories
- Understand the Data Persistence Options
- Understand the Defaults system

Lecture 6–Lab Practise

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture4-5, practicing in the code from the examples in lecture notes and with exercises

Week 4

Lecture 7 - Core location and Mapkit

(2 hours Lecture + 4 hours recommended reading)

This course shows iOS developers how to add location awareness and maps to Apple iPhone and iPad applications. Discover how to show customers and clients where you're located and share directions with them. The lecture covers the basic purpose of the Core Location and MapKit frameworks and how to integrate their services with your existing applications. Also shows how to center a map on a location, add annotations, create overlays, and zoom and navigate around maps. The course also covers how to leverage live location data such as course and speed and modify it when necessary.

Outline

- Displaying maps
- Reviewing the geographic coordinate system in MapKit
- Centering the map on the user location
- Adding interactivity to annotations
- Creating overlays with shapes and lines
- Starting and stopping location services
- Defining the distance between two locations

- Implementing forward or reverse geocoding

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Be able to display maps
- Be able for reviewing the geographic coordinate system in MapKit
- Be able to Centering the map on the user location
- Be able to Adding interactivity to annotations
- Be able to Creating overlays with shapes and lines
- Be able to Starting and stopping location services
- Be able to Defining the distance between two locations
- Be able to Implementing forward or reverse geocoding

Lecture 8 - Gestures Interaction and Accelerometer Recursion

(2 hours Lecture + 4 hours recommended reading)

User interactions on Apple Watch generate touch events and gestures. When the user taps a button or another control, Apple Watch calls that control's associated action method. You define action methods for the controls in your interface and use them to respond to user interactions. The system also provides automatic responses for the following gestures. Accelerometer and gyroscope data can be used for fitness and health-related activities or for games. You can use motion data to gauge the user's activity level and track specific types of movement, such as arm movements made during a workout. Apple Watch lets you record sensor data for several days so that you can identify long-term movement patterns.

Outline

- Drag
- Flick
- Swipe
- Double tap
- Pinch
- Touch and hold
- Shake
- Use motion data to offer a tangible benefit to the user
- Avoid using the accelerometers or gyroscopes for the direct manipulation of your app's interface

Intended Learning Outcomes

- Taps trigger action-based events in interface elements
- Vertical swipes scroll the current screen or swipe between detail rows in a table
- Horizontal swipes display the previous or next page in a page-based interface

- Left edge swipes navigate back to a parent screen in a hierarchical interface

Week 5

Lecture 9—Audio and Video

(2 hours Lecture + 4 hours recommended reading)

The AV Foundation framework on the iOS SDK permits developers to play and record audio and video with simplicity. In addition, the Media Player framework permits developers to play audio and video files. Apple platforms provide a comprehensive set of audio frameworks and technologies that are essential to creating a rich app experience. Use them to immerse your users in multichannel audio with spatial rendering, process sound in real-time using AVAudioEngine, and engage the creativity of enthusiasts and professionals through Audio Unit Extensions. Audio apps, such as synths, tuners, and podcast players, are some of the most popular in the App Store. But even the simplest apps are usually wired for sound. John Nastos, the developer of Metronomics, shows how he uses iOS system sounds and playback controls to program iOS apps with sound. He walks through the four main frameworks—System Sound Services, AVFoundation and AVAudioPlayer, Audio Queue Services, and Core Audio—providing developers with the information they need to start working with sound or transition their existing skills from a different language or platform.

Outline

- Playing sounds with System Sound Services
- Setting up audio sessions
- Playing sounds with AVFoundation andAudioPlayer/AVAudioRecorder
- Recording audio with an audio input queue
- Playing back audio with an audio output queue
- Setting up audio units
- Changing input and output levels
- Responding to events
- Working with third-party frameworks

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understand the Methods
- Understand theProperties
- Understand theAVURLAsset
- Understand theAVAssetExportSession

Lecture 10–Lab Practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture 7-9, practicing in the code from the examples in lecture notes and with exercises

Week 6

Lecture 11 - Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 12 – Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 7

Midterm Exams **(2 hours)**

Week 8

Lecture 13 - Tables and Collection Views

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of databases. An introduction to databases and web development and explaining how they are working. Then we will analyze the Structured Query Language (SQL). Following we will review the database APIs. An analysis of managing a MySQL database will follow. As next step explaining to the class how we are accessing MySQL in PHP. Next thing we will review the case study schemas. On the last section of the lecture we will see sample database techniques.

Outline

- Understanding the impact of changes to Xcode and Swift
- Adding and configuring the new UICollectionView
- Using Auto Layout to arrange an iOS user interface
- Creating table views and data sources
- Loading an array
- Grouping sections
- Adding titles and images to table cells
- Responding to table row selection events
- Adding tabs to a tabbed application

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Posting to Facebook with the Social framework
- Dynamically changing the size of collection view cells
- Creating a custom pass with the Passbook API
- Transitioning between views
- Sending data between views

Lecture 14 - Core Data

(2 hours Lecture + 4 hours recommended reading)

Core Data is an object-oriented persistence framework used to manipulate and store data in iOS and OS X applications, and it's a core competency for any Apple developer. This course introduces the concepts behind Core Data: what it is, what it does, and how to get started. An exploration of the Core Data stack of objects and steps through the hands-on process of using Core Data in both iOS and Cocoa. The course shows how to shift from a database-focused or file-focused approach into a true object persistence approach: working with saving, loading, searching, and filtering. Discover how to model your data correctly, integrate Core Data objects with iOS and Cocoa user interfaces, and take existing data and load it into your app.

Outline

- Understanding Core Data and object persistence frameworks
- Creating a Core Data project
- Exploring data modeling
- Creating entities, attributes, and relationships
- Creating managed objects

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Fetching in Core Data
- Implementing undo and redo support
- Creating a Core Data Cocoa app without code
- Responding to validation issues
- Converting store types
- Preloading default data

Week 9

Lecture 15 - Auto layout and orientation

(2 hours Lecture + 4 hours recommended reading)

OS has visual UI development tools built right into Xcode, the IDE that iOS developers use the most. Xcode's Interface Builder provides graphical tools

for manipulating layouts and views—which means little to no programming required. Interface design is a great way to break into iOS app development, or expand your programming skills to the realm of UX. Here we explain how to create designable views and dynamic and adaptive user interfaces for any screen size or orientation. Learn how to work with stack views, images, custom fonts, and Interface Builder's Auto Layout tools, which speed up your design process and help, adhere to Apple's interface guidelines. Along the way, he provides best practices for designing interfaces that are clean, efficient, and enjoyable for users.

Outline

- Creating and customizing views
- Laying out a user interface
- Working with dynamic Auto Layout designs
- Stacking views
- Creating an adaptive layout
- Handling orientation changes
- Working with images
- Customizing fonts

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Using Xcode and the iOS Simulator
- Learning Swift basics and structure
- Creating objects, variables, properties, and custom classes
- Connecting UI elements to code
- Using delegation
- Using the Xcode debugger
- Creating and customizing table views
- Exploring storyboards
- Introducing blocks
- Saving and loading data
- Understanding the differences in iPad development
- Creating iPad apps with popovers and split views
- Adding application icons and launch images

Lecture 16 - Social Media & Public Relations

(2 hours Lecture + 4 hours recommended reading)

This course provides the core knowledge to begin programming in any language. We use JavaScript to explore the core syntax of a programming language, and show how to write and execute your first application and understand what's going on under the hood. The course covers creating small programs to explore conditions, loops, variables, and expressions; working with different kinds of data and seeing how they affect memory; writing modular code; and how to debug, all using different approaches to

constructing software applications. Finally, the course compares how code is written in several different languages, the libraries and frameworks that have grown around them, and the reasons to choose each one.

Outline

- Writing source code
- Understanding compiled and interpreted languages
- Requesting input
- Working with numbers, characters, strings, and operators
- Writing conditional code
- Making the code modular
- Writing loops
- Finding patterns in strings

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Working with arrays and collections
- Adopting a programming style
- Reading and writing to various locations
- Debugging
- Managing memory usage
- Learning about other languages

Week 10

Lecture 17 - iCloud

(2 hours Lecture + 4 hours recommended reading)

iCloud is built into every iOS device and every new Mac. It lets users access their content from any device, but it's also great for developers who want to store and sync data in the cloud. In this short course, The lecturer explains how to access iCloud from iOS; using the iCloud API to incorporate storage capabilities into the iPhone and iPad apps you build. He shows how to load files from iCloud, send data to iCloud, work with CloudKit databases, and autosync cloud data so your apps are always up to date.

Outline

- Working with iCloud key-value pairs
- Building an example app that accesses iCloud documents
- Saving and loading iCloud documents
- Fetching records with CloudKit

Intended Learning Outcomes

At the end of this lecture students should be able to:

- Understanding the class structure of an app
- Building the data model and constants
- Making your app compatible with the Apple Developer portal
- Connecting to iCloud
- Understanding the UIDocument class
- Handling document metadata class
- Opening, closing, saving, and deleting documents from iCloud

Lecture 18 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture13, practicing in given exercises during the lab time.

Week 11

Lecture 19 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture14, practicing in given exercises during the lab time.

Lecture 20 - Individual project

(2 hours Lecture + 4 hours recommended reading)

This lecture will provide an overview of IOS Application. An introduction to the software and explaining how it's working. Understanding the concept and all the steps needed for creating and publish an IOS Application

Outline

- Explain the process of creating a universal app that will run on both iPhone and iPad devices.
- Understand the process required to publish and submit an iOS application.
- Design, develop, create and present a significant final iOS project.

Week 12

Lecture 21 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from

lecture15, practicing in given exercises during the lab time.

Lecture 22 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught from lecture16, practicing in given exercises during the lab time.

Week 13

Lecture 23 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught through lecture 17, practicing in given exercises during the lab time.

Lecture 24 - Lab practice

(2 hours Lecture + 4 hours recommended reading)

This is a practical lecture in lab and it is based on the material taught through the Individual project, practicing in given exercises during the lab time.

Week 14

Lecture 25- Revision part1

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Lecture 26 - Revision part2

(2 hours Lecture + 10 hours recommended reading)

Brief revise of the material taught and supplementary examples/exercises.

Week 15

(2 hours exam)

Final Examination

-
- Running and modifying an iOS app
 - Gaining a comfort level with Xcode
 - Apply Auto Layout constraints to create adaptive user interfaces
 - Discovering how to connect user interface controls to controller code
 - Understanding the tools and technologies used to create iOS apps
 - Practicing the fundamentals of Swift syntax
 - Understanding object-oriented programming with Swift
 - Discovering Swift data types and collections
 - Applying UILabel and UIPickerView components, IBOutlet and

	<p>IBActions</p> <ul style="list-style-type: none"> • Demonstrating Arrays, ranges and the map function • Describing protocols and delegates • Using UserDefaults and property list files for persistence • Describing object-oriented inheritance and subclassing • Discovering how to respond to touch events • Practicing establishing connections between controllers and views • Describing how frameworks provide additional app functionality • Defining URLs and the NSURL class • Combining additional frameworks in an Xcode project configuration • Discovering the fundamental features of the MKMapView API
Teaching Methodology	Lectures/Labs/Assignments
Bibliography	<p>Core</p> <ul style="list-style-type: none"> • iOS 8 for Programmers: An App-Driven Approach with Swift, 3/E"by Paul Deitel, Harvey M. Deitel, Abbey DeitelPublisher: Prentice Hall 2015, ISBN-13: 9780133965261. <p>Recommended</p> <ul style="list-style-type: none"> • Swift for Programmers"By Paul Deitel, Harvey DeitelPublisher: Prentice Hall 2015, ISBN-13: 9780134021362 • Academic Bundle iOS 8 for Programmers and Swift for Programmers • Beginning iPhone Development with Swift: • Exploring the iOS SDKby David Mark et al.-2014ISBN13: 9781484204108 • Programming iOS 8: Dive Deep into Views, View Controllers, and Frameworksby Matt Neuburg-2014ISBN13: 9781491908730
Assessment Methods	Participation and Class Attendance, Midterm, Final Exams, Assignments.
Class Attendance	<p>Class attendance is considered an important part of the educational process. It is expected that students will attend all class sessions scheduled for the courses for which they have registered. Academics (Module Leader) are responsible for recording student attendance for the module they are responsible for. This is to be recorded on a typed list for their module. (Class lists are available from the Department Office).The absence limit is 10%.</p> <p>At the beginning of each semester the lecturers will define absentee limits so they are aware of how many absences students are allowed before it affects their grades and progression. If they do exceed the maximum number of unjustified absences their overall grade is automatically reduced by 10% in any unit they did not adequately attend.</p> <p>At the end of each semester the Module Leader is to provide an overall summary of the student attendance for that module. If the student exceeds 30% of the module in absences he/she automatically fails the module. Attendance list and an overall summary of attendance are to be kept in the relevant module files which are located in the Department Office.</p>

Weighting of Assessment	Participation and Class Attendance (10%), Midterm, (25%), Final Exams (50%), Assignments (15%).
Lectures/ Hours per week	1 Lecture / 2hours 1 Lab / 2 hours
Project details and Assessment	<p>Students will be required to build a basic user experience program.</p> <p><u>Putting together a real estate investment app and it will do two things:</u></p> <ol style="list-style-type: none"> <u>3. Evaluate a potential buy fix and sell property by calculating potential profit.</u> <u>4. Provide a utility to manage the rehab project once the property is bought.</u> <p><u>It's sort of two apps in one. The opening screen would be a UINavigationController that asks the user if they want to evaluate a property or manage a property. If they tap manage a property it would take them to a tab controller with tabs for budget, repairs, to-do list and notes. The user would be able to navigate away from the tab controller if they go back to the main screen.</u></p> <p>The final project should be between 7 to 8 A4 pages 1.5 spacing, Times New Roman 12 font, 2cm margins on each side, excluding appendices, tables, figures, charts, references. The project should also contain a REFERENCES part at the end, where you should list all sources used in the preparation of the project. The Harvard referencing system should be used.</p> <p>The paper-based supportive justification of the project will be graded as follows:</p> <p>Effective use and reference to theory from the course and from external sources: 30%</p> <p>Strategic thinking and creative solutions: 20%</p> <p>Overall presentation: 10%</p> <p>Suggestions and recommendations for improvement: 10%</p> <p>Thorough, focused and insightful analysis: 10%</p> <p>The use of examples and data: 10%</p> <p>Persuasion: 10%</p>
Indicative learning and teaching time	This module is delivered through lectures, group discussions, seminars, projects, presentations and case studies.

	<u>Contact Hours:</u>	
	Lectures	56 Hours
	Mid-term Exam	2 Hours
	Group Discussions/Seminars/Presentations/Case studies	8 Hours
	Final Exams	2 Hours
	<u>Student's Private Study</u>	
	Student self- initiated	56 Hours
	Homework/ Projects/Presentations	44 Hours
	Midterm and Final Exams Preparation	20 Hours

Total :	188 Hours	
Language	English	

ANNEX 3 – DETAILED BIOGRAPHICAL NOTES



Curriculum vitae

PERSONAL INFORMATION

Panayiotis Vorkas



Anastasi Manoli 8, 7520 Larnaca (Cyprus)

99595186

pvorkas@live.com



POSITION

Head of Mobile and Web Application Development

WORK EXPERIENCE

01/10/2015–Present

Lecturer of Computing

Ledra College, Nicosia (Cyprus)

EDUCATION AND TRAINING

01/10/2005–01/12/2012

Bachelor in Information Technology

A.T.E.I Thessalonikis, Sindos (Greece)

12/03/2012–15/03/2012

Microtik Certified Network Associate

Microtik User Meeting (MUM) 2012, Warsaw- Poland, Warsaw (Poland)

01/10/2014–01/10/2016

Master in Information Communication Technology

International Hellenic University, Thessaloniki (Greece)

10/02/2017–08/01/2018

CCNA Routing & Switching

UCLAN CYPRUS, Pyla - Lamaka (Cyprus)

PERSONAL SKILLS

Mother tongue(s)

Greek

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
TOEIC					

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills

- Audience profile
- Listening
- Avoiding emotional hooks
- Educating without arrogance
- Interpersonal Communication

- Written Communication
- Collaboration
- Negotiation

Organisational / managerial skills

- Self-Awareness
- Continuous Learner
- Planning Ahead
- Creating and keeping deadlines.
- Delegation.
- Goal setting and meeting goals.
- Decision making.
- Team management.
- Project management.
- Making schedules.

Job-related skills mentoring skills (as a trainer in "train the teacher" in college to use e-learning platform)
Excellent troubleshooting skills in complex software and hardware problems

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital skills - Self-assessment grid

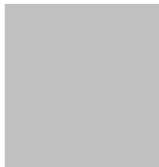
MTCNA

Driving licence AM, A1, A2, A, B1, B, BE, C1, C1E, C, CE



PERSONAL INFORMATION

Giorgos Georgiou



11, Gregory Afxentiou Kokkinotrimithia, Nicosia, 2660, Cyprus
22832558 99837771
giorgos_23_@hotmail.com
<https://www.facebook.com/giorgosgeorgiou23>

Sex Male | Date of birth 11/03/1982 | Nationality Greek/Cypriot

I'm young full of energy and I'm still learning many things. I can learn easily, self-motivated. I am a pursuing person, highly motivated and versatile individual with experience in Information Technology and specialising in Computer Networking. I work well in a team and have the ability to adapt to the daily challenges of today's working environments.

PERSONAL STATEMENT

Seeking to work in Information Technology and Computer Networking, areas where I have experience and practical skills. I want to have a great career and I'm looking for the opportunity. My dream is to become a great professional in Computer Science and Computer Networking.

WORK EXPERIENCE

Feb 2017 to Today

Computing Lecturer

Ledra College
Langada, Strovolos, Cyprus
<http://ledra.ac.cy>

- Teaching: Information Systems Technology, Intermediate Programming, Introduction to Databases, Introduction to Web Application Development and Introductory Programming.

Oct 2015 to Today

Computing Tutor

Private lessons

- Teaching: Pascal Programming for final year students, C++ programming for second year students, AutoCAD and preparing final year students for university entrance exams.

Oct 2015 to Today

Computing Lecturer

Global College
245 Eleonon Street, Strovolos 2048, Cyprus
www.globalcollege.ac.cy

- Teaching: Computer Fundamentals and Applications and Computerized Accounting.

Oct 2015 to Feb 2016

Head of buffet

Diamond Hall
Kokkinotrimithia, Nicosia, Cyprus
In charge of the smooth run of the buffet during events.

Dec 2014 to Oct 2015

Delivery boy

Carina Pizza
25is Martiou 95, Palaiometochi 2682, Cyprus

- Delivering food to customers.

Nov 2014 to Jun 2015

Computing Tutor

- Intercity Private Institute
Egkomi, Nicosia, Cyprus
- Teaching: ECDL modules: Excel, Access, Powerpoint and Windows & IT concepts and E-Kidz class.
- Feb 2011 to Jun 2012 **Education**
Computing Lecturer
City College
55 East Road, London N1 6AH
<http://www.citycollege.ac.uk>
Teaching: Object Oriented Programming (C++), Human Computer Interface, Project Management
Network Security, Visual Programming (Visual Basic) and Programming in Java
- Feb 2011 to Jun 2012 **Education**
Lab Assistant
London Metropolitan University
166–220 Holloway Road, London N7 8DB
www.londonmet.ac.uk
• Assisting students in lab for the Computer Software & Hardware Architecture.
- Jun 2008 to Sep 2008 **Education**
IT Manager
Elysee Irrigation
Pentadaktylou, 5, 2643, Cyprus
elysee.com.cy
• I was in charge of the smooth running of the company's internal network.
- Oct 2007 to May 2008 **Production**
Customer Service Agent
Otenet Telecommunications
Pindarou, Nicosia, Cyprus
• I was responsible for troubleshooting the day-to-day problems of the company's nationwide customers and providing a premium level of service.
- Jun 2007 to Feb 2008 **Telecommunications**
Delivery boy
Pizza Hut
Kokkinotrimithia, Nicosia, Cyprus
www.pizzahut.com.cy
• Delivering food to customers.
- Restaurant**

EDUCATION AND TRAINING



Curriculum Vitae

Giorgos Georgiou

Jan 2009 to Jun 2010 **MSc Computer Networking**

London Metropolitan University
166–220 Holloway Road, London N7 8DB
www.londonmet.ac.uk

Principal subjects covered and skills acquired: Embedded Internet Systems, Advanced Routing Protocols (CCNP course), Enterprise Switched Networks (CCNP course), Digital & Mobile Broadcasting, Broadband Networks, Research & Development, Thesis & Scientific Article writing

Oct 2005 to Jun 2008 **BSc Computer Science**

University of Nicosia
46 Makedonitissis Avenue, Engomi, Nicosia
www.intercollege.ac.cy

Sep 2001 to Sep 2005 **Diploma in Computer Studies**

Higher Technical Institute
Aglantzia, Nicosia, Cyprus

May 1999 **Higher in Accounting**

LCCI

PERSONAL SKILLS

Mother tongue(s) Greek

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Communication skills • Good communication skills gained through my experience as computing lecturer

Organisational / managerial skills

- Leadership (I am a goal-driven leader who maintains a productive climate and confidently motivates, mobilizes, and coaches employees to meet high-performance standards)
- Keeping deadlines (One very important rule I have learned so far is never miss the deadline whatever the reason)
- Meeting goals (I am pursuing the goals individual and I never give up until I meet them)
- Decision making (I always take into consideration all the odds based on the occasion, compare it with the positives and try to maximize the good outcome with minimizing the damage if that is inevitable)
- Team management (I was born to lead, I like to earn people's trust and respect and always try to guide them to what I believe is the best for them. I always try to have their attention and focus and motivate them to achieve the best possible outcome)
- Project management (I was teaching this subject so it was very easy for me to adapt it as a skill to my personal life and character)
- Problem-solving (I am a productive worker with solid work ethic who utilizes optimal effort in successfully completing tasks)
- Teamwork (I am a creative team player, with expertise in building trusting relationships with customers and colleagues)
- Multitasking (I can handle many tasks at the same time for example I can run a lot of modules; run a lot of projects etc.)
- Strategic thinking (since my childhood I was always admire ancient Greek heroes like Leonidas, Achilles, Odysseus etc. and I was reading and analysing the way they were thinking and the decisions that they were making based on the facts that they had. That helped me to develop my own strategic thinking which it is adapting through experiences in life)

Job-related skills

- Willingness to learn (I am excited when I have to meet challenges and quickly adapt new concept)
- Passion (I am consistently cited for uncontrolled passion for work)
- Loyalty (I am a very loyal and dedicated individual with an excellent work record)
- Professionalism and Self-Confidence (I am a confident hardworking achiever who is highly organized, dedicated, and committed to professionalism)
- Honesty and Integrity (I am an experienced professional whose honesty and integrity create effective leadership and optimal business relationships)
- Adaptability (I am a highly adaptable person, willing to travel, very positive, robust and patient risk-taker who is open to new ideas)
- Reliability and Responsibility (I am a responsible contributor committed to excellence and success)

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user
Replace with name of ICT-certificate(s)				

Computer skills

- Good command of office suite (MS PowerPoint, MS Access, MS Excel, MS Word, Windows & IT Concepts through the ECDL course I was teaching)
- Good command of a variety of programming languages that I taught from time to time (PHP, SQL, Oracle & Oracle forms 10i, C++, Java, Pascal)
- Good command of self-learning techniques, intrusion detection systems and network threats classification through my PhD level research

Other skills

Anything about IT support, Viruses treatment, Photoshop, AutoCAD, Networking, Bar-Tender, Critical thinking in decision making, Unix, Social networks, ERP, BTMS Garage Systems

Driving licence

B

ADDITIONAL INFORMATION



Curriculum Vitae

Giorgos Georgiou

Publication/Presentation/Project

Self-Learning of new Network Threats

Academic Interest/Research

Network Security, Network Intrusion Detection Systems, Self-Learning Techniques, Virus Classification/Identification



Curriculum vitae

PERSONAL INFORMATION

Vasiliki Moti

22514044

vasiliki@ledra.ac.cy

POSITION

Lecturer- Head of Digital Marketing

WORK EXPERIENCE

01/10/2016–Present

Lecturer of Digital Marketing

Ledra College, Nicosia (Cyprus)

EDUCATION AND TRAINING

2003–2007

BA in Journalism

Frederick Institute of Technology, Nicosia (Cyprus)

2009–2010

MA in Media and Public Relations

University of Newcastle, Newcastle (United Kingdom)

2011–2012

CIPR Diploma in Public Relations

Chartered Institute of Public Relations UK, London (United Kingdom)

2014–Present

PhD in Media and Communication

University of Nicosia, Nicosia (Cyprus)

PERSONAL SKILLS

Mother tongue(s) Greek

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills

- Strong communication and interpersonal skills.
- Excellent verbal and written communication skills.
- Experienced at giving oral presentations.
- Excellent communicator.
- Confident presenter.
- Strong editorial and proof reading ability producing accurate and high quality work.

Organisational / managerial skills

- Leadership, planning and problem solving skills.

- Excellent organisational and time management skills.
- Ability to prioritise work.
- Ability to work accurately under pressure of deadlines.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital skills - Self-assessment grid

Driving licence B1, B

PATROKLOU KOKKINOU 7, FLAT 31, ACROPOLI
NICOSIA, CYPRUS
MOBILE 96 52 54 22
E-MAIL MKOZANIDI@GMAIL.COM

M A R I N A K O Z A N I D I

1. PERSONAL INFORMATION

Marital status: Single

Age: 36

Nationality: Greek

2. STUDIES

[2004 – 2006] Department of Linguistics

London Metropolitan University, MA in Applied Translation Studies

[2000 – 2004] Department of Government & Linguistics,

University of Essex, BA in European Studies and Modern Languages

▪ *Erasmus – Students' exchange programme for 9 months of studies in the Autonomous University of Madrid, Spain (26/9/2002 -28/6/2003)*

[1999] High school graduation

3. LANGUAGES

Greek [Mother tongue]

English [Fluent]

Spanish [Final Honors University level in Spanish, Diploma de Español B2 Nivel Intermedio, Instituto de Cervantes]

Italian [Basic communicative capability]

4. WORK EXPERIENCE

▪ October 2017 – until today “Ledra College”
Nicosia, Cyprus –English Lecturer

▪ January 2016 – September 2017 “Relia Trading Ltd”
Nicosia, Cyprus - Customer Service, Translation

▪ September 2015 – May 2016 “IEK AKMI”

Herakleion, Crete - English Lecturer & ELE (Español como lengua extranjera – Spanish as a foreign language)

- September 2013 – 10th June 2015 *“Polyglosso” Institute of Foreign Languages*
Athens, Greece – TEFL
 - February 2013 – July 2014 *OTE Academy; Registered Education Provider*
Athens, Greece – TEFL for adults
 - July 2012 – December 2012 *Teleperformance*
Athens - Inbound call center for English and Spanish speaking customers; Technical Support for SanDisk products
 - October 2008 – June 2012 *“Salevris Institute of Foreign Languages”*
Athens, Greece - TEFL
 - February 2008 – August 2008 *“Rebreeze Café Bar”*
Athens – Barista
 - October 2007 – December 2008 *Versus Travel*
Athens – Hired to assist on project driven translation work for the travel industry. Participated in organizing promotion campaigns, travel literature, brochures and internet content.
 - March – September 2006 *“Kalia Beach Hotel”*
Herakleion, Crete – Receptionist
 - June - August 2005 *“Atlas Translations Ltd”*
London, Covent Garden
- *Placement; During my time there, I had to deal with a variety of tasks such as: Translating from English into Greek, Spanish into Greek and from Spanish into English, typesetting, proofreading, use of office equipment (telephone/fax/photocopy machine/computer), banking, and dealing with clients
- November 2004– April 2005 *La Strada, Restaurant*
London, Islington – Waitress

5. OTHER INFORMATION

- Cambridge International Diploma in IT Skills (Microsoft Office, Microsoft Windows: Excel, Internet, Email)
- Excellent swimming ability

6. SEMINARS

- 2009 British Council, Athens

Introductory Methods Course in TEFL (Teaching of English as a Foreign Language)

- 2009 HILLSIDE PRESS, Athens 2009

Emotional problems in early childhood and adolescence associated with learning difficulties

- 2008 CITY & GUILDS ESOL, Athens

Vocabulary: Should Students Attack or Ignore New Words?

7. HOBBIES

- Literature
- Cinema
- Music
- Trekking
- Swimming

8. REFERENCES

Available upon request

Alexandros Marcou

Kiriakou Matsi 8,
Xylotymvou, Larnaca, 7510
e: alexkec_88@hotmail.com
t: 96381390

EDUCATION AND QUALIFICATIONS

Coventry University 2013-2017

MPhil in Computing Design routing protocol in wireless ad hoc networks for QoS

Key Modules: Network and Mobile Device Forensics, MATLAB, Network Simulator 2, Research Design and Writing.

Coventry University 2009-2012

Bachelor of Science with Honors First Class in Ethical Hacking and Network Security

Key Modules: Ethical Hacking, Systems Security, Advanced Network Management and Design, Operating Systems and Security, Database Systems (SQL Plus), Networked System Architectures, Object-oriented Programming (Java).

Dissertation: Hacking Forensic Android Devices.

University of Thessaly 2008-2009

Computer and Communications Engineering

Key Modules: Programming Language (C), Mathematics, Linear Algebra, Digital Design, Introduction to Computers, Physics

St. George's Lyceum Larnaca 2003-2006

Lyceum Apolyterion (average 18 and 4/12 out of 20)

Key Modules: Computers, Mathematics, Physics, Biology.

EXPERIENCE

Coventry University

Hourly paid Teaching Assistant 2016-2017

- Assisting on ECDL 2016 module:
 - Computer Essentials,
 - IT Security,
 - Online Essentials,
 - Word Processing,
 - Advance Presentation Software.
- Approved BCS Invigilator
- Covered the main Lecturer

Sunwing Resort

Receptionist 2010, 2000 - 2003

- Communication
- Customer service ability
- English Language

Cyprus Army
Military Service (Sergeant), Cyprus 2006 - 2008

- Group Leader
- Team Work
- Discipline
- Adaptable

ADDITIONAL SKILLS PROFILE

IT SKILLS

- Active member of Facebook and Twitter and highly proficient in using the internet.
- PC assembly / troubleshooting / home networking and LAN setup.
- Operating Systems: Ubuntu, OpenSuse, Backtrack 3/4/5, Windows 98/Me/NT/2000/XP/Vista/7/8 as well as using the above Operating Systems on VMware, Virtual Box and Windows Virtual PC.
- Excellent knowledge of OS installation and configuration for both Linux and Windows
- Well-versed in of graphic design applications Photoshop, Fireworks and Dreamweaver.
- Vulnerability Assessment, finding vulnerabilities and suggest fixes by using Nessus, Nexpose and Nmap.
- Excellent knowledge of performing Wireless Network Attack (WEP, WPA, WPS).
- Knowledgeable of performing Man in the Middle attack by using the Cain and Able or the ettercap.
- Familiar with the following Digital Forensic Tools: Encase, FTK, WinHex and ViaForensics.

INTERESTS

- Socializing with friends and meeting new people.
- Reading Technology news

SOCIAL SKILLS

- Excellent communication skills, both written and oral.
- Friendly and easily make friendships
- Good communication and team working skills gained during my military service and my experience as a receptionist.
- Good ability to adapt to multicultural environments, gained from my studies in Greece and UK.
- Leadership became essential in my military service as sergeant while i was responsible for a team of 12 people.
- During my studies the group works was a team of 5 people and I was interlinking each other.
- Attending clients meetings enhanced my communication skills.

LANGUAGES

- Greek
- English

DRIVING LICENCE

UK Driving Licence (AM, A, B1, B)

Anastasia Kalli Koupepidou
Patron 4, 2660
Kokkinotrimithia
96359516 | Anastasia.kalli@gmail.com

Personal statement	I am an energetic, ambitious person who has developed a mature and responsible approach to any task that I undertake. I am a reliable, professional and efficient individual, with my best attributes being my confidence, honesty, commitment and great sense of humor. I have strong technical skills, as well as excellent interpersonal skills. I consider myself to be a great team player, but also a person who can work on her own initiative.
Work experience	
Dates	October 2017 - Present
Occupation or position held	Lecturer Ledra College College Nicosia Teaching the following courses:
Main activities and responsibilities	MW 101: Introduction to Databases
Name and address of employer	DM 206: Content Development for Social Media and Search Engine Optimization DM 204: Fundamentals of Web Design and Applications for Social Media May 2015 – Present
Dates	
Occupation or position held	Accounting Support
Main activities and responsibilities	Accounts receivable management, Insurance liaison, Patient liaison General accounting (billing, vendors etc.)
Name and address of employer	American Medical Center / American Heart Institute
Dates	July 2011- May 2015
Occupation or position held	Accounts Assistant
Main activities and responsibilities	Providing Management Reports to the Board of Directors, Financial Team, Brand Managers and External Audit Office cooperators. Providing weekly and monthly reports to suppliers for several companies of the Group. Daily provide Sales Reports of the Group for the management Team. Bank, customers, suppliers' and intercompany accounts Reconciliation. Imports-Exports-Transfers of stock for several fashion companies.
Name and address of employer	Mallouppas & Papacostas Public Co. Ltd

Occupation or position	Dates January 2012-June 2012
Main activities and responsibilities	held Computer Teacher
Name of employer	Part-time Computer teacher of ECDL and Pre-ECDL Computer International Idaliou
Occupation or position	Dates October 2009-June 2011
Main activities and responsibilities	held Computer Teacher
Name of employer	Full time Computer teacher of ECDL, Advanced ECDL and for international students. Global College Nicosia
Occupation or position	Dates October 2009-June 2011
Main activities and responsibilities	held Computer Teacher
Name of employer	Computer teacher of ECDL and Pre-ECDL Pathway Tutors Nicosia
Occupation or position	Dates September 2007-July 2009
Main activities and responsibilities	held Computer Teacher
Name of employer	Computer teacher of ECDL and Pre-ECDL Computer International Idaliou
Occupation or position	Dates April 2006 - May 2007
Main activities and responsibilities	held Assistant HR Officer
Name of employer	Temporary worked in Human Resources Department of CYTA to months' internship for the University and other 6 months' extension to work there with contract as temporary employee. Cyprus Telecommunications Authority

Education and training	
	Dates 2013 – 2015
Title of qualification	awarded PGD Management
	Strategic Business Planning, Accounting, Marketing, Managing Human Resources, Operations management.
	Master's thesis: Marketing through social media and traditional media. A case study in the fashion retail industry in Cyprus for local and international brands.
	University of Wolverhampton
	Dates 2001
Title of qualification	awarded Bachelor – Computer Engineering and Communications
	Programming, Networking, Operating Systems, Telecommunications.
	Thesis title: Simulation in Matlab environment the width and phase response of Phase Locked Loop (PLL) 3rd and 4th order.
	Technological Educational Institute of Central Macedonia, Serres
Title of qualification	Dates 1998
Principal	awarded High School Leaving
	subjects Economics, Mathematics, Accounting.
	Palouriotissa High School
	Certificates ▪ LCCI Accounting Higher
	☒ GCE O' Level English Language
	☒ Ecdl Core Certificate
	☒ Ecdl Advance Certificate PowerPoint
	☒ Ecdl Advance Certificate Excel
	☒ Ecdl Image Editing (Photoshop) Certificate
	☒ Ecdl Web Editing (Dreamweaver) Certificate

Personal skills and competences

Native language Greek

Other language(s) English – Very Good

Russian – Attending lessons Level 1

Computer skills Excellent knowledge of Windows and Ms Office applications **competences**
Accounting software experience Microsoft Navision ERP, SAP

Fluent experience with Sketch up, Photoshop and Dreamweaver.

Research Interests

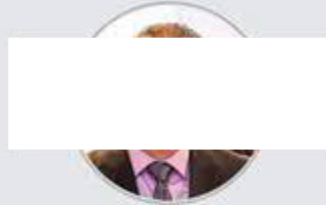
- Mobile technology and resident
- The new research opportunities by tracking the GPS locations during data collection.
- Mobile applications for science learning, Investigation of the use of thermographs research.
- Wireless Application Protocol (WAP). Automobile

Additional information Member of Cyprus Computer Society (CCS ID:2050)

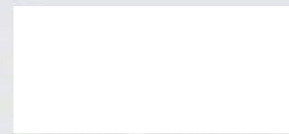
Conference and Seminars	
Name and type of Trainer ECDL Image	Dates 09/07/2013 – 10/07/2013 organisation providing education and Train the Editing (Photoshop CS5) training
Name and type of Trainer ECDL Web	Dates 27/04/2013 – 29/04/2013 organisation providing education and Train the Editing (Dreamweaver CS5) training
Name and type of SAGE software	Dates 29/12/2012 – 30/12/2012 organisation Train the Trainers for Computerized Accounting Using providing education and Ecdl Cyprus training
Name and type of Knowledge providing Certification training	Dates 12/10/2012 – 14/10/2012 organisation Theta Healing Institute of education and ThetaHealing Basic DNA
Name and type of Park Λευκωσία	Dates 26/05/2011 organisation 2ο Συνέδριο και έκθεση Πληροφορικής και Τεχνολογίας, Hilton providing education and training
Title of qualification Name and type of Cyprus providing	Dates 30/03/2010-31/03/2010 awarded Certificate ECDL Advanced Presentations organisation ECDL education and
	training

GEORGE MALEKOS

SOFTWARE INNOVATION ARCHITECT, CEO



CONTACT



PROFILE

Extensive experience in Software innovation architecture, software development and since 1993 the founder and CEO of the software company G.M Powersoft Computer Solutions Ltd in Cyprus.

Software architecture specialist for APPS and Cloud Computing (SAAS).

Experience in many European projects under Eureka, Eurostars, FP7 and CORNET. Project leader and founder of European success stories programme Eureka EUNEA/1204/11 project name: e-Powercard.

ABOUT ME



WORK EXPERIENCE

- SENIOR PROGRAMMER** **MEGASOFT ADVANCE SOLUTIONS LTD**

 - Senior Programme (Programming, software support , training Software development Team Leader)

JUL 1990 - DEC 1993 **CYPRUS**
- SOFTWARE INNOVATION ARCHITECT,CEO** **POWERSOFT COMPUTER SOLUTIONS LTD**

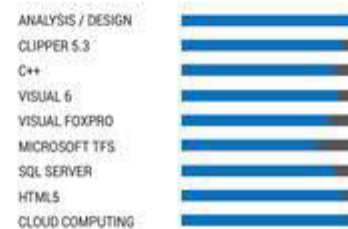
 - Driving the business, make decisions on how to develop and grow the business.
 - Oversee and provide input into product design, support and training.
 - Financial decisions, project management.
 - Software Innovation Architect dedicated to accelerating cloud's successful adoption.

1993 - Present (23 Years) **CYPRUS**
- TEACHING COMPUTERIZED ACCOUNTING** **UNIVERSITY OF NICOSIA (ACCOUNTING INFORMATION SYSTEM)**

2004 - APR 2014 **CYPRUS**
- ORGANIZATIONS GEORGE SUPPORTS**

 - Powersoft
 - Hewlett-Packard
 - Microsoft

SKILLS



EDUCATION

- 1986** **5th Lyceum of Limassol**

- Graduate
- 1988 - 1992** **Cyprus College**

- Computer Science BSC

LANGUAGE

- GREEK**
★★★★★
- ENGLISH**
★★★★★

ACHIEVEMENTS

- e-powercard European success story 2011
- Cyprus Innovation Award OCT 2012
- In Business Award candidate OCT 2011
- Jury Member of Digital Championship JUN 2015
- Grand Jury for The European Youth Award (EYA) SEP 2015

INTERESTS



PLACE I LIVE



EUROPEAN PROJECT EXPERIENCE ▼

- Member of European Business Test Panel Consultatio
- Accredited Advisor of the European Office Cyprus(2009-2012)
- Software Architect and work package leader for Euro pean funded program AKΓEN/0506, project name: k-index IPE(Cyprus)
- Member of the Software user group for European funded program CORNET/2007/01 "Experience transfer and knowledge management on smes developing & delivery software products" project name: EXTRA
- Project Leader of program ΜΕΤΡΑ/ΣΥΝΕΔ/0308/35 funded from IPE
- Member in project BMI-shape on FP7 proposal, Behavioural Models and Interventions for Stimulating Healthy Activity Patterns and Eating Habits.
- Project leader and founder of European program Eureka EUNEA/1204/11 project name: e-powercard, funded by IPE (Research Promotion Foundation Cyprus).
- Project leader and founder for the project " EI5993 DADIFS", for the standardization of Data Exchange, submitted to EUROSTARS; the project is currently under evaluation 06/2012 (second submission)

PROFESSIONAL EXPERIENCE ▼

TEACHING

- Instructor in Cyprus College for advanced students in Programming in 2005-2006
- Guest Instructor in Cyprus College (2005-2007) for Computerized Accounting
- Instructor & Trainer Intercollege (2006-2007) for Computerized Accounting
- Professor for Computerized Accounting University of Nicosia(2008-today)
- Professor for train the trainer computerized accounting Cyprus College(2011-today)
- ECDL train the trainer for computerized accounting

COMPETENCES

- Member of the Advisory Council & MBA Mentor at University of Nicosia since 2006
- Member of the board CITEA 2006-2008(Cyprus Information Technology Enterprises Association)
- Vice-president of CITEA 2008-2010
- Accredited Advisor of the European Office Cyprus since 2009
- Head of the Board for the annual ICT Cyprus Conference June 2010& May 2011
- Member of CSCC <<Cloud Standards Customer Council >> since 2011 and workgroup leader for the whitepaper

SEMINARS & TRAININGS ▼

- 02/2002 Time Management, 03/1998-Microsoft Visual Fox Pro, 01/2003-Body Language,02/2003-Accounting for Managers
- 10/2003 Challenging the EU entry, 12/2003 HR-efficient supervision of Stuff, 12/2004 Business Plans for SME's
- 06/2004 How to get into the e- Economy,10/2004 Regional strategies of Business Innovation
- 10/2004 Business Plans, Con/con Integrated Training (Cyprus) Ltd
- 02/2006 European Funding programs for the private sector, 06/2006 Mobile Technology transfer Clinics
- 06/2006 Recognition of Powersoft for its contribution in the education of students, Intercollege
- 09/2006 Strategy of operational Systems & Management, Cyprus Employers & Industrials Federation
- 03/2007 SMEs Coordinators of European Framework Projects, comprising of " Mid-Term Assessment to Completion", SME to LEAD Consortium
- 05/2008 Lean Sales and distribution, Applying lean thinking to sales distribution and retail management functions
- 02/2009 Customer Care Forum: quality Customer Service, a strategic tool for recession days
- 12/2009 Presenting with impact ,for improving presentation skills
- 11/2010 Microsoft Tech-Ed Europe (Berlin 8-12Nov a full week of trainings and seminars for Latest and feature Microsoft technologies)
- 02/2011 Effective Performance Appraisals
- 08/2011 Certification Microsoft Partner Network Sale and Services Assessment for Microsoft Online Services (Cloud services)
- 09/2011 Certification from HP Certified Profesional Program (HP SMB Solutions)
- 10/2011 Cloud Confex Certification (Dubai)
- 10/2011 Global Leaders Summit (Gitex Technology Week 2011)
- 03/2012 Ctr Publications Seminar for Tax (fiscal law)
- 03/2013 Exhibition Innovate UK
- 03/2013 Retail Business Expo London
- 06/2013 Certification from CMMI Level 3 (Capability Maturity Model Integration)
- 07/2013 Certification as Examiner/Trainer for Retail shops

Demetrios Melides

<https://cy.linkedin.com/in/demetriosmelides>

date of birth : 16/03/1986
address : 4b Georgiou Papandreou
Street, Yeri, Nicosia
telephone number : 96033051
mail : Demetrios.Melidis@gmail.com

EDUCATION

2015 - 2018
Master of Arts (M.A.) in Digital Media & Communications
University of Nicosia
specialization: Public Relations and Advertising in Networked Society

2011 - 2014
Bachelor of Science (B.Sc.) in Computer Science
University of Central Lancashire
specialization: Software Development

2005 - 2009
Bachelor of Arts (B.A.) in Greek Philology
Aristotle University of Thessaloniki
specialization: Classics

PROFESSIONAL EXPERIENCE

Lecturer — *Ledra College*

FEBRUARY 2018 - PRESENT
responsibilities: teaching modules: Introduction to Digital Marketing, Social Media Management, Market Research, Digital Campaigns, conducting research for the College's academic journal

Communications Consultant — *melitiva*

OCTOBER 2016 - PRESENT
main responsibilities: strategic marketing, brand development, reputation management, public relations, digital marketing, search engine marketing, media buying, competition monitoring

Public Relations Consultant — *GLO Learning*

NOVEMBER 2015 - PRESENT
main responsibilities: PR strategy development, media relations, press releases, communications planning

Market Research & Digital Media Executive — *marcus evans*

AUGUST 2015 - OCTOBER 2016

CERTIFICATIONS

- Google AdWords Certified (6/6 certifications)
- Google Analytics Certified
- Microsoft Accredited Professional (Bing Ads)
- Certified Email Marketer (HubSpot)
- Digital Sales Certified (Google)

ACADEMIC INTERESTS

- The impact of digital media on civic participation
- Social and psychological effects of computer-mediated communication
- The digitalization of political communication

SKILLS

- communications strategy analysis & monitoring
- design and implementation of marketing plans
- researching & interpreting market trends
- use of digital media as a source of information and a tool of engagement
- application of marketing analysis models
- excellent digital advertising skills
- exceptional writing skills

main responsibilities: market research, marketing strategy design, planning digital marketing campaigns, search engine optimization, budget management, monitoring design and implementation of promotional activities, evaluation of campaigns

Digital Marketing Manager – *placeholder*

JULY 2013 - JULY 2015

main responsibilities: digital marketing campaigns design & implementation, organic SEO, SEM, content writing, market research, social media management, web analytics

Philology Instructor – *Self employed*

MARCH 2010 - JUNE 2013

responsibilities: preparation of students for university entry exams in Ancient Greek, Literature, Essay Writing, History and Latin (1817 teaching hours in total)

RESEARCH PAPERS

APRIL 2018

Political Communication and Digital Media

OCTOBER 2017

Social Media in Crisis Management: Opportunities and Risks

FEBRUARY 2017

Social and Psychological effects of Computer-Mediated Communication

LANGUAGES

- fluent in **Greek** (native speaker)
- excellent command of the **English** language
- basic knowledge of **German**: Zertifikat Deutsch (Goethe Institut)

ADDITIONAL INFORMATION

- fulfilled military service obligation
- class B Driver's License
- volunteer editor/writer
- member of the club's "House of Art and Literature" chess team

INTERPERSONAL SKILLS

- communication skills
- ability to multitask and manage conflicting demands
- effective delegation abilities
- holistic approach
- highly responsible
- punctuality



ANNEX 4 – INFRASTRUCTURE

Ο ΠΕΡΙ ΡΥΘΜΙΣΕΩΣ ΟΔΩΝ ΚΑΙ ΟΙΚΟΔΟΜΩΝ ΝΟΜΟΣ, ΚΕΦ. 96

ΑΔΕΙΑ ΟΙΚΟΔΟΜΗΣ

№ 01623

Αρ. Φακ.: 0774/96
Αρ. Άδειας: 1623

I. ΠΑΡΑΧΩΡΗΣΗ ΑΔΕΙΑΣ

Παραχωρείται στ. κ.ν. Αιχμη Χρήστος Α ΒΡΡ (CYPRUS) ΛΤΟ
 Διεύθυνση Λαμαριά 13 - Τρεβόλας Τηλ 420153
 (Μόριος Χρήστος)
 άδεια για την εκτέλεση της παρακάτω οικοδομικής εργασίας
 στο/στα τεμ. 2028 Φύλλο/Σχέδιο XXI/62W τοποθεσία/ενορία Α.Σ. Βαρνάβα
 της Περιοχής του Δήμου/Συμβουλίου-Βελιώσας/Χωρίου Τ.Α. Μοκκασίου Τρεβόλας

II. ΠΕΡΙΓΡΑΦΗ ΟΙΚΟΔΟΜΙΚΗΣ ΕΡΓΑΣΙΑΣ

- Είδος οικοδομικής εργασίας Προσθήκες/μεταρρυθμίσεις κτην.
- Εγκριμένη χρήση οικοδομής Χρησιμοποιείται τριώροφη αποδομή με αλλαγή χρήσης από γραφεία σε Τεχνική Γραφείο
- Όγκος προτιθέμενων οικοδομών σε κυβικά μέτρα (m³)
- Όγκος υφιστάμενων οικοδομών (αν η άδεια αφορά προσθήκες) σε κυβικά μέτρα (m³)
- Μετατροπές/Επισκευές (Σύντομη περιγραφή)
- Αξία προτιθέμενης κατασκευής (όπως αυτή υπολογίζεται από τον αρχιτέκτονα) €

III. ΟΡΟΙ ΓΙΑ ΤΗΝ ΠΑΡΑΧΩΡΗΣΗ ΤΗΣ ΑΔΕΙΑΣ

7. Η άδεια παραχωρείται με βάση-

(α) τα επισυναπτόμενα αρχιτεκτονικά και χωρομετρικά σχέδια ΧΑΡΤΟΣΗΜΑΤΩΝΙΚΕ 25/ΣΕΝΤ
 (Παράρτημα/τα 2(2Α-2) + 3), και

(β) τους επισυναπτόμενους όρους (Παράρτημα 1 + 4) /τους ακόλουθους όρους:

.....

.....

.....

8. Όλα τα παραρτήματα αποτελούν αναπόσπαστο μέρος της άδειας αυτής.

IV. ΔΙΚΑΙΩΜΑΤΑ

9. Δικαιώματα € 30. = που πληρώθηκαν σύμφωνα με απόδειξη
 αρ. 13944 και ημερομηνία 7/10/91

10. Κατάθεση € — Αρ. Απόδειξης — Ημερ. —

V. ΠΕΡΙΟΔΟΣ ΠΟΥ ΙΣΧΥΕΙ Η ΑΔΕΙΑ

11. Η άδεια αυτή ισχύει μέχρι τ. 15 6/10/92

Ημερομηνία 7/10/91

Υπογραφή: [Blank]
 Αρμοδία Αρχή: ΔΗΜΙΟΣ ΣΤΕΦΑΝΟΣ
 (Σφραγίδα)

ΔΗΜΟΣ ΤΡΕΒΟΛΑΣ

ΓΙΑ ΕΠΙΣΗΜΗ ΧΡΗΣΗ	
Στήλη	Κώδικας
1	1
2-5	
6-13	
14-19	
20	
21-26	
27-29	
30-33	
34-35	
36-44	
45-53	
54	
55-63	
64-67	



ΚΥΠΡΙΑΚΗ ΔΗΜΟΚΡΑΤΙΑ
ΥΠΟΥΡΓΕΙΟ ΔΙΚΑΙΟΣΥΝΗΣ
ΚΑΙ ΔΗΜΟΣΙΑΣ ΤΑΞΕΩΣ

ΠΥΡΟΣΒΕΣΤΙΚΟΣ ΣΤΑΘΜΟΣ
ΑΚΡΟΠΟΛΕΩΣ
ΛΟΧΙΑ ΣΠΥΡΟΥ ΤΤΑΝΤΗ

Αρ. Φακ. Π.Υ. 343/2/ΣΧ675

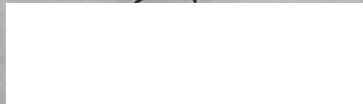
Αρ. Τηλ.: 22802150
Αρ. Φαξ.: 22305180
Email: cyprusfireservice@fs.gov.cy
www.fs.gov.cy

18 Απριλίου 2016

Κων Γιώργο Κακούρη
Διευθυντή
LEDRA COLLEGE
Λαγκαδά 13
2023 - Στρόβολος

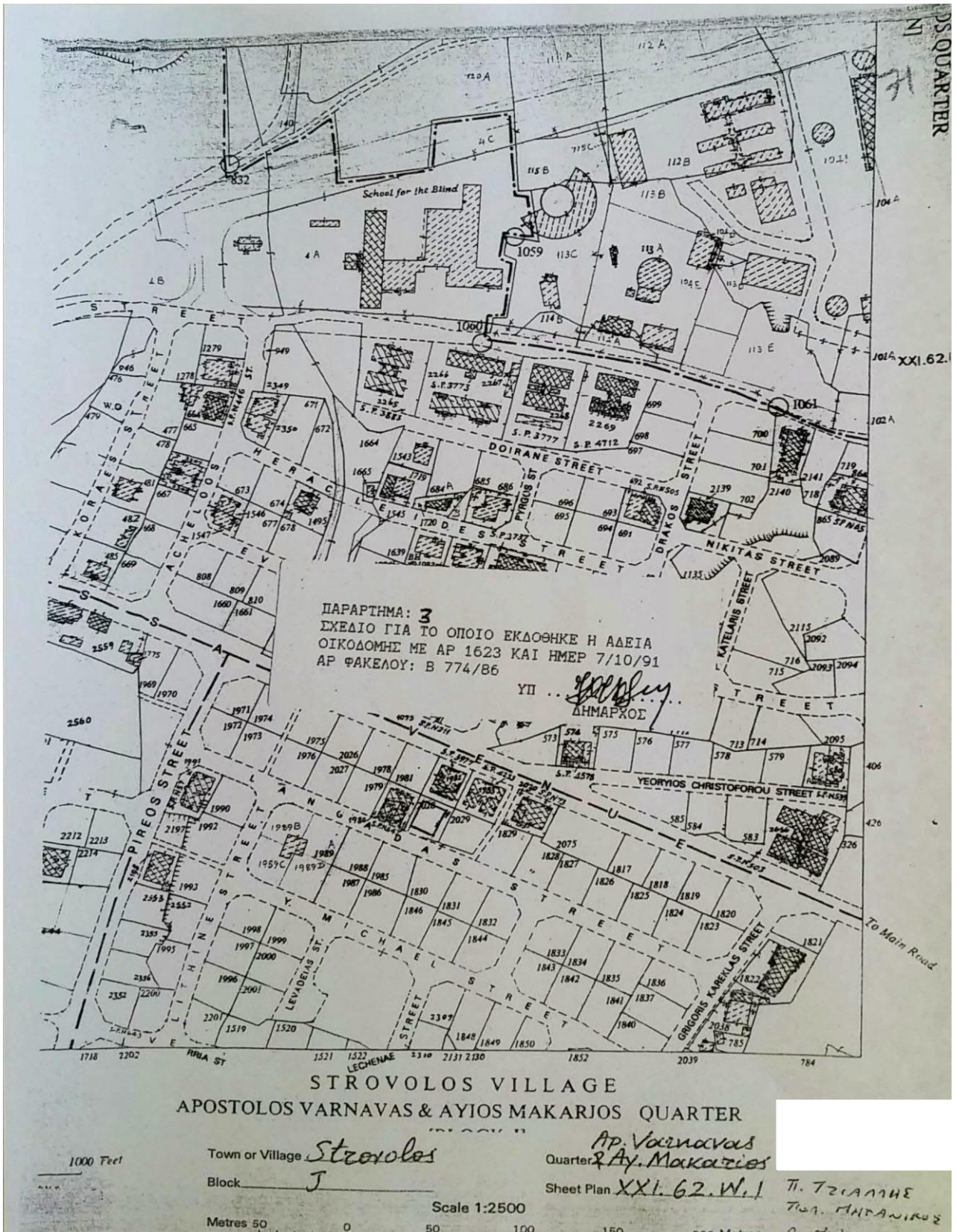
**Επιθεώρηση πυροπροστασίας της Σχολής τριτοβάθμιας εκπαίδευσης
«LEDRA COLLEGE» στην οδό Λαγκαδά 13, Στρόβολος**

Αναφέρομαι στην επιστολή σας ημερομ. 17.3.2016 και σας πληροφορώ ότι η πιο πάνω
οικοδομή επιθεωρήθηκε στις 24.3.2016 και κρίθηκε κατάλληλη από απόψεως
πυροπροστασίας.



(Ν. Λογγίνας Ανωτ. Υπ/μος)
Επαρχιακός Υπεύθυνος
Πυροσβεστικών Σταθμών Νείας
για Διευθυντή Πυρ. Υπηρεσίας

Κων/- Διευθυντή Πυρ. Υπηρεσίας
/ΑΔ



(Υ.Π.Π. Τριτ. Εκπ. Δρ.1.1)
Νοέμβριος 2000

**ΑΝΑΛΥΤΙΚΗ ΚΑΤΑΣΤΑΣΗ ΚΤΙΡΙΑΚΩΝ ΕΓΚΑΤΑΣΤΑΣΕΩΝ
ΓΙΑ ΙΔΡΥΣΗ ΙΣΤΕ**

ΙΣΤΕ ΚΑΙ ΠΛΗΡΗΣ ΔΙΕΥΘΥΝΣΗ: TRINITY COLLEGE
ΛΑΓΚΑΔΑ 13, ΣΤΡΟΒΟΛΟΣ, ΛΕΥΚΩΣΙΑ

Α/Α π.χ 1	ΧΩΡΟΙ (αίθουσες και εργαστήρια) π.χ Γραφείο αρ. 001	ΔΙΑΣΤΑΣΕΙΣ (μήκος x πλάτος) π.χ 4 μέτρα x 3 μέτρα	ΥΠΗΡΕΣΙΑΚΗ ΧΡΗΣΗ
	First Floor		
1	Teacher's Office	5.2m x 3.6m	
2	Library	5.2m x 8.1m	
3	Reception	4.7m x 5.2m	
4	Principals Office	5.5m x 5.2m	
5	Computer Lab	6.7m x 3.6m	
6	Classroom	4.0m x 6.7m	
7	Office	4.8m x 4.4m	
	Second Floor		
8	Classroom 1	5.2 x 13.9	
9	Classroom 2	12.1 x 5.1	
10	Computer Lab	8.1 x 6.8	
	Third Floor		
11	Cafeteria	10.7 x 5.1	

Όνομα Αρχιτέκτονα:

Υπογραφή Αρχιτέκτονα:

Όνομα Ιδιοκτήτη:

Υπογραφή Ιδιοκτήτη:

Ημερομηνία Εγγράφου:

ANNEX 5 –QUALITY STANDARDS AND INDICATORS

Instructions:

The present ANNEX should be duly completed by the Internal Quality Committee of the Institution. The ANNEX constitutes an integral part of the application for the evaluation accreditation of a program of study.

Quality Standards and Indicators

The present document has been prepared within the framework of the authority and competencies of the Cyprus Agency of Quality Assurance and Accreditation in Higher Education, according to the provisions of the “Quality Assurance and Accreditation of Higher Education and the Establishment and Operation of an Agency on Related Matters Laws of 2015 to 2016”.

The document describes the quality standards and indicators, which will be applied for the evaluation of the programs of study of institutions of higher education.

DIRECTIONS: Note what is applicable for each quality standard/indicator.

1. Applicable to a minimum degree
2. Applicable to a non-satisfactory degree
3. Applicable to a satisfactory degree
4. Applicable to a very satisfactory degree
5. It applies and it constitutes a good practice

It is pointed out that, in the case of standards and indicators that cannot be applied due to the status of the institution and/or of the program of study, N/A (= Not Applicable) should be noted and a detailed explanation should be provided on the institution’s corresponding policy regarding the specific quality standard or indicator.

1. EFFECTIVENESS OF TEACHING WORK – AVAILABLE RESOURCES						
1.1	Organization of teaching work	1	2	3	4	5
1.1.1	The student admission requirements to the program of study, are based on specific regulations which are adhered to in a consistent manner.					√
1.1.2	The number of students in each class allows for constructive teaching and communication, and it compares positively to the current international standards and/or practices.					√
1.1.3	The organization of the educational process safeguards the quality implementation of the program's purpose and objectives and the achievement of the learning outcomes. Particularly, the following are taken into consideration:					
1.1.3.1	The implementation of a specific academic calendar and its timely publication.					√
1.1.3.2	The disclosure of the program's curricula to the students, and their implementation by the teaching personnel					√
1.1.3.3	The course web-pages, updated with the relevant supplementary material					√
1.1.3.4	The procedures for the fulfillment of undergraduate and postgraduate assignments / practical training					√
1.1.3.5	The procedures for the conduct and the format of the examinations and for student assessment					√
1.1.3.6	The effective provision of information to the students and the enhancement of their participation in the procedures for the improvement of the educational process.					√
1.1.4	Adequate and modern learning resources, are available to the students, including the following:					
1.1.4.1	facilities					√
1.1.4.2	library					√
1.1.4.3	infrastructure					√

	1.1.4.4	student welfare					√
	1.1.4.5	academic mentoring				√	
1.1.5	A policy for regular and effective communication, between the teaching personnel and the students, is applied.						√
1.1.6	The teaching personnel, for each course, provide timely and effective feedback to the students.						√
1.1.7	Statutory mechanisms, for the support of students and the communication with the teaching personnel, are effective.						√
1.1.8	Control mechanisms for student performance are effective.						√
1.1.9	Support mechanisms for students with problematic academic performance are effective.						√
1.1.10	Academic mentoring processes are transparent and effective for undergraduate and postgraduate programs and are taken into consideration for the calculation of academic work load.						√
1.1.11	The program of study applies an effective policy for the prevention and detection of plagiarism.						√
1.1.12	The program of study provides satisfactory mechanisms for complaint management and for dispute resolution.						√
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p> <p>1.1.7 Through Moodle and Website</p> <p>1.1.9 Support mechanisms for students with problematic academic performance: assignments, projects and retake exams.</p> <p>1.1.11 Plagiarism programs: Plagiarism Checker X</p> <p>https://plagiarismcheckerx.com/</p> <p>*For further information please refer to the policy for the prevention and detection of plagiarism in the QA Handbook.</p> <p>Note, additionally:</p> <p>a) the expected number of Cypriot and International Students in the program of study.</p> <ul style="list-style-type: none"> We expect to register 16 students in the 1st intake and 16 students in each subsequence semester. 							

b) the countries of origin of the majority of students.

- Ghana: 3
- Nigeria:3
- Cameron:3
- Cyprus: 7

c) the maximum planned number of students per class-section.

- 16 Students

1.2	Teaching	1	2	3	4	5
1.2.1	The methodology utilized in each course is suitable for achieving the course's purpose and objectives and those of the individual modules.					√
1.2.2	The methodology of each course is suitable for adults.					√
1.2.3	Continuous-formative assessment and feedback are provided to the students regularly.					√
1.2.4	The assessment system and criteria regarding student course performance, are clear, adequate, and known to the students.					√
1.2.5	Educational activities which encourage students' active participation in the learning process, are implemented.					√
1.2.6	Teaching incorporates the use of modern educational technologies that are consistent with international standards, including a platform for the electronic support of learning.					√
1.2.7	Teaching materials (books, manuals, journals, databases, and teaching notes) meet the requirements set by the methodology of the program's individual courses, and are updated regularly.					√
Justify the answer you have provided and note the additional comments you may have on each standard / indicator.						
1.3	Teaching Personnel	1	2	3	4	5
1.3.1	The number of full-time academic personnel, occupied exclusively at the institution, and their fields of expertise,					√

	adequately support the program of study.					
1.3.2	The members of teaching personnel for each course have the relevant formal and fundamental qualifications for teaching the course, as described by the legislation, including the following:					
1.3.2.1	Subject specialization, preferably with a doctorate, in the discipline.					√
1.3.2.2	Publications within the discipline.		√			
1.3.3	The specializations of Visiting Professors adequately support the program of study.	N/A				
1.3.4	Special Teaching Personnel and Special Scientists have the necessary qualifications, adequate work experience and specialization to teach a limited number of courses in the program of study.	N/A				
1.3.5	In every program of study, the Special Teaching Personnel does not exceed 30% of the Teaching Research Personnel.					
1.3.6	The teaching personnel of each private institution of tertiary education, to a percentage of at least 70%, has recognized academic qualification, by one level higher than that of the program of study in which he/she teaches.					√
1.3.7	In the program of study, the ratio of the number of courses taught by full-time personnel, occupied exclusively at the institution, to the number of courses taught by part-time personnel, ensures the quality of the program of study.					√
1.3.8	The ratio of the number of students to the total number of teaching personnel is adequate for the support and safeguarding of the program's quality.					√
1.3.9	The academic personnel's teaching load does not limit the conduct of research, writing, and contribution to the society.			√		
1.3.10	Future redundancies / retirements, expected recruitment and promotions of academic personnel safeguard the unimpeded implementation of the program of study within a five-year span.					√

1.3.11	The program's Coordinator has the qualifications and experience to efficiently coordinate the program of study.						√
Justify the answer you have provided and note the additional comments you may have on each standard / indicator.							

2. PROGRAM OF STUDY AND HIGHER EDUCATION QUALIFICATIONS							
2.1	Purpose and Objectives and learning outcomes of the Program of Study	1	2	3	4	5	
2.1.1	The purpose and objectives of the program of study are formulated in terms of expected learning outcomes and are consistent with the mission and the strategy of the institution.						√
2.1.2	The purpose and objectives of the program and the learning outcomes are utilized as a guide for the design of the program of study.						√
2.1.3	The higher education qualification and the program of study, conform to the provisions of their corresponding Professional and Vocational Bodies for the purpose of registration to these bodies.	N/A					
2.1.4	The program's content, the methods of assessment, the teaching materials and the equipment, lead to the achievement of the program's purpose and objectives and ensure the expected learning outcomes.						√
2.1.5	The expected learning outcomes of the program are known to the students and to the members of the academic and teaching personnel.						√
2.1.6	The learning process is properly designed to achieve the expected learning outcomes.						√
2.1.7	The higher education qualification awarded to the students, corresponds to the purpose and objectives and the learning outcomes of the program.						√
Justify the answer you have provided and note the additional comments you may have on each standard / indicator.							

2.2	Structure and Content of the Program of Study	1	2	3	4	5
2.2.1	The course curricula clearly define the expected learning outcomes, the content, the teaching and learning approaches and the method of assessing student performance.					√
2.2.2	The European Credit Transfer System (ECTS) is applied and there is true correspondence between credits and workload per course and per semester for the student either he / she studies in a specific program or he/she is registered and studies simultaneously in additional programs of studies according to the European practice in higher education institutions.					√
2.2.3	The program of study is structured in a consistent manner and in sequence, so that concepts operating as preconditions precede the teaching of other, more complex and cognitively more demanding, concepts.					√
2.2.4	The higher education qualification awarded, the learning outcomes and the content of the program are consistent.					√
2.2.5	The program, in addition to the courses focusing on the specific discipline, includes an adequate number of general education courses.					√
2.2.6	The content of courses and modules, and the corresponding educational activities are suitable for achieving the desired learning outcomes with regards to the knowledge, skills, and abilities which should be acquired by students.					√
2.2.7	The number and the content of the program's courses are sufficient for the achievement of learning outcomes.					√
2.2.8	The content of the program's courses reflects the latest achievements / developments in science, arts, research and technology.					√
2.2.9	Flexible options / adaptable to the personal needs or to the needs of students with special needs, are provided.				√	

Justify the answer you have provided and note the additional comments you may have on each standard / indicator.

Note the expected number of students who will be studying simultaneously at another academic institution, based on your experience so far, regarding students who study simultaneously in the programs of your institution.

2.3	Quality Assurance of the Program of Study		1	2	3	4	5
2.3.1	The arrangements regarding the program's quality assurance define clear competencies and procedures.						√
2.3.2	Participation in the processes of the system of quality assurance of the program, is ensured for						
	2.3.2.1	the members of the academic personnel					√
	2.3.2.2	the members of the administrative personnel					√
	2.3.2.3	the students.					√
2.3.3	The guide and / or the regulations for quality assurance, provide detailed information and data for the support and management of the program of study.						√
2.3.4	The quality assurance process constitutes an academic process and it is not restricted by non-academic factors.						√
Justify the answer you have provided and note the additional comments you may have on each standard / indicator.							
2.4	Management of the Program of Study		1	2	3	4	5
2.4.1	Effective management of the program of study with regard to its design, its approval, its monitoring and its review, is in place.						√
2.4.2	It is ensured that learning outcomes may be achieved within the specified timeframe.						√
2.4.3	It is ensured that the program's management and development process is an academic process which operates without any non-academic interventions.						√
2.4.4	The academic hierarchy of the institution, (Rector, Vice-Rectors, Deans, Chairs and Programs' Coordinators, academic personnel) have the sole responsibility for academic excellence and the development of the programs of study.						√
2.4.5	Information relating to the program of study are posted publicly and include:						
	2.4.5.1	The provisions regarding unit credits					√
	2.4.5.2	The expected learning outcomes					√

	2.4.5.3	The methodology						√
	2.4.5.4	Course descriptions						√
	2.4.5.5	The program's structure						√
	2.4.5.6	The admission requirements						√
	2.4.5.7	The format and the procedures for student assessment						√
2.4.6	The award of the higher education qualification is accompanied by the Diploma Supplement which is in line with the European and international standards.							√
2.4.7	The effectiveness of the program's evaluation mechanism, by the students, is ensured.							√
2.4.8	The recognition and transfer of credit units from previous studies is regulated by procedures and regulations which ensure that the majority of credit units is awarded by the institution which awards the higher education qualification.							√
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p> <p>In the case of practical training, note:</p> <ul style="list-style-type: none"> - The number of credit units for courses and the number of credits for practical training - In which semester does practical training takes place? - Note if practical training is taking place in a country other than the home country of the institution which awards the higher education qualification 								
2.5	International Dimension of the Program of Study		1	2	3	4	5	
2.5.1	The program's collaborations with other institutions are compared positively with corresponding collaborations of other departments / programs of study in Europe and internationally.		N/A					
2.5.2	The program attracts Visiting professors of recognized academic standing.		N/A					
2.5.3	Students participate in exchange programs.		N/A					

2.5.4	The academic profile of the program of study is compatible with corresponding programs of study in Cyprus and internationally.					√
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p> <p>Also, comment on the degree the program compares positively with corresponding programs operating in Cyprus and abroad in higher education institutions of the same rank.</p> <ul style="list-style-type: none"> • There is no corresponding program in Cyprus. The program compares positively with corresponding programs operating abroad. 						
2.6	Connection with the labor market and the society	1	2	3	4	5
2.6.1	The procedures applied, so that the program conforms to the scientific and professional activities of the graduates, are adequate and effective.					√
2.6.2	According to the feasibility study, indicators for the employability of graduates are satisfactory.					√
2.6.3	Benefits, for the society, deriving from the program are significant.					√
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p>						

3. RESEARCH WORK AND SYNERGIES WITH TEACHING						
3.1	Research - Teaching Synergies	1	2	3	4	5
3.1.1	It is ensured that teaching and learning have been adequately enlightened by research.	n/a				
3.1.2	New research results are embodied in the content of the program of study.	n/a				
3.1.3	Adequate and sufficient facilities and equipment are provided to support the research component of the program of study, which are available and accessible to the personnel and the students.	n/a				
3.1.4	The results of the academic personnel's research activity are published in international journals with the peer-reviewing system, in international conferences, conference minutes, publications etc.	n/a				
3.1.5	External, non-governmental, funding for the academic personnel's research activities, is compared positively to the funding of other institutions in Cyprus and abroad.	n/a				
3.1.6	Internal funding, of the academic personnel's research activities, is compared positively to the funding of other institutions in Cyprus and abroad.	n/a				
3.1.7	The policy for, indirect or direct, internal funding of the academic personnel's research activity is satisfactory.	n/a				
3.1.8	The participation of students, academic, teaching and administrative personnel of the program in research activities and projects is satisfactory.	n/a				
3.1.9	Student training in the research process is sufficient.	n/a				
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p> <ul style="list-style-type: none"> No final thesis or research is required as the specific program is of 2 years duration. 						
4. ADMINISTRATION SERVICES, STUDENT WELFARE AND SUPPORT OF TEACHING WORK						

4.1	Administrative Mechanisms	1	2	3	4	5
4.1.1	There is a Student Welfare Service that supports students with regards to academic and personal problems and difficulties.				√	
4.1.2	Statutory administrative mechanisms for monitoring and supporting students are sufficient.					√
4.1.3	The efficiency of these mechanisms is assessed on the basis of specific criteria.					√
Justify the answer you have provided and note the additional comments you may have on each standard / indicator.						
4.2	Infrastructure / Support	1	2	3	4	5
4.2.1	There are suitable books and reputable journals supporting the program.					√
4.2.2	There is a supportive internal communication platform.					√
4.2.3	The facilities are adequate in number and size.					
4.2.4	The equipment used in teaching and learning (laboratory and electronic equipment, consumables etc) are quantitatively and qualitatively adequate.					√
4.2.5	Teaching materials (books, manuals, scientific journals, databases) are adequate and accessible to students.					√
4.2.6	Teaching materials (books, manuals, scientific journals, databases) are updated regularly with the most recent publications.					√
4.2.7	The teaching personnel are provided with training opportunities in teaching method, in adult education, and in new technologies on the basis of a structured learning framework.				√	
Justify the answer you have provided and note the additional comments you may have on each standard / indicator.						
4.3	Financial Resources	1	2	3	4	5
4.3.1	The management and allocation of the financial resources of the program of study, allow for the development of the program and of the academic / teaching personnel.					√

4.3.2	The allocation of financial resources as regards to academic matters, is the responsibility of the relevant academic departments.					√
4.3.3	The remuneration of academic and other personnel is analogous to the remuneration of academic and other personnel of the respective institutions in Cyprus.					√
4.3.4	Student tuition and fees are consistent to the tuition and fees of other respective institutions.					√
Justify the answer you have provided and note the additional comments you may have on each standard / indicator.						

The following criterion applies additionally for distance learning programs of study.

5.	DISTANCE LEARNING PROGRAMS	1	2	3	4	5
5.1	Feedback processes for teaching personnel with regards to the evaluation of their teaching work, by the students, are satisfactory.					
5.2	The process and the conditions for the recruitment of academic / teaching personnel, ensure that candidates have the necessary skills and experience for long distance education.					
5.3	Through established procedures, appropriate training, guidance and support, are provided to teaching personnel, to enable it to efficiently support the educational process.					
5.4	Student performance monitoring mechanisms are satisfactory.					
5.5	Adequate mentoring by the teaching personnel, is provided to students, through established procedures.					
5.6	The unimpeded long-distance communication between the teaching personnel and the students, is ensured to a satisfactory degree.					
5.7	Assessment consistency, its equivalent application to all students, and the compliance with predefined procedures,					

	are ensured.						
5.8	Teaching materials (books, manuals, scientific journals, databases) comply with the requirements provided by the long-distance education methodology and are updated regularly.						
5.9	The program of study has the appropriate and adequate infrastructure for the support of learning.						
5.10	The supporting infrastructures are easily accessible.						
5.11	Students are informed and trained with regards to the available educational infrastructure.						
5.12	The procedures for systematic control and improvement of the supportive services are regular and effective.						
5.13	Infrastructure for distance education is comparable to university infrastructure in the European Union and internationally.						
5.14	Electronic library services are provided according to international practice in order to support the needs of the students and of the teaching personnel.						
5.15	The students and the teaching personnel have access to the necessary electronic sources of information, relevant to the program, the level, and the method of teaching.						
5.16	The percentage of teaching personnel who holds a doctorate, in a program of study which is offered long distance, is not less than 75%.						

Justify the answer you have provided and note the additional comments you may have on each standard / indicator.

If the following apply, note “√” in the appropriate space next to each statement. In case the following statements do not apply, note what is applicable:

The maximum number of students per class-section, should not exceed 30 students.	
The conduct of written examinations with the physical presence of the students, under the supervision of the institution or under the supervision of reliable agencies which operate in the countries of the students, is	

compulsory.	
The number of long distance classes taught by the academic personnel does not exceed the number of courses taught by the teaching personnel in conventional programs of study.	

The following criterion applies additionally for doctoral programs of study.

6.	DOCTORAL PROGRAMS OF STUDY	1	2	3	4	5
6.1	The provision of quality doctoral studies is ensured through Doctoral Studies Regulations.					
6.2	The structure and the content of a doctoral program of study are satisfactory and they ensure the quality provision of doctoral studies.					
6.3	The number of academic personnel, which is going to support the doctoral program of study, is adequate.					
6.4	The doctoral studies' supervisors have the necessary academic qualifications and experience for the supervision of the specific dissertations.					
6.5	The degree of accessibility of all interested parties to the Doctoral Studies Regulations is satisfactory.					
6.6	The number of doctoral students, under the supervision of a member of the academic personnel, is apt for the continuous and effective feedback provided to the students and it complies with the European and international standards.					
6.7	The research interests of academic advisors and supervisors are satisfactory and they adequately cover the thematic areas of research conducted by the doctoral students of the program.					

Justify the answer you have provided and note the additional comments you may have on each standard / indicator.

Note the number of doctoral students under the supervision of each member of the academic personnel of the program and the academic rank of the supervisor.

Names and signatures of the Chair and the Members of the Internal Quality Committee.

Name:	Signature:
Δρ. Παναγιώτης Ήφαιστος (PhD)	
Γιώργος Κακούρης (PhD)	
Γιάννος Χαραλαμπίδης (PhD)	
Παναγιώτης Βορκάς (Head of Mobile & Web Application Development)	
Βασιλική Μότη (PhD Candidate)	
Στέλιος Σταύρου (Student)	


Date:

application_accreditation_evaluation_new_program_study_15_06_17/Epl

Appendices

- **Appendix 1:** Qualifications and Experience of Academic Staff
- **Appendix 2:** Procedures for Monitoring of Each Programme on an On-Going Basis.
- **Appendix 3:** Placement Test – Pearson
- **Appendix 4:** Academic Calendar 2017-2018
- **Appendix 5:** Professional Collaboration with PowerSoft & Agreement
- **Appendix 6:** Lab Programs Requirements
- **Appendix 7:** External Peer Scrutiny- Powersoft
- **Appendix 8:** Seminars
- **Appendix 9: Additional Questionnaires: Teaching Effectiveness for Labs and Projects**

Appendix 1: Qualifications and Experience of Academic Staff



**INTERNATIONAL
HELLENIC
UNIVERSITY**

**HELLENIC REPUBLIC
INTERNATIONAL HELLENIC UNIVERSITY**
School of Science and Technology
MSc in Information and Communication Technology (ICT) Systems
Date : 20/9/2016
Certificate Number : 164

CERTIFICATE

THE FOLLOWING DETAILS ARE VERIFIED:

Personal Details

Surname :	VORKAS	Name :	PANAGIOTIS
Father's name :	ANTONIS	Mother's name :	MARIA
Place of birth :	LARNACA, CYPRUS	Date of birth :	15/05/1985

Registration Details

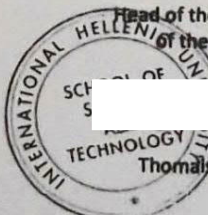
Date :	4/10/2013	Registration Number :	3301130019
Method of Registration :	Following Application	Study period :	2013 - 2014
Stream :	Core		
Programme of Study :	MSc in Information and Communication Technology (ICT) Systems		

Registration Documents : All required by law.
Official length of programme is 3 semesters.
This certificate is issued for every legal use.

Transcript of Grades

MODULE	TYPE	CREDITS	GRADE
Core Modules			
1 Web Information Systems	C	7.5	8.3
2 Decision Support Systems	C	7.5	6.3
3 ICT Management and E-Business Strategy	C	7.5	7.1
4 Computer Networks	C	7.5	7.1
5 Advanced Information Systems: Design, Development and Maintenance	C	6.0	7.6
6 Wireless Communications and Networks	C	6.0	7.6
7 Information Systems Security	C	6.0	9.3
Elective Modules			
8 Knowledge Management	E	6.0	6.8
9 Green ICT	E	6.0	5.6
DISSERTATION		30.0	5.6

Head of the Secretariat
of the School



Thomas Gkrimpizi

Page 1

[3301130019] VORKAS PANAGIOTIS



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
ΑΛΕΞΑΝΔΡΕΙΟ ΤΕΧΝΟΛΟΓΙΚΟ ΕΚΠΑΙΔΕΥΤΙΚΟ ΙΔΡΥΜΑ ΘΕΣΣΑΛΟΝΙΚΗΣ
ΣΧΟΛΗ ΤΕΧΝΟΛΟΓΙΚΩΝ ΕΦΑΡΜΟΓΩΝ
ΤΜΗΜΑ ΠΛΗΡΟΦΟΡΙΚΗΣ

Αρ. Μητρ. : 052946
Αρ. Πρωτ. : 2673

Ημερομηνία : 11-12-2012

ΠΙΣΤΟΠΟΙΗΤΙΚΟ ΑΠΟΦΟΙΤΗΣΗΣ
ΤΟ ΤΜΗΜΑ ΠΛΗΡΟΦΟΡΙΚΗΣ
ΤΗΣ ΣΧΟΛΗΣ ΤΕΧΝΟΛΟΓΙΚΩΝ ΕΦΑΡΜΟΓΩΝ

Πιστοποιεί ότι:

Ο φοιτητής ΒΟΡΚΑΣ ΠΑΝΑΓΙΩΤΗΣ του ΑΝΤΩΝΙΟΥ και της ΜΑΡΙΑΣ
αφού παρακολούθησε και περάτωσε με επιτυχία τις σπουδές του στο
ΤΜΗΜΑ ΠΛΗΡΟΦΟΡΙΚΗΣ

της ΣΧΟΛΗΣ ΤΕΧΝΟΛΟΓΙΚΩΝ ΕΦΑΡΜΟΓΩΝ

κρίθηκε άξιος πτυχίου στις 30-11-2012, με γενικό βαθμό επίδοσης :

έξι και σαράντα έξι εκατοστά (6,46) "Καλώς"

και φέρει τον τίτλο :

"Πτυχιούχος ΜΗΧΑΝΙΚΟΣ ΠΛΗΡΟΦΟΡΙΚΗΣ Τεχνολογικής Εκπαίδευσης (Τ.Ε.)".

Το παρόν επέχει θέση αντίγραφου πτυχίου.

Ο Πρόεδρος

Παύλος Αχ. Καρακολαβίδης
Καθηγητής

Ο Προϊστάμενος του Τμήματος

Δρ. Ιγνάτιος Δεληγιάννης
Καθηγητής



UNIVERSITY OF



WOLVERHAMPTON

This is to certify that
Anastasia Kalli
has been awarded the
Postgraduate Diploma
in
Management

17th August 2015

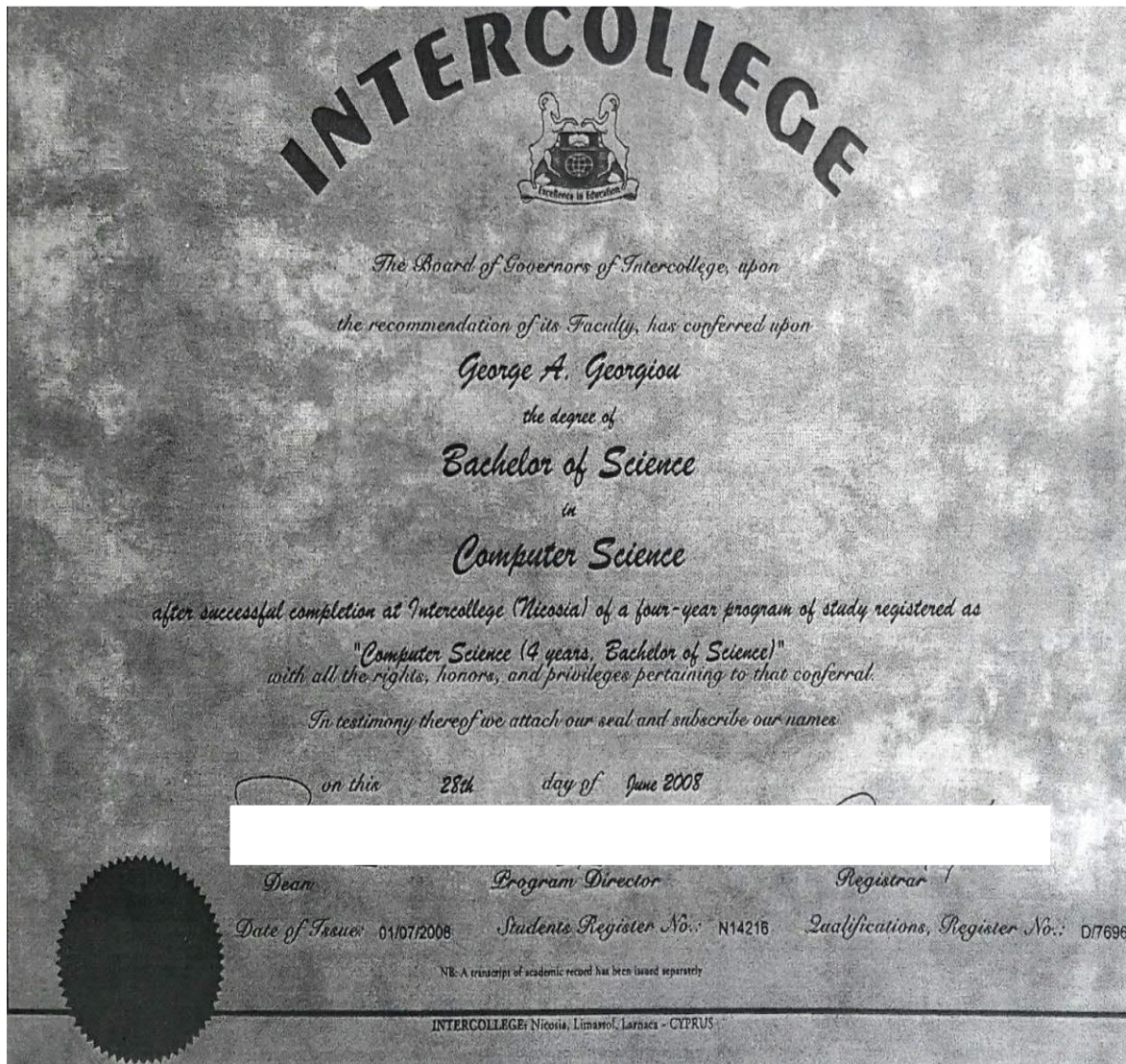
1133780/1-182125

Vice-Chancellor

Academic Registrar

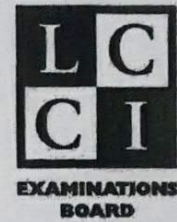


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Certificate



This is to certify that

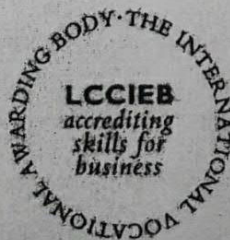
GEORGE A GEORGIU

has been awarded

Accounting - Third Level

Pass

having been examined by the London Chamber of Commerce and Industry Examinations Board.



W J Swords
Chief Executive

Brian Pearce
Chairman



GEORGIOS GEORGIU

has been awarded the degree of

Master of Science

with

Distinction

having successfully completed the approved postgraduate programme in

Computer Networking

Vice-Chancellor
and Chief Executive



Academic Registrar



Dated

14th July 2010

3557654949

FREDERICK INSTITUTE OF TECHNOLOGY



Αριθμός Μητρώου.: 31263

Αριθμός Βιβλίου Πιστοποιητικών Σπουδών.: 4216

ΠΤΥΧΙΟ ΔΗΜΟΣΙΟΓΡΑΦΙΑΣ

Απονέμεται

στη ΒΑΣΙΛΙΚΗ Ξ. ΜΟΤΗ

η οποία ολοκλήρωσε με επιτυχία τετραετή κλάδο σπουδών
εγγεγραμμένο ως "ΔΗΜΟΣΙΟΓΡΑΦΙΑ (4 Έτη, Πτυχίο, Σύστημα
Πιστωτικών Μονάδων)" στο "Frederick Institute of
Technology", στη Λευκωσία, στις 18 Ιουνίου 2007.

[Redacted]
(Διευθυντής)

[Redacted]
(Υπεύθυνος Κλάδου Σπουδών)

Ημερ. Έκδοσης 12 Ιουλίου 2007

[Redacted]
(Υπεύθυνος Έγγραφών)

Chartered Institute of Public Relations

DIPLOMA IN PUBLIC RELATIONS


THIS IS TO CERTIFY THAT

Vasiliki Moti

has been awarded the
CIPR DIPLOMA IN PUBLIC RELATIONS

With Merit

Chartered Institute of Public Relations
52-53 Russell Square, London, UK


CIPR President

October 2012

Date





University of Newcastle upon Tyne

Faculty of
Humanities and
Social Sciences

Vasiliki MOTI

was admitted to the Degree of

MASTER OF ARTS
IN MEDIA AND PUBLIC RELATIONS

on

24 November 2010



VICE-CHANCELLOR



REGISTRAR



00024036

ΕΠΙΣΗΜΗ ΜΕΤΑΦΡΑΣΗ · TRADUCTION OFFICIELLE · OFFICIAL TRANSLATION

No 106467

UNIVERSITY OF ESSEX

Πιστοποιείται ότι το πτυχίο

**Μπάτσελορ Θεωρητικών Επιστημών
με Ειδικότητα Τάξεως II (Κατηγορία 2)**

στις

ΕΥΡΩΠΑΪΚΕΣ ΣΠΟΥΔΕΣ ΚΑΙ ΣΥΓΧΡΟΝΕΣ ΓΛΩΣΣΕΣ

της Σχολής Κοινωνικών Επιστημών
απονεμήθηκε στη

ΜΑΡΙΝΑ ΚΟΖΑΝΙΔΟΥ

κατά την τελετή αποφοίτησης της 15^{ης} Ιουλίου 2004

Ακαδημαϊκός Γραμματέας (ε.υ.)

Πιστοποιώ ότι καθ' όσα γνωρίζω το παρόν αποτελεί γνήσιο έγγραφο που εκδόθηκε από Εκπαιδευτικό
Τμήμα ανεγνωρισμένο από το Υπουργείο Παιδείας και Επαγγελματίων του Ηνωμένου Βασιλείου.

Για τον Μορφωτικό Ακόλουθο
Σοφία Χανιώτη (Τ.Υ.)
Βρετανική Πρεσβεία, Αθήνα
20 Ιουνίου 2008

Ακριβής μετάφραση από το συνημμένο Αγγλικό επικυρωμένο έγγραφο.
Αθήνα, 05/08/2008
Μεταφραστής: Κ. Α. Νάστος

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ, ΥΠΟΥΡΓΕΙΟ ΕΞΩΤΕΡΙΚΩΝ
ΜΕΤΑΦΡΑΣΤΙΚΗ ΥΠΗΡΕΣΙΑ
RÉPUBLIQUE HELLÉNIQUE, MINISTÈRE DES AFFAIRES ÉTRANGÈRES
SERVICE DE TRADUCTION
HELLENIC REPUBLIC, MINISTRY OF FOREIGN AFFAIRS
TRANSLATION SERVICE

ΕΠΙΣΗΜΗ ΜΕΤΑΦΡΑΣΗ / TRADUCTION OFFICIELLE / OFFICIAL TRANSLATION

No 106467

UNIVERSITY OF ESSEX

Πιστοποιείται ότι το πτυχίο

Μπάτσελορ Θεωρητικών Επιστημών
με Ειδικευση Τάξεως II (Κατηγορία 2)

στις

ΕΥΡΩΠΑΪΚΕΣ ΣΠΟΥΔΕΣ ΚΑΙ ΣΥΓΧΡΟΝΕΣ ΓΛΩΣΣΕΣ

της Σχολής Κοινωνικών Επιστημών
απονεμήθηκε στη

ΜΑΡΙΝΑ ΚΟΖΑΝΙΔΟΥ

κατά την τελετή αποφοίτησης της 15^{ης} Ιουλίου 2004

Ακαδημαϊκός Γραμματέας (τ.υ.)

Πιστοποιώ ότι καθ' όσα γνωρίζω το παρόν αποτελεί γνήσιο έγγραφο που εκδόθηκε από Εκπαιδευτικό
Τμήμα ανεγνωρισμένο από το Υπουργείο Παιδείας και Επαγγελματίων του Ηνωμένου Βασιλείου.

Για τον Μορφωτικό Ακόλουθο
Σοφία Χανιώτη (Τ.Υ.)
Βρετανική Πρεσβεία, Αθήνα
20 Ιουνίου 2008

Ακριβής μετάφραση από το συνημμένο Αγγλικό επικυρωμένο έγγραφο.
Αθήνα, 05/08/2008
Μεταφραστής: Κ. Α. Νάστος

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ, ΥΠΟΥΡΓΕΙΟ ΕΞΩΤΕΡΙΚΩΝ
ΜΕΤΑΦΡΑΣΤΙΚΗ ΥΠΗΡΕΣΙΑ
RÉPUBLIQUE HELLÉNIQUE, MINISTÈRE DES AFFAIRES ÉTRANGÈRES
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HELLENIC REPUBLIC, MINISTRY OF FOREIGN AFFAIRS
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Doctoral College and Centre for
Research Capability and Development
T: +44 (0)24 7765 5667
F: +44 (0)24 7765 5666
www.coventry.ac.uk

Alexandros Marcou
8 K. Matsi
Xylotymbou
Larnaca
Cyprus
7510

12th April 2018

Dear Alexandros,

MASTER OF PHILOSOPHY SUCCESS

I am writing personally to express my sincere congratulations on your recent success in gaining a Master of Philosophy degree.

A research degree is based on a long tradition of scholarship and steady academic mastery in the discipline. Studying for a research degree is therefore an individual and personal journey of exploration and achievement. The award signifies not only your academic achievement but all your hard work and determination throughout the period of study.

Whatever direction your future holds, whether further academic work or employment, I would encourage you to take the opportunity to publish the results of your research to benefit the wider academic community.

On behalf of Coventry University I offer our best wishes for the future.

Yours sincerely

Professor John Latham
Vice-Chancellor and CEO, Coventry University
Extraordinary Professor, Stellenbosch University



The Academic Board on the **RECOMMENDATION** of the Research Degrees Sub-Committee has **AGREED** to **AWARD** the Degree of **MASTER OF PHILOSOPHY** to:

NAME: Alexandros Marcou

PROJECT TITLE: An optimized link state routing protocol on ad-hoc wireless networks based on Internet connectivity

COLLABORATION WITH:

DATE 13/4/18

SIGNATURE

.....
C BOARD



COVENTRY UNIVERSITY

has been awarded the degree of

Bachelor of Science
with Honours
First Class

in

Ethical Hacking and Network Security

November 2012



Vice-Chancellor

Academic Registrar

Appendix 2: Procedures for Monitoring of Each Programme on an On-Going Basis.

The ongoing monitoring of programmes is carried out by the Academic Council at Programme Board level. There are five mechanisms by which the programmes are monitored on an ongoing basis:

- (a) Programmatic reviews
- (b) Staff meetings
- (c) Principal's Office
- (d) Academic Council
- (e) Student responses.

Programmatic Review

Programmatic reviews are conducted every five years and allow for self-assessment by Programme Board. Integral to this self-analysis is the opportunity to reflect on current practice and, in so doing so, propose new changes to improve the delivery systems and thus enhance the learning experience. Fundamental to this process are the feedback and recommendations of the extern examiners. This process is also an opportunity for individual lecturers, or lecturers who share subjects, to review their course outlines with a view to modifying the content and method of delivery. It is also a valuable opportunity for the Programme Boards to evaluate the processes by which learners are assessed.

Ledra College underwent its last Programmatic Review in 2016 when a root and branch review of all modules and programmes took place. Regular meetings of staff, both as a large group and in clusters of special interest, were held to ensure broad participation. All members of academic staff were involved in revising and updating the modular content, assessment methods and coherence of the modules that they deliver in the context of the overall aims and intended outcomes of the relevant degree programmes.

Staff Meetings

At the general meetings of all staff or at the more frequent Programme Board meetings, individual members of staff may raise issues relating to the ongoing monitoring of programmes. These meetings are important for highlighting issues as they develop during the delivery of any course or subject, e.g. essay assignment date problems, individual student issues relating to continuous assessment, etc. Decisions or recommendations made by the meeting(s) may be referred initially to the Principal's Office and then to the Academic Council.

Principal's Office.

The Principal or Assistant Principal hold regular meetings with the Programme Board Chairs where issues relating to the ongoing monitoring of courses can be raised and discussed. These can then be referred if necessary from the Principal's Office to the Academic Council for further discussion and a decision made as to any possible action to be taken. The Assistant Principal has a particular remit of ensuring the quality of ongoing Quality Assurance policies and procedures.

Student Responses

There are three avenues through which learners contribute to the ongoing monitoring of courses:

(a) Students are given the opportunity to comment on the delivery of courses through a questionnaire which will now be available on-line through Moodle to students in the second semester. This questionnaire can be an indicator of a larger systemic problem to which the Programme Board can be alerted.

(b) Students may approach their Academic Advisor in order to highlight specific problems relevant to that particular year or course of study. The issue can then be raised by the Academic Advisor in Programme Board meetings and be considered at higher levels (Principal's Office, Academic Council).

(c) The student representative can raise matters that he/she feels significant to Academic Council for consideration if they feel that satisfaction has not been achieved at Programme Board level.

Procedures for Periodic Formal Evaluation of A Programme.

Periodic Formal Evaluation

The College regards periodic formal evaluation of its programmes to be an integral part of its commitment to provide quality, relevant and competitive courses. It evaluates its programmes on a regular basis, currently at five-year intervals.

Scope

The formal evaluation may be at single-programme level or departmental level. The College may also conduct an evaluation of closely-related programmes.

Process

Based on international guidelines the College has devised a framework for the self-study report (see below) which forms the basis for various discussions, consultations and data-gathering. A number of drafts of the report are produced and reviewed at different levels prior to its submission.

The review process involves all the sections of the College community and stakeholders: students, academic and support staff, administrators, graduates, employers and other agencies. The College regards the self-evaluation process as having an intrinsic value in informing itself and communicating to others about the work of the department and the programmes which it offers. This internal phase enables the college to take account of past developments, address present needs, and plan for the future.

The external phase of the process consists of a submission of the self-study report and relevant documentation to a panel, a visit of the panel to the College, discussions by the panel members with representatives of the College staff and management and a report from the panel. The panel members are selected by the College for (a) their prior



experience; (b) their acquaintance with the academic work of the College; (c) their expertise in the academic/professional fields under review.

Following the panel's visit, College management and staff meet at different levels (departmental meeting, Principal's Office, Academic Council and Management Board) to consider the panel's observations and report.

Appendix 3: Placement Test – Pearson



PHOTOCOPIABLE © 2007 Pearson Longman ELT

Success Upper-Intermediate - Advanced Placement Test

Circle the correct answers: A, B, C or D as in the example 0.

- 0 I don't know what you mean ___ 'communication skills'.
- A) with **B) by** C) for D) from
- 1 Tom is quite ___ and finds it hard to talk to new people.
- A) reserved B) well-groomed C) scruffy D) sloppy
- 2 They ___ out for six months.
- A) have gone B) are going C) go D) have been going
- 3 We were so late that the show ___ before we got there.
- A) was nearly finishing B) had nearly finished
- C) nearly finished D) has nearly finished
- 4 Mum's at ___ hospital visiting our grandmother.
- A) – B) a C) an D) the
- 5 Have you ever thought about ___ golf?
- A) taking up B) setting up C) taking off D) setting off
- 6 Could you tell me what ____?
- A) does it say B) is saying C) it says D) is it saying
- 7 I have a ___ knowledge of all aspects of business.
- A) seen B) heard C) sound D) sure
- 8 Just think, this time tomorrow we ___ our English exam and will still have another hour to go.
- A) will have written B) will be writing
- C) will write D) are writing
- 9 I'll do my work as soon as I ___ my tea.
- A) will have finished B) will finish
- C) will be finishing D) finish

- 10 ____ the end of the year, the road will have been completed.
A) By B) In C) For D) When
- 11 You should show more ____ when talking to your boss.
A) respected B) respectful C) respect D) respectable
- 12 John always comes ____ as being unfriendly. I don't know why.
A) across B) above C) away D) over
- 13 We were completely ____ and lost the match badly.
A) overplayed B) replayed C) outplayed D) displayed
- 14 We want more money. This job is terribly ____.
A) overpaid B) repaid C) unpaid D) underpaid
- 15 When I was young, we ____ often go to the mountains.
A) would B) did C) used D) use to
- 16 Don't bother to ask him. He ____.
A) isn't answering B) wouldn't answer
C) won't answer D) wasn't answering
- 17 I don't like the way she talks ____ people's backs.
A) in front of B) below C) around D) behind
- 18 You've got to ____ the bullies at your school.
A) face towards B) take over C) stand up to D) turn round
- 19 Bob was very ____ about my hat. He said it was beautiful.
A) intriguing B) complimentary C) infantile D) cautious
- 20 I'd prefer ____ go out until I've eaten.
A) don't B) not C) didn't D) not to
- 21 I'd rather he ____ English.
A) studied B) study C) studying D) studies

- 22 ___ we are careful, we sometimes make mistakes.
 A) However B) Although C) In spite of D) Nevertheless
- 23 The room was empty but I could smell cigarettes. Somebody ___ there.
 A) had smoked B) was smoking C) had been smoking D) smoked
- 24 ___ to work, I saw an accident.
 A) Having walked B) Walking
 C) Walk D) To walk
- 25 ___ staying at the hotel last year, we decided to go again.
 A) Enjoying B) Had enjoyed C) Having enjoyed D) Had been enjoying
- 26 Can I ___ your brains for a minute?
 A) pick B) take C) borrow D) catch
- 27 We saw a wonderful ___ of *Hamlet* at the local theatre.
 A) performer B) performing C) performed D) performance
- 28 To my ___, no one was there.
 A) amaze B) amazing C) amazed D) amazement
- 29 I sometimes ___ because of an accident I had when I was a child.
 A) stroll B) limp C) stumble D) wander
- 30 The door ___ shut with a bang.
 A) swung B) flew C) slammed D) yelled
- 31 He encouraged ___ up our own business.
 A) to set B) setting C) us to set D) us setting
- 32 Have you ever considered ___ to the countryside?
 A) move B) to move C) for moving D) moving
- 33 He let ___ with a warning.
 A) them go B) they go C) they to go D) them to go

- 34 I'm not used ___ up so early.
A) to get B) getting C) to getting D) for getting
- 35 Don't worry about Tom. He ___ this food!
A) used to B) is used to C) gets used to D) didn't use to
- 36 Don't shout at them! Why don't you just look ___?
A) after B) them after C) after they D) after them
- 37 Did you remember ___ the door?
A) lock B) to lock C) locking D) for locking
- 38 I'll never forget ___ this song for the first time.
A) to hear B) hear C) heard D) hearing
- 39 There ___ anyone here. No one knows about it.
A) mustn't be B) can't be C) won't have been D) couldn't have been
- 40 No one spoke English at the police station but, I ___ explain what had happened using sign language.
A) could B) was able to C) managed D) succeeded in
- 41 Be early. It's ___ to be crowded.
A) bound B) permitted C) required D) obliged
- 42 People here have a ___ to be unfriendly to strangers.
A) belief B) thought C) tendency D) rule
- 43 On the ___, results have been positive.
A) all B) main C) general D) whole
- 44 I could see at a ___ that something was wrong.
A) look B) glance C) sight D) stare
- 45 I hate the way he looks down his ___ at us.
A) face B) eye C) nose D) chin
- 46 The thing I love are the incredibly ___ descriptions.
A) vital B) visual C) virtual D) vivid
- 47 'You have to believe me.' He said I ___ him.
A) must believe B) must have believed C) had to believe D) would have to believe
- 48 'We came home last week.' They said they had come home ___.



- A) the week before
B) the next week
C) last week
D) that week
- 49 'What do you want to do?' He asked me what ___ to do.
A) do I want B) I want C) did I want D) I wanted
- 50 The actors were standing ___ waiting to go on.
A) backstage B) in the stalls C) in the box office D) in the chorus
- 51 The artist painted a ___ of a bowl of fruit.
A) landscape B) portrait C) sculpture D) still life
- 52 Every time I hear this, it makes me fall asleep: it's so ____.
A) uplifting B) rhythmic C) graceful D) soporific
- 53 He admitted ___ the money.
A) stealing B) for stealing C) of stealing D) to steal
- 54 He accused us ___ spoiling the whole day for everyone.
A) for B) on C) of D) with
- 55 They warned us ___ so fast.
A) to not drive B) not to drive C) not driving D) don't drive
- 56 We ___ not to be late.
A) told B) were told C) were telling D) will tell
- 57 A new cinema ___ at the moment.
A) is being built B) is building C) is built D) builds
- 58 I don't mind ___ to work late.
A) to be asked B) asking C) be asked D) being asked
- 59 These forms need ___ in before you go home.
A) be filled B) to fill C) to be filled D) being filled
- 60 He's a very ___ child at times.
A) destructing B) destroyed C) destructive D) destruction
- 61 You've got to ___ up to what is happening in the world.
A) get B) wake C) make D) take
- 62 He's very ___ -minded and always forgets things.



- A) narrow B) open C) broad D) absent
- 63 Don't be so big- _____. You're not the only clever person here.
A) headed B) minded C) brained D) faced
- 64 Despite _____ the answers, Karen failed her exam.
A) know B) to know C) knowing D) she knew
- 65 I wish I _____ understand this book.
A) can B) did C) would D) could
- 66 If only I _____ up so late last night.
A) didn't stay B) hadn't stayed C) haven't stayed D) wouldn't stay
- 67 I wish John _____ talking on his phone. It's so annoying!
A) stopped B) could stop C) would stop D) did stop
- 68 You've been here all day. You _____ the washing up at least.
A) could have done B) could do
C) would have done D) would do
- 69 I think _____ ring John to see how he is.
A) I better B) I would better C) I had better D) I should better
- 70 The company should _____ even in two or three years.
A) break B) make C) get D) go
- 71 We won't be able to afford a holiday this year _____ I get a better job.
A) if B) provided C) unless D) as long as

- 72 If I hadn't become a journalist, I ___ here now.
A) wasn't **B)** hadn't been **C)** wouldn't be **D)** wouldn't have been
- 73 If I didn't like you, I ___ to your party last week.
A) hadn't gone **B)** haven't gone **C)** wouldn't go **D)** wouldn't have gone
- 74 The house in ___ we live was built in the 18th century.
A) where **B)** which **C)** that **D)** what
- 75 This is the friend ___ I was telling you about.
A) about who **B)** who **C)** about whom **D)** which
- 76 She believes anything she's told, ___ is so naive.
A) which **B)** what **C)** that **D)** this
- 77 This is the factory ___ products are sold in India.
A) which **B)** that **C)** what **D)** whose
- 78 There's a small bird's ___ in our tree.
A) hive **B)** nest **C)** kennel **D)** burrow
- 79 The house needs ___ up but it won't take long.
A) doing **B)** making **C)** taking **D)** working
- 80 The house ___ fields so it is very quiet.
A) looks into **B)** looks out of **C)** backs onto **D)** backs up to
- 81 It's ___ of my business but isn't this the wrong house?
A) not **B)** any **C)** nothing **D)** none
- 82 I _____ have finished earlier but I didn't want to.
A) might **B)** could **C)** may **D)** can
- 83 Why did she go to see that awful film? She ___ have read the reviews – they all said it was terrible.
A) must **B)** can't **C)** could **D)** mustn't

- 84 Oh! Thank you but you ___ any food. We've got plenty.
A) needn't have brought B) didn't need to bring
C) needn't bring D) didn't need to have brought
- 85 Don't look so surprised. It's a tried and ___ method of catching fish.
A) worked B) tested C) found D) succeeded
- 86 There was ___ proof that he was the murderer.
A) concluding B) concluded C) conclusive D) conclusion
- 87 I'm enjoying myself but I'll probably live to ___ it.
A) upset B) deny C) forget D) regret
- 88 I find it difficult to live ___ my parents expectations.
A) down on B) up to C) out of D) through
- 89 ___ to be the oldest skeleton ever found.
A) It is thought B) It has thought C) It thinks D) It thought
- 90 These clothes were expected _____ by people under twenty only.
A) to wear B) to be worn C) to be wearing D) to have worn
- 91 Let's move ___ and discuss something else.
A) up B) over C) on D) round
- 92 There are a ___ of strange-looking people here.
A) amount B) several C) few D) number
- 93 ___ of the people I know like this kind of music.
A) None B) No C) Any D) No one
- 94 The children here are very special. _____ has got a unique talent.
A) Every B) All C) Each D) Any
- 95 ___ I want to do is go to the opera.
A) Which B) That C) How D) What

- 96 It was ___ film, it made me cry.
A) so sad B) such a sad C) really a sad D) incredibly sad
- 97 I'm going to write a letter to the ___ of the newspaper.
A) editor B) journalist C) director D) producer
- 98 The film was made ___ location.
A) in B) from C) on D) with
- 99 No sooner had I finished one project ___ I had to start the next.
A) as B) then C) when D) than
- 100 Not only ___ brilliantly but he's also a great actor.
A) he does sing B) does he sing C) he sings D) he can sing

Appendix 4: Academic Calendar 2017-2018

Academic College Calendar 2017 – 2018

Fall Semester: 2017 – 2018

25/09/2017	Induction Week
01/10/2017	Holiday-Cyprus Independence Day
02/10/2017	Fall Semester begins
06/11/2017-10/11/2017	<u>Fall Semester Midterm Exams</u>
28/10/2017	Holiday-Greek National Day (Oxi Day)
22/12/2017 – 06/01/2018	Christmas Holidays
08/01/2018-21/01/2018	Revisions
22/01/2018 – 26/01/2018	Fall Semester Final Exams

Spring Semester: 2018

29/01/2018 - 02/02/2018	Induction Week
05/02/2018	Spring Semester begins
19/02/2018	Holiday-Green Monday.
12/03/2017-16/03/2018	<u>Spring Semester Midterm Exams</u>
25/03/2018	Holiday-Greek Independence Day
01/04/2018	Holiday-Greek Cypriot National Day
02/04/2018 – 15/04/2018	Easter Holidays
1 May 2018	Labour Day
07/05/2018-20/05/2018	Revisions
21/05/2018 – 25/05/2018	Spring Semester Final Exams
28 May 2018	Holy Spirit Monday

Summer Semester: 2018

11/06/2018	Summer Intensive English-Foundation begins
11/06/2018-15/06/2018	Induction Week
16/07/2018-20/07/2018	<u>Summer Semester Midterm Exams</u>

15/08/2018 – 21/08/2018	Summer Holidays
03/09/2018-16/09/2018	Revisions
17/09/2018– 21/09/2018	Summer Semester Final Exams
26/06/2018	Graduation Day

Contacts in Cyprus

Ministry of Education & Culture

Address: Kimon and Thoukidides Str.
CY-1434 Nicosia
Tel: (357) 22800600
Fax: (357) 22305974
E-mail: registry@moec.gov.cy

Ministry of Interior

Address: Demostheni Severi Ave
CY-1457 Nicosia, Cyprus
Tel: (357) 22867800
Fax: (357) 22676709

Larnaca International Airport

Address: Larnaca CY-7130, Cyprus
Tel: 77778833

Ledra College is registered with the Cyprus Ministry of Education and Culture as an establishment of Higher (Tertiary) education. It is fully owned and operated by George Kakouris, bearing legal liability.

This Prospectus was submitted to the Ministry of Education and Culture on April 12, 2017. Approval was given by the Director of Higher and Tertiary Education ref:

Appendix 5: Professional Collaboration & Agreement

PowerSoft

Memorandum of Understanding was signed by Ledra College Cyprus and GM Powersoft Computer Solutions Ltd on Thursday, April 28th, 2017, at Powersoft headquarters in Nicosia, with the main objective of promoting research, innovation and entrepreneurship in Cyprus with effective engagement of young people. The purpose of the memorandum is to provide the framework for cooperation between Ledra College Cyprus and Powersoft in the fields of teaching, research and applied experience.

In this context, the wider objective of this cooperation is to facilitate the dissemination of high-end know-how and technology transfer to the members of both signatories so that they can strengthen their strategic position in relation to innovation in the field of Management Data, Data Mining and Analytics, Internet and Mobile Telephony, Cloud Computing, Commerce, and Industry. The agreement also includes student internship, Powersoft involvement in student projects, joint research activity, student business support, and collaboration on education and human resources development.

On behalf of Ledra College Cyprus, the director of the College, Dr. George Kakouris, signing the agreement, stressed that such partnerships with organizations such as Powersoft, which give impetus to young people, are particularly valuable in the difficult times that the country is experiencing and send optimistic messages.

The agreement was signed by GM Powersoft Computer Solutions Ltd, the CEO and Software Innovation Architect of the company, Mr. George Malekkos, who thanked Dr. George Kakouris for the confidence he shows towards Powersoft, saying that this collaboration is very promising for both sides. The collaboration begins with Powersoft365 Accounting and continues with the School of Sciences / Computing team.

Agreement between PowerSoft and Ledra College



Για όποιον αφορά,

Θα θέλαμε να σας πιστοποιήσουμε ότι η εταιρεία μας βρίσκεται σε συνεργασία με το Κολλέγιο Λήδρα, Λαγκαδά 13 Στρόβολος, στα ακόλουθα:

1. Συνεργαζόμαστε στο επίπεδο ανάπτυξης ακαδημαϊκών προγραμμάτων.
2. Στα πλαίσια της συνεργασίας ανάπτυξης των ακαδημαϊκών προγραμμάτων, στελέχη μας διατίθενται στο Κολλέγιο Λήδρα ως επισκέπτες-διαλέκτες.
3. Η εταιρεία μας στα ίδια πλαίσια συνεργασίας δέχεται φοιτητές από το Κολλέγιο Λήδρα για πρακτική εξάσκηση στο αντικείμενο των σπουδών τους.

Τελειώνοντας, σας ευχαριστούμε και είμαστε στη διάθεσή σας για τυχόν διευκρίσεις επί του θέματος

Με εκτίμηση,



Γιώργος Μαλέκκος
CEO & Software Innovation Architect
Powersoft Computer Solutions Ltd

Appendix 6: Lab Programs Requirements

LEDRA COLLEGE

Mobile and Web Application Development (2 years, Diploma)

LAB PROGRAM'S REQUIREMENTS

Contents

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4. Java JDK 8u111 with NetBeans 8.2	413
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6. NotePad++	146
7. KompoZer	413
8. WAMP	413
9. SPSS for Windows Version 13	414

Introduction

The lab continuously provides the best computing facilities for students as it consists of **16 Fujitsu Esprimo E910** fully incorporated into the College Network and featuring full Internet access and all the software needed for an effective and productive teaching.

1. Lab Hardware

16 x Fujitsu Esprimo E910 E90+
Intel Quad Core i5-3470 4x 3,20 GHz
8 GB RAM / 128 GB SSD
Intel HD Graphics 2500
Gigabit Ethernet Lan (10/100/1000)
Windows 7 Professional X64

2. WireShark

https://www.wireshark.org/docs/wsug_html_chunked/ChIntroPlatforms.html

- The current version of Wireshark should support any version of Windows that is still within its extended support lifetime. At the time of writing this includes Windows 10, 8, 7, Vista, Server 2016, Server 2012 R2, Server 2012, Server 2008 R2, and Server 2008.
- Any modern 64-bit AMD64/x86-64 or 32-bit x86 processor.
- 400 MB available RAM. Larger capture files require more RAM.
- 300 MB available disk space. Capture files require additional disk space.
- 1024x768 (1280x1024 or higher recommended) resolution with at least 16 bit color. 8 bit color should work but user experience will be degraded.
- A supported network card for capturing
 - Ethernet. Any card supported by Windows should work. See the wiki pages on Ethernet capture and offloading for issues that may affect your environment.
 - 802.11. See the [Wireshark wiki page](#).

3. Microsoft Office Professional Plus 2010

[https://technet.microsoft.com/en-us/library/ee624351\(v=office.14\).aspx](https://technet.microsoft.com/en-us/library/ee624351(v=office.14).aspx)

- 500-megahertz (MHz) processor or later versions; 1 gigahertz (GHz) required for Microsoft Outlook with Business Contact Manager.

- 256 megabytes (MB) of RAM or higher; 512 MB recommended for graphics features, Microsoft Outlook Instant Search, Microsoft Outlook with Business Contact Manager, Communicator, and certain advanced functionality.
- 3.5 gigabyte (GB) available disk space.
- 1024 × 768 or higher-resolution monitor.
- Windows Vista with Service Pack 1 (SP1) > higher.

4. Java JDK 8u111 with NetBeans 8.2

https://netbeans.org/community/releases/82/relnotes.html#system_requirements

Hardware requirements:

- 800MHz Intel Pentium III or equivalent
- 512 MB of RAM.
- 750 MB of free space

5. Aptana Studio3

- Aptana Studio supports both 32-bit and 64-bit architecture for the following common operating systems:
- Linux: x86 architecture, GTK windowing system
- Mac OS: OS X/Intel architecture, OS X 10.5 or later
- Windows: x86 architecture
- Minimum requirements:
- Linux: 1 GB RAM, Pentium 4-level processor
- Mac OS: 1 GB RAM, G5 or Intel-based machine
- Windows: 1 GB RAM, Pentium 4-level processor

6. NotePad++

<http://notepad.reviewsoft.com/details/>

- No special requirements.
- OS Support Win2003, Win2000, Win7 x64, Win XP, Win Vista, Win7 x32, Win8 x32, Win8 x64, Win10 x32, Win10 x64, Windows 8, Windows 10

7. KompoZer

<http://kompozer.net/>

- No special requirements.
- OS Support Win2003, Win2000, Win7 x64, Win XP, Win Vista, Win7 x32, Win8 x32, Win8 x64, Win10 x32, Win10 x64, Windows 8, Windows 10

8. WAMP

<http://ampps.com/wamp>

- Compatible OS: Windows XP SP3+, Windows Vista SP2+, Windows Server 2003 SP2+, Windows 7, Windows Server 2008, Windows Server 2008 R2.
- Space: Capacity of minimum 1.5GB Hard Disk space.
- Memory: 1GB RAM

9. SPSS for Windows Version 13

<http://www-01.ibm.com/support/docview.wss?uid=swg21479950>

- Microsoft Windows Me, Microsoft Windows 98, Microsoft Windows 2000, and Microsoft Windows XP.
- Pentium or Pentium-class processor.
- 128MB RAM or more.
- 220MB hard drive space.
- A graphics adapter with 800 x 600 resolution (SVGA) or higher.
- For connecting with an SPSS Server, a network adapter running the TCP/IP network protocol.

Appendix 7: External Peer Scrutiny – Powersoft

External peer reviewers from Powersoft are appointed to provide the College with independent, impartial judgement and advice regarding the quality and standards of the provision. They are drawn both from academics at other institutions and professional practitioners. Their role is to ensure that the College's Academic Regulations (including any approved variant regulations) and Academic Procedures in relation to assessment are applied appropriately, that nationally agreed levels of standards and quality are being upheld and that student performance is comparable to that at other institutions.

Appendix 8: Seminars



EIMF TRAINING PROGRAMMES

Calendar Jan-Jun 2018

Course Title	Trainer	City	Date(s)	Hours	Time	Fee (€)	HRDA Subs	Net Fee	Fee (€) Inc VAT
CySEC Advanced Examination Preparation Course	Panayiotis Antoniou	NIC	25, 29, 31 May 5, 7, 12 June	32	14:00-20:15	995	544	451	640.05
Handling Client Complaints	Adam Samuel	NIC	23 May	5	09:00-14:30			220	261.80
Alternative Investment Funds (AIF), AIFMD, and Undertakings for Collective Investment in Transferable Securities (UCITS)	Alexis Kartalis	NIC	29, 30 May	6	17:00-20:30			180	214.20
Methods and Techniques for a successful Internal Audit	Konstantinos P. Triantafyllidis	LIM	29, 30 May	10	09:00-15:00			220	261.80
EXIN General Data Protection Foundation Certificate	Kalia Panteli	NIC	30, 31 May	14	09:00-17:15			292	347.48
Pillar II Risk Management Framework: ICAAP	Panayiotis Antoniou	NIC	1 June	5	15:00-20:30			220	261.80
Certified Information Privacy Professional/Europe (CIPP/E)	Tim Clements	NIC	4, 5 June	14	09:00-17:15			1750	2082.5
Certified Information Privacy Manager (CIPM)	Tim Clements	NIC	6, 7 June	14	09:00-17:15			1750	2082.5
AML series: KYC and Customer Due Diligence for Investment Firms	Panagiotis Nicolaou	NIC	6 June	5	15:00-20:30			180	214.20
AML series: CAMS Examination Preparation Course: Become a Certified Anti-Money Laundering Specialist (ACAMS)	Gregory Dellas	NIC	9, 16 June	14	09:00-17:15	530	238	292	392.70
EXIN General Data Protection Practitioner Certificate	Kalia Panteli	NIC	11, 12, 13 June	21	09:00-17:15	800	357	443	595
CySEC Advanced Examination Preparation Course	Panagiotis Nikolaou	LIM	12, 14, 19, 28 June 3, 5 July	32	14:00-20:15			500	595
Compliance in the Financial Services Sector - the Compliance Function in Practice	Panayiotis Antoniou	LIM	14, 15 June	10	14:00-19:30			250	297.50
CISI Risk in Financial Services	Petros Florides	NIC	14, 15 June	14	09:00-17:15			292	347.48

Course Title	Trainer	City	Date(s)	Hours	Time	Fee (€)	HRDA Subs	Net Fee	Fee (€) Inc VAT
Finance and Accounting for Non-Financial Professionals	Marios Mortis	NIC	18, 19 June	14	09:00-17:15			250	297.50
Understanding and Negotiating ISDA Master Agreement OTC Documentation	Nick Skrekas	NIC	18, 19 June	14	09:00-17:15			350	416.50
AML 4th Directive	Panagiotis Nikolaou	NIC	18 June	5	09:00-14:30			220	261.80
Introduction to IFRS 16 Leases	Derek Carmichael	NIC	20 June	5	14:00-19:00			140	166.6
Institutional Portfolio Management	Paul Meadows	NIC	20,21 June	14	09:00-17:15			320	380.80
MiFID II Applied Best Execution and Controls for Investment Firms	Panagiotis Nikolaou	NIC	26 June	5	09:00 - 14:30			292	347.48
IFRS Masterclass: IAS 36 Impairment of assets	Derek Carmichael	NIC	27 June	3	09:00-12:00			80	95.20
MiFID II Applied Product Governance for Investment Firms	Panagiotis Nikolaou	NIC	29 June	5	09:00-14:30			292	347.48
Audit Report Writing	Konstantinos P. Triantafyllidis	NIC	5,6 July	10	09:00-15:00			220	261.80
Client identification and KYC process as part of an effective audit plan	Bobbi Koufari	NIC	6 July	5	09:00-14:30			180	214.20
Audit Quality: monitoring results and preparing for audit review	Bobbi Koufari	NIC	13 July	5	09:00-14:30			180	214.20

Coursera

<https://www.coursera.org/learn/learning-assessment>

Coursera provides universal access to the world's best education, partnering with top universities and organizations to offer courses online.

The screenshot shows the Coursera website interface. At the top, there is a search bar with the text "What do you want to learn?" and a user profile icon for "Anastasia". The main content area features the course title "Foundations of Teaching for Learning: Introduction to Student Assessment" by Commonwealth Education Trust. A welcome message from the instructor is displayed in a light gray box, stating: "Welcome to Foundations of Teaching for Learning: Introduction to Student Assessment! You're joining thousands of learners currently enrolled in the course. I'm excited to have you in the class and look forward to your contributions to the learning community. To begin, I recommend taking a few minutes to explore the course site. Review the material we'll cover each week, and preview the assignments you'll need to complete to pass the course. Click **Discussions** to see forums where you can discuss the course material with fellow students taking the class. If you have questions about course content, please post them in the forums to get help from others in the course community. For technical problems with the Coursera platform, visit the [Learner Help Center](#). Good luck as you get started, and I hope you enjoy the course!" Below the message is a "Less" button with an upward arrow icon. The left sidebar contains a navigation menu with "Course Home" selected, followed by "Week 1" through "Week 6", "Grades", and "Discussion Forums".

EDX

<https://www.edx.org/>

Founded by Harvard University and MIT in 2012, edX is an online learning destination and MOOC provider, offering high-quality courses from the world's best universities and institutions to learners everywhere.

HTML5 Apps and Games W3Cx - W3C provides a [W3Cx Verified Certificate for this course](https://www.w3.org/W3C/Certificates/verified-certificates.html) (<https://courses.edx.org/courses/course-v1:W3Cx+HTML5.2x+3T2017/course/>)

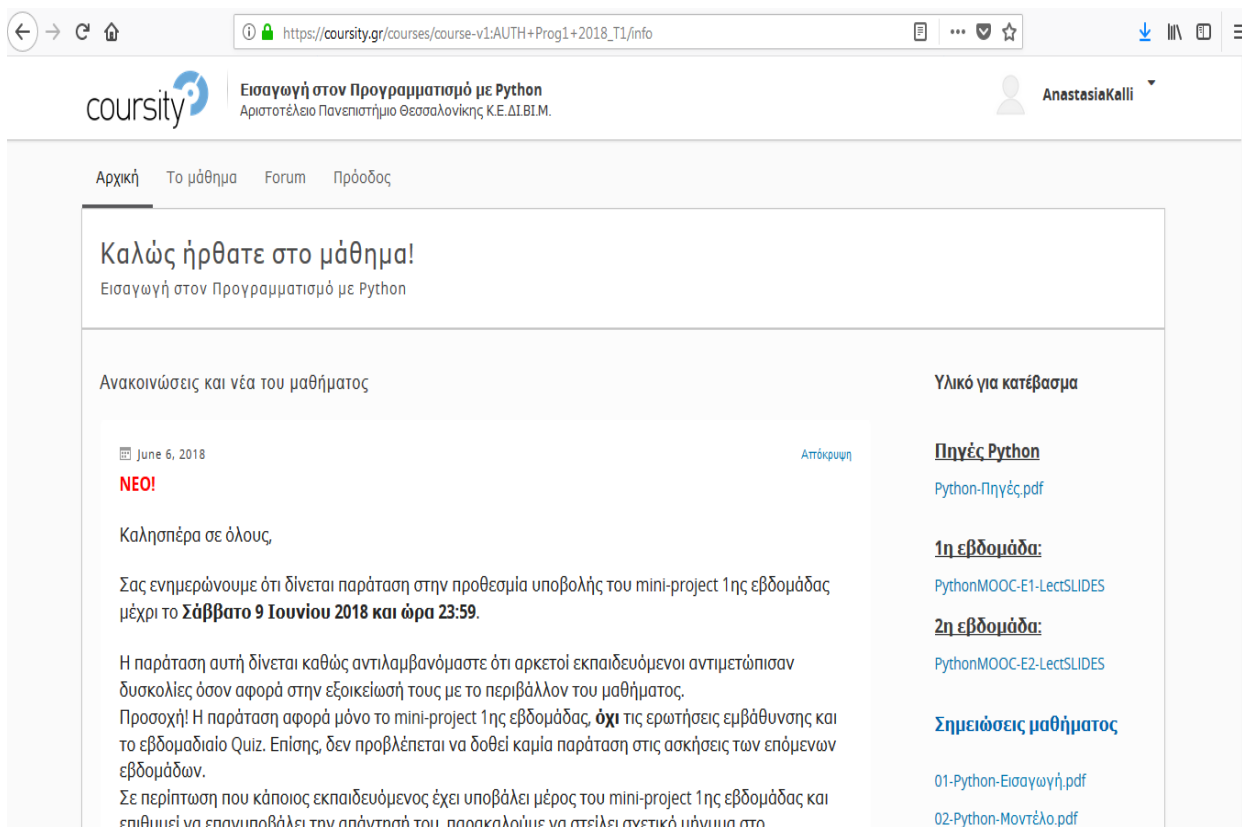
The screenshot shows the edX course interface for 'HTML5 Apps and Games'. At the top, the edX logo is on the left, and 'W3Cx: HTML5.2x HTML5 Apps and Games' is in the center. On the right, there is a 'Help' button and a user profile for 'AnastasiaKalli'. Below the header, a navigation bar contains links for 'Course', 'Student Introduction', 'Discussion', 'Community', and 'Progress'. The main content area features a large heading 'HTML5 Apps and Games' with a 'Start Course' button. A welcome message box on the left reads: 'Welcome to the HTML5 Apps and Games course! Hello, Thank you for registering to this HTML5 Apps and Games course. It naturally follows the HTML5 Coding Essentials and Best Practices course (also in self-paced mode). To get started, please read the Course information section, where you can become oriented to the course structure, the schedule, and how things will work in this course. Please take 5 mins to introduce yourself in the student introduction forum, and another 5 minutes to answer our welcome survey. Course outline Over the next 4 weeks, you will discover advanced HTML5 techniques that will help you develop innovative projects and applications. Please try to work on one of the many proposed optional projects, to be found'. On the right, a 'Goal' section states 'Earn a certificate'. Below that, 'Course Tools' includes 'Bookmarks', 'Updates', and 'Upgrade to Verified'. 'Important Course Dates' shows 'Today is Jun 11, 2018 12:54 EEST', 'Course End in 4 months - Oct 1, 2018', and a note that 'After this date, course content will be'.

COURSITY

Το Coursity είναι μία καινοτόμα πλατφόρμα, που φιλοξενεί σεμινάρια τα οποία πραγματοποιούνται διαδικτυακά με τη μορφή βιντεοσκοπημένων μαθημάτων. Τα διαδικτυακά σεμινάρια καλύπτουν ένα μεγάλο εύρος επιστημονικών πεδίων και γνωστικών αντικειμένων και έχουν διάρκεια 4-8 εβδομάδες. Οι επιστημονικά υπεύθυνοι και οι διδάσκοντες είναι αναγνωρισμένοι καθηγητές ελληνικών Πανεπιστημίων. Η επιτυχής παρακολούθηση των σεμιναρίων οδηγεί στη λήψη Πιστοποιητικού από τα Κέντρα Δια Βίου Μάθησης Ελληνικών Πανεπιστημίων.

<https://coursity.gr>

Introduction to programming with Python – Aristotle University Thessaloniki Learning Center for Lifelong Learning.



The screenshot shows a web browser window displaying the Coursity website. The URL in the address bar is https://coursity.gr/courses/course-v1:AUTH+Prog1+2018_T1/info. The page title is "Εισαγωγή στον Προγραμματισμό με Python" (Introduction to Programming with Python) from the Aristotle University of Thessaloniki. The user is logged in as "AnastasiaKalli".

The main content area features a welcome message: "Καλώς ήρθατε στο μάθημα!" (Welcome to the course!) and "Εισαγωγή στον Προγραμματισμό με Python". Below this, there is a section for "Ανακοινώσεις και νέα του μαθήματος" (Announcements and news of the course). A recent announcement from June 6, 2018, is highlighted with a "NEO!" (New!) tag. The announcement text reads: "Καλησπέρα σε όλους, Σας ενημερώνουμε ότι δίνεται παράταση στην προθεσμία υποβολής του mini-project 1ης εβδομάδας μέχρι το **Σάββατο 9 Ιουνίου 2018 και ώρα 23:59**. Η παράταση αυτή δίνεται καθώς αντιλαμβανόμαστε ότι αρκετοί εκπαιδευόμενοι αντιμετώπισαν δυσκολίες όσον αφορά στην εξοικείωσή τους με το περιβάλλον του μαθήματος. Προσοχή! Η παράταση αφορά μόνο το mini-project 1ης εβδομάδας, **όχι** τις ερωτήσεις εμφάνισης και το εβδομαδιαίο Quiz. Επίσης, δεν προβλέπεται να δοθεί καμία παράταση στις ασκήσεις των επόμενων εβδομάδων. Σε περίπτωση που κάποιος εκπαιδευόμενος έχει υποβάλει μέρος του mini-project 1ης εβδομάδας και επιθυμεί να επαγυποβάλει την απάντησή του, παρακαλούμε να στείλει σχετικό μήνυμα στο

On the right side, there is a section for "Υλικό για κατέβασμα" (Material for download). It lists "Πηγές Python" (Python Sources) with a link to "Python-Πηγές.pdf" and "1η εβδομάδα:" (1st week) with a link to "PythonMOOC-E1-LectSLIDES" and "2η εβδομάδα:" (2nd week) with a link to "PythonMOOC-E2-LectSLIDES". At the bottom, there is a section for "Σημειώσεις μαθήματος" (Course Notes) with links to "01-Python-Εισαγωγή.pdf" and "02-Python-Μοντέλο.pdf".

ΤΡΕΧΟΝ ΣΕΜΙΝΑΡΙΟ



CCNA CyberSecurity Operations

The CCNA Cybersecurity Operations curriculum provides a first step in acquiring the knowledge and skills needed to work with a Security Operation Centre (SOC) ...



ΕΚΠΑΙΔΕΥΤΗΣ
Παφίτης Σωτήρης

ΕΝΑΡΞΗ
18/06/2018 18:15

ΣΥΝΟΛΙΚΟ ΚΟΣΤΟΣ ΕΠΙΧΕΙΡΗΣΗΣ
€ 200,00



ΓΛΩΣΣΑ
Αγγλικά

ΛΗΞΗ
17/10/2018 21:30

ΔΙΑΡΚΕΙΑ
81 ώρες (ημέρες)

[Περισσότερα](#)



ΧΩΡΟΣ ΔΙΕΞΑΓΩΓΗΣ
**Εκπαιδευτικό & Εξ...
Λεμεσός**

ΤΡΕΧΟΝ ΣΕΜΙΝΑΡΙΟ



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GDPR For Marketers

Το GDPR είναι μια ευκαιρία για τις επιχειρήσεις να συνειδητοποιήσουν την αξία των δεδομένων τους. Η εφαρμογή της νέας νομοθεσίας επηρεάζει σημαντικά τον τρόπο ...



ΕΚΠΑΙΔΕΥΤΗΣ
Μαϊμάρης Μιχάλης

ΕΝΑΡΞΗ
11/07/2018 08:30

ΣΥΝΟΛΙΚΟ ΚΟΣΤΟΣ ΕΠΙΧΕΙΡΗΣΗΣ
€ 81,00



ΓΛΩΣΣΑ
Ελληνικά

ΛΗΞΗ
11/07/2018 17:00

ΔΙΑΡΚΕΙΑ
7 ώρες (ημέρες)

[Περισσότερα](#)



ΧΩΡΟΣ ΔΙΕΞΑΓΩΓΗΣ
**Hilton Cyprus
Λευκωσία**

Appendix 9: Additional Questionnaires: Teaching Effectiveness for Labs and Projects

Ledra College Feedback for Lecturer

Lab Section Form

Instructions: The primary purpose of this form is to gather information to help your Lecturer improve his/her teaching, and as a result enhance instruction at Ledra College. Your honest and thoughtful feedback, comments and suggestions are appreciated.

Lecturer's Last name:

Lecturer's First name:

Course:

Semester: Fall Spring

Year: _____

1. For this lab section,...

- a. on average, how many hours did you spend outside of class each week preparing for this lab course (reading, studying, preparing reports, etc)? _____ (Hours)
- b. what grade do you expect to earn in this lab? A A/B B B/C C C/D D

2. For this lab section, how frequently did you...

	<u>Never</u>	<u>Rarely</u>	<u>Sometimes</u>	<u>Often</u>	<u>Always</u>
a. attend class during the scheduled lab time?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. work in the lab outside of scheduled lab time?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. prepare thoroughly for the lab before the class?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. seek out one-on-one assistance from the lecturer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Rate your lecturer's performance in each of the following areas.

	<u>R-Poor</u>	<u>D-Fair</u>	<u>C-Good</u>	<u>B-Very Good</u>	<u>A-Excellent</u>	<u>N/A</u>
a. level of preparation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
b. level of organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
c. understanding of the course material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
d. quality of in-class examples or problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
e. quality of in-class demonstrations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
f. ability to respond to students' questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
g. ability to link abstract concepts to concrete situations or examples	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
h. ability to manage in-class time effectively?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>

- | | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------|
| i. ability to speak English (e.g. pronunciation, vocabulary, speed) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> |
| j. ability to understand spoken English | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> |
| k. quality of answer keys or feedback to students on graded assignments | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> |
| l. ability to return students' work in reasonable time | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> |
| m. availability to meet with students outside of class | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> |

4. In this lab, to what extent did the lecturer...

- | | Not at all | A little | Some | A lot | An exceptional amount |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a. encourage students to ask questions? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. attempt to learn students' names? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. intimidate or embarrass students? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. respond or interact with students in a way that was biased by the student's personal characteristics (e.g., gender, physical appearance, ethnicity, cultural background, sexual orientation)? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. treat students in disrespectful manner? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. return students' work in a reasonable time? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

5. How would you rate the lecturer's overall effectiveness in this lab?

- | | R-Poor | D-Fair | C-Good | B-Very Good | A-Excellent |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a. Overall effectiveness | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

6. What were the strong points about your lecturer's teaching? That is, what do you want your lecturer to continue to do in the future?

7. What specific suggestions do you have to help your lecturer improve his/her teaching?

Ledra College Feedback for Lecturer

Project Section Form

Instructions: The primary purpose of this form is to gather information to help your lecturer improve his/her teaching, and as a result enhance instruction at Ledra College. Your honest and thoughtful feedback, comments and suggestions are appreciated.

Lecturer's Last name:

Lecturer's First name:

Course:

Semester: Fall Spring

Year: _____

3. For this project section,...

- a. on average, how many hours did you spend outside of class each week preparing for this project section (reading, studying, assignments, group meetings, etc)? _____ (Hours)
- b. what grade do you expect to earn in this section? A A/B B B/C C C/D D

4. For this project section, how frequently did you...

	<u>Never</u>	<u>Rarely</u>	<u>Sometimes</u>	<u>Often</u>	<u>Always</u>
a. attend class?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. prepare thoroughly for the class before the it met?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. seek out one-on-one assistance from the lecturer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Rate your lecturer's performance in each of the following areas.

	<u>R-Poor</u>	<u>D-Fair</u>	<u>C-Good</u>	<u>B-Very Good</u>	<u>A-Excellent</u>	<u>N/A</u>
a. level of preparation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
b. level of organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
c. familiarity with the project and assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
d. ability to guide students to useful resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
e. ability to assist students in finding useful approaches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
f. ability to respond to students' questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
g. ability to clarify or explain difficult topics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
h. quality of in-class examples or demonstrations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
i. ability to manage group dynamics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
j. ability to manage in-class time effectively?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
k. ability to speak English (e.g.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>

pronunciation, vocabulary, speed)

l. ability to understand spoken English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
m. quality of answer keys or feedback to students on graded assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
n. availability to meet with students outside of class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>

4. In this project section, to what extent did the lecturer...

	Not at all	A little	Some	A lot	An exceptional amount
a. encourage students to ask questions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. attempt to learn students' names?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. intimidate or embarrass students?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. respond or interact with students in a way that was biased by the student's personal characteristics (e.g., gender, physical appearance, ethnicity, cultural background, sexual orientation)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. treat students in disrespectful manner?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. provide constructive feedback on graded work?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. return students' work in a reasonable time?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. How would you rate the lecturer's overall effectiveness in this project section?

	R-Poor	D-Fair	C-Good	B-Very Good	A-Excellent
a. Overall effectiveness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. What were the strong points about your lecturer's teaching? That is, what do you want your Lecturer to continue to do in the future?

7. What specific suggestions do you have to help your Lecturer improve his/her teaching?

Appendix 10: Academic Misconduct

For the purposes of our College regulations, academic misconduct is defined as any action(s) or behaviour likely to confer an unfair advantage in assessment, whether by advantaging a candidate for assessment or disadvantaging (deliberately or unconsciously) another or others. Examples of such misconduct are given below: the list is not exhaustive and the use of any form of unfair or dishonest practice in assessment not itemised below can be considered potential misconduct.

Coursework Submitted for Assessment

The submission of material (written, visual or oral), originally produced by another person or persons or oneself, without due acknowledgement*, so that the work could be assumed to be the student's own. For the purposes of these Regulations, this includes incorporation of significant extracts or elements taken from the work of (an)other(s) or oneself, without acknowledgement or reference*, and the submission of work produced in collaboration for an assignment based on the assessment of individual work (Such misconduct is typically described as plagiarism and collusion).

*(Note: To avoid potential misunderstanding, any phrase that is not the student's own or is submitted by the student for a different assessment should normally be in quotation marks or highlighted in some other way. It should also be noted that the incorporation of significant elements of (an) other(s) work or of one's own work submitted for a different assessment, even with acknowledgement or reference, is unacceptable academic practice and will normally result in failure of that item or stage of assessment.)

- Being party to any arrangement whereby the work of one candidate is represented as that of another.
- The submission of work that is not one's own (e.g. work that has been purchased, or otherwise obtained from a "cheat site").
- Offering an inducement to staff and/or other persons connected with assessment.

Examinations

- Importation into an examination room of materials other than those which are specifically permitted under the regulations applying to the examination in question.
- Reference to such materials (whether written or electronically recorded) during the period of the examination, whether or not such reference is made within the examination room.
- Refusing, when asked, to surrender any materials requested by an invigilator.

- Using any application of a mobile telephone.
- Copying the work of another candidate.
- Disruptive behaviour (including making unacceptable noise, e.g. from a mobile 'phone, during examination or assessment.
- Obtaining or seeking to obtain access to unseen examination questions prior to the examination.
- Failure to observe the instructions of a person invigilating an examination, or seeking to intimidate such a person.
- Offering an inducement to invigilators and/or staff and/or other persons connected with assessment.
- Where academic misconduct is suspected, the matter will be dealt with under the Procedure to be followed in the event of a suspected case of academic misconduct. If it is determined that academic misconduct has taken place, a range of penalties may be prescribed which includes expulsion from the programme.

PLAGIARISM - A GUIDANCE NOTE FOR STUDENTS

1. Definition of Plagiarism

Our College defines plagiarism and other academic misconduct in Part 8 of the Ledra Manual of General Regulations (to which all students are referred upon joining Ledra). In this document, the following example of an assessment offence is given:

The submission of material (written, visual or oral), originally produced by another person or persons or oneself, without due acknowledgement*, so that the work could be assumed to be the student's own. For the purposes of these Regulations, this includes incorporation of significant extracts or elements taken from the work of (an)other(s) or oneself, without acknowledgement or reference*, and the submission of work produced in collaboration for an assignment based on the assessment of individual work. (Such misconduct is typically described as plagiarism and collusion.)

The following note is attached:

*(Note: To avoid potential misunderstanding, any phrase that is not the student's own or is submitted by the student for a different assessment should normally be in quotation marks or highlighted in some other way. It should also be noted that the incorporation of significant elements of (an)other(s) work or of one's own work submitted for a different assessment, even with acknowledgement or reference, is unacceptable academic practice and will normally result in failure of that item or stage of assessment.)

2. **Plagiarism in Greater Detail**

Work that students submit for assessment will inevitably build upon ideas that they have read about or have learnt about in lectures. That is perfectly acceptable, provided that sources are appropriately acknowledged. It should be noted, however, that the wholesale reproduction of the ideas and words of others, however well referenced, is likely to lead to failure at assessment (see section 6 below)

The submission of work that borrows ideas, words, diagrams, or anything else from another source (or sources), without appropriate acknowledgement, constitutes plagiarism. Plagiarism is not limited to unattributed cutting-and-pasting; it includes the reproduction, without acknowledgement, of someone else's work, taken from a published (or unpublished) article, a book, a website, a friend's (or anybody else's) assignment, or any other source.

When an assignment or report uses information from other sources, the student must carefully acknowledge exactly what, where and how s/he has used them. If someone else's words are used, they must be within quotation marks and a reference must follow the quotation.

Where a concept or argument in another source is paraphrased (rather than directly quoted), quotations marks should not be used, but it will still be necessary to acknowledge the source. Remember, however, that the making of simple changes to the wording of a source, while retaining the broad structure, organisation, content and/or phraseology of the source, is unacceptable academic practice and will probably be regarded as plagiarism.