Student Handbook

Department of Information Technology

School of Computing and Technology

Eastern Mediterranean University

TABLE OF CONTENTS

THE BS IN IT PROGRAM AND IT FIELD

School of Computing and Technology (SCT) is the first academic unit that was established in 1989 when Eastern Mediterranean University was founded. The Bachelor of Science (BS) program in Information Technology officially began accepting students in the fall of 1994. The BS in IT program is recognized and accredited by both YOK and YODAK

The program has received ASIIN accreditation as well as Euro-Inf label in June 2011. The BS program in IT program is the only program accredited by ASIIN in the fields of informatics in the region. Furthermore it is the third program that was awarded the Euro-Inf label quality label.

This handbook describes undergraduate Information Technology program of the School of Computing and Technology (SCT) to people who are interested in joining it, as well as to people who are already in it. The first part of the handbook provides a general idea on what "Information Technology" means. The second part is designed to help current students by answering many day-to-day academic advising questions as they progress toward graduation.

Information Technology (IT) is an academic discipline distinct from computer engineering, Computer Science and Information Systems Engineering. IT usually deals with the business side of computer applications and encompasses software engineering and development, computer networking and communications, Web technologies, computer security, database management, and digital media technologies. The IT professionals are hired by organizations of all sizes in all industries and therefore the IT curriculum in EMU provides the students with a broad professional foundation encompassing all pillars of the IT field as well as technical specialization in the areas of their choice.

A very common question asked is "What are the differences between Information Technology and computer science, software engineering, computer engineering and/or management information systems?" Even though, IT just like the other fields listed above has some roots in computer science (among other fields), there are some key professional and curricular factors that differentiate IT from the other fields.

At the professional level, the computer scientist, software engineer and computer engineer tend to devote their time to creating, developing and extending the underlying computing technology, while the IT professional tends to apply current technology to solve real-world problems for people.

Curriculum of IT program differs from CS, SE and CE in many respects. The CS, SE and CE programs provide a stronger emphasis on traditional programming and hardware technologies as well as theories related with communications and programming than in the IT program. The typical CS or SE application involves writing large programs from scratch using traditional programming languages and focusing on software architecture, data structures and algorithm development issues. Application development as thought in the IT department contains a foundation in traditional programming languages but emphasizes building software applications by gluing together available components in high-level environments and providing an accessible

interface to the functionality those components provide. Also the CS, CE and SE curriculum require significantly more math and science than Information Technology, mainly because extending the underlying technology requires a more thorough mathematical foundation than applying that technology. The IT program at Eastern Mediterranean University (EMU) is not mathematics and physics intensive as the related engineering disciplines that normally deal with the science of constructing computers and related technologies such as how to build microprocessors, how to write a compiler etc.

The main difference between information technology and management information systems (MIS), is that MIS is a business program that focuses on the applications and implications of computing in the business domain. MIS takes the Business core and approach computing from the perspective of a manager in the business world whereas IT focuses on the selection, integration and deployment of computing technology.

Jobs requiring information technology expertise are found in every part of society. Students may specialize in one of the two IT tracks by choosing appropriate elective courses (listed later in this handbook) but the strong foundation in the IT field allows them to pursue many different job opportunities. Graduates of the IT department may take positions with job titles like programmer, systems analyst/designer, web designer/master, content developer, network/systems administrator, security specialist, game developer, database developer/administrator, multimedia content developer, application developer, interface design specialist, testing and quality assurance specialist, instructional designer, user support specialist, or technical marketing representative etc. The flexible and broad foundation given by the IT department allows students to easily choose and succeed in alternative career paths that make use of their IT background such as teaching, communications, business administration.

MISSION AND VISION

In keeping with the vision of Eastern Mediterranean University and the School of Computing and Technology, The Information Technology department aims to be recognized as one of the leading Information Technology education, development, and consultation centers that make use of all current IT technologies, innovative approaches for teaching, learning, and IT solution development. The aim of the department is:

- To enhance, expand and broaden the potential of students through use of new technologies and approaches
- To graduate students with qualifications and qualities required by the current and future market demands and EU standards.
- To empower graduates with a solid foundation in the IT field as well as practical experience using latest technologies.
- To provide an environment for student centered, team oriented and project based learning.
- To give initiative to the students to design their own curriculum according to their individual needs.

- To be recognized for effectiveness and leadership in IT education.
- To provide researchers and enterprises with expert consultation on IT related topics.
- To produce reliable, user-oriented, user-friendly and exciting information technology solutions through student graduation projects.

The mission of the IT department parallels that of the School of Computing and Technology and the Eastern Mediterranean University. The Information Technology department provides a multi-disciplinary environment for high quality education using the latest technologies, approaches and expertise. It is also committed to contributing to the current knowledge in both theoretical and applied areas of IT.

In performing these tasks, the department maintains an awareness of current needs, and anticipated future needs of the global market as well as current developments in the IT field and updates its curriculum accordingly. It also recognizes the growing interdisciplinary nature of IT field and provides a flexible curriculum that can be molded by the students to suit their individual needs.

The Department strives to promote an environment for team oriented project based education for students. The mission of the IT program is to equip students with the following knowledge and skills, which are considered to be vitally important in the IT field:

- Strong foundation in IT related fields
- Strong analytical and critical thinking skills
- Self-improvement and adaptation skills in the changing world
- Extensive business and real world perspective
- Effective communication skills to interact with customers and colleagues
- Effective team playing skills
- State-of-the-art as well as practical knowledge in IT field
- Diversified education providing flexibility in career opportunities

ENTRANCE REQUIREMENTS

Admission to the BS in IT program is open to high school graduates. Majority of the students attend the IT program right after high school. Some students transfer from other programs or universities and a smaller percentage choose IT as their second degree. The last two cases, students may receive credit toward graduation based on the university level course work they have completed in other intuitions provided that the institution is approved by the registrar's office and the courses are evaluated as equivalent to coursework in the IT department by the transfer committee. It is also possible transfer credit from coursework completed as part of professional training programs such as APTECH based on official agreements with Eastern Mediterranean University. For questions related to credit transfer you can see the chair of the transfer committee. The members of transfer committee are listed on the departmental web page.

Applicants must submit a certified copy of Higher Secondary School Certificate or Intermediate Certificate or the equivalent, demonstrating that he or she has satisfactorily graduated from secondary school, and must arrange for other relevant certified documents, such as transcripts or detailed mark sheets, to be released to EMU. Citizens of Turkish Republic of Northern Cyprus and Republic of Turkey are placed in the IT program based on their score in EMU entrance and OSYM (Central exam organized by the Higher Education Council of Turkey) exams respectively. Other applicants are required to:

1) have achieved an overall secondary school performance approved by the department as well as their respective country
2) supply two letters of recommendation
3) supply financial guarantees that sufficient funds for tuition and living expenses are available.
4) Further Information may be received from the registrar's office (registrar.emu.edu.tr)

ADVISING

In general, if you have a question about something, check out this handbook first. If you don't find the specific answer you're looking for in the handbook, you at least should find out who the right person to ask is. If you have a question or concern or problem, and you're not sure where to go for help, contact the IT Department Office or the coordinators.

The most frequent advising question is who to see for advice. In the IT department there are various advising resources, including Academic as well as non-Academic Advisors.

In EMU, for every student who has the right to enroll in an academic program, an academic advisor who is a member of the academic staff is appointed by the relevant Department Chair or School Director. The academic advisor has the obligation of guiding the student in course registration, or in other academic and administrative matters.

In the IT department, every student is assigned an academic advisor at the beginning of each school year. The academic advisors are assigned to students based on ranges of the student identity numbers. This means that your academic advisor may change from one academic year to the next. To see the latest advisor list consult http://sct.emu.edu.tr/it.

For questions related to which courses to take, which IT specialization tracks suit you, what kind of skills are required by the career path you wish to take etc. you should see your academic advisor. You can also seek advice from your academic advisor on general course related problems, or other academic matters such as taking courses during summer or at other institutions, at another college, and transferring credits. If you want to take courses from other institutions or transfer credit for previous course work, you must apply to the transfer committee. The Academic Advisors are available full time during registration period and are available for advising during their office

hours or by appointment at other times. Many faculty members have open door policy and are available for advising all the time.

There are two teams of non-Academic Advisors who are available to help students with non-academic matters. One team of non-academic advisors provide support to international students focusing on the sort of problems the international students may face. The other team provides help to Turkish speaking students from Turkey and Cyprus. Members of the non-academic advising committee can be found on the departmental web site. Students may see the non-academic advisors for guidance in matters of everyday life in Cyprus. Many students need to talk about relationship problems, seek advice on rent or immigration problems etc. Your non-academic advisor is here to listen to you and direct you toward a solution.

The IT Undergraduate Program Coordinator is the person to see for unusual things that the Academic or non-Academic Advisors cannot answer. In general you should try one of these advisors first and let them refer you to Program Coordinator if necessary.

CURRICULUM OF THE IT PROGRAM

The IT curriculum that will be applied starting 2011-2012 Spring semester can be seen below. Ideally students should take the courses in the order listed in the curriculum. If you feel you cannot cope with the predefined courses either in terms of quantity or content, you can consult your advisor and design an alternative path toward graduation. Successful students who wish to graduate sooner than eight semesters may take one additional course every semester as long as either last semester's GPA or the overall CGPA is greater than 3.00/4.00.

For every semester, the number of specified credit courses of a registered program makes up the semester course load. Non-credit courses are not taken into account in the computation of the course load. However, upon the recommendation of the student's academic advisor and the approval of the School Director:

1) a maximum of two courses can be reduced from the normal course load of a semester. In this case, the student must register for the untaken courses at the nearest next semester the courses are offered.
2) a student's semester course load can be increased by one course at most. In order to do this,
    i. the student's Cumulative Grade Point Average (CGPA) should not be below 3.00, or
    ii. the student has to be designated a 'High Honor' or an 'Honor' at the end of the previous academic term.

Even though the students are advised to take the courses as shown on the IT curriculum on the next two pages, it is possible for a student to choose different courses in any semester subject to approval of the advisor and coordinator. Nevertheless, the maximum course load must be within the limits shown in the curriculum.

Details on the number of courses a student may register in a semester in relation with their 'Cumulative Grade Point Average' or 'Grade Point Average' may be found in the section titled 'Registering for Courses'.

Curriculum of the Information Technology (35) Program

Freshman Year – First Semester								
Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			Prerequisites
					(L/L/T)	EMU	ECTS	
1	35711	ITEC103	Information Technology Fundamentals	AC	(2,2,0)	3	6	35711
1	35712	ITEC113	Algorithms and Programming Techniques	AC	(3,2,0)	4	8	35712
1	35713	ITEC161	Introduction to Business	AC	(3,0,0)	3	4	35713
1	35714	MATH133	Basic Mathematics	AC	(3,0,1)	3	6	35714
1	35715	ENGL191	Communication in English - I	UC	(3,0,1)	3	4	35715

Freshman Year – Second Semester								
Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			Prerequisites
2	35721	ITEC114	Structured Programming	AC	(3,2,0)	4	8	ITEC113
2	35722	ITEC122	Introduction to Multimedia	AC	(3,1,0)	3	7	ITEC103
2	35723	MATH134	Discrete Mathematics for Information Technology	AC	(3,0,1)	3	6	MATH133
2	35724	ENGL192	Communication in English - II	UC	(3,0,1)	3	4	ENGL191
2	35725	TUSL181 HIST280	Turkish as a Foreign Language History of Turkish Reforms	UC	(2,0,0)	2	3	
2	35726	UE-01	University Elective - I	UE	(3,0,0)	3	3	

Sophomore Year – First Semester								
Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			Prerequisites
3	35731	ITEC212	Database Management Systems	AC	(3,2,0)	4	6	
3	35732	ITEC213	Data Structures and Applications	AC	(3,2,0)	4	6	ITEC114
3	35733	ITEC215	Human Computer Interaction	AC	(3,0,1)	3	6	
3	35734	ITEC229	Client-Side Internet and Web Programming	AC	(3,2,0)	4	6	
3	35735	ITEC255	Computer Organization and Architecture	AC	(3,0,1)	3	6	

Sophomore Year - Second Semester								
Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			Prerequisites
4	35741	ITEC202	Operating Systems	AC	(3,2,0)	4	6	ITEC255
4	35742	ITEC224	Database Programming	AC	(3,2,0)	4	6	ITEC212
4	35743	ITEC230	Rich Internet Application (RIA) Development	AC	(3,2,0)	4	6	ITEC229
4	35744	ITEC243	Object Oriented Programming	AC	(3,2,0)	4	6	ITEC114
4	35745	ITEC259	Digital Logic Design	AC	(3,2,0)	4	6	

Junior Year – First Semester								
Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			Prerequisites
5	35751	ITEC309	Computer Networks - I	AC	(4,0,0)	4	7	
5	35752	ITEC315	System Analysis and Design	AC	(3,2,0)	4	8	
5	35753	ITEC327	Server-Side Internet and Web Programming	AC	(3,2,0)	4	6	ITEC230, ITEC212
5	35754	MATH211	Introduction to Statistics	AC	(3,0,1)	3	6	
5	35755	UE-02	University Elective - II	UE	(3,0,0)	3	3	

Junior Year – Second Semester								
Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			Prerequisites
6	35761	ITEC310	Computer Networks - II	AC	(3,2,0)	4	7	ITEC309
6	35762	ITEC314	Multi-Platform Programming	AC	(3,2,0)	4	7	ITEC243
6	35763	ITEC316	Software Engineering	AC	(3,0,1)	3	7	ITEC315
6	35764	ITEC317	Ethical and Social Issues in Information Systems	AC	(3,0,0)	3	3	
6	35765	AE-01	Area Elective I	AE	(3,0,1)	3	6	

Senior Year – First Semester								
Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			Prerequisites
7	35771	ITEC400	Summer Training	AC	(0,0,0)	0	1	
7	35772	ITEC403	Graduation Project Orientation	AC	(1,0,0)	1	3	
7	35773	ITEC413	Information System Security	AC	(3,2,0)	4	6	
7	35774	ITEC415	Analysis of Algorithms	AC	(3,0,1)	3	6	
7	35775	ITEC421	Management Information Systems	AC	(3,0,1)	3	6	
7	35776	AE-02	Area Elective - II	AE	(3,0,1)	3	6	
7	35777	AE-03	Area Elective - III	AE	(3,0,1)	3	6	

Senior Year – Second Semester								
Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			Prerequisites
8	35781	ITEC404	Graduation Project	AC	(3,0,0)	3	6	ITEC403
8	35782	AE-04	Area Elective - IV	AE	(3,0,1)	3	6	
8	35783	AE-05	Area Elective - V	AE	(3,0,1)	3	6	
8	35784	AE-06	Area Elective - VI	AE	(3,0,1)	3	6	
8	35785	UE-03	University Elective - III	UE	(3,0,1)	3	3	

AC = Area Core AE = Area Elective FC = Faculty Core UC = University Core UE = University Elective

Non-Turkish speaking students should take: TUSL181

Turkish speaking students should take: HIST280

When taking courses you must realize that some courses are pre-requisites to others, and therefore, you must take some courses earlier in your academic program. For example before you can take ITEC114, you must pass (or get an exemption for) ITEC113. Therefore we say that ITEC113 is a pre-requisite of ITEC114.

In the first two years, the focus is on introducing you to information technology and laying out a foundation for specialization. Therefore, the majority of prerequisite chains start in the first and second years.

Figure 1 shows the pre-requisite chains in the IT curriculum. Please take the pre-requisite relationships into account when designing alternative course schedules for yourself. Naturally, if you follow the posted IT curriculum you will not encounter any pre-requisite problems.

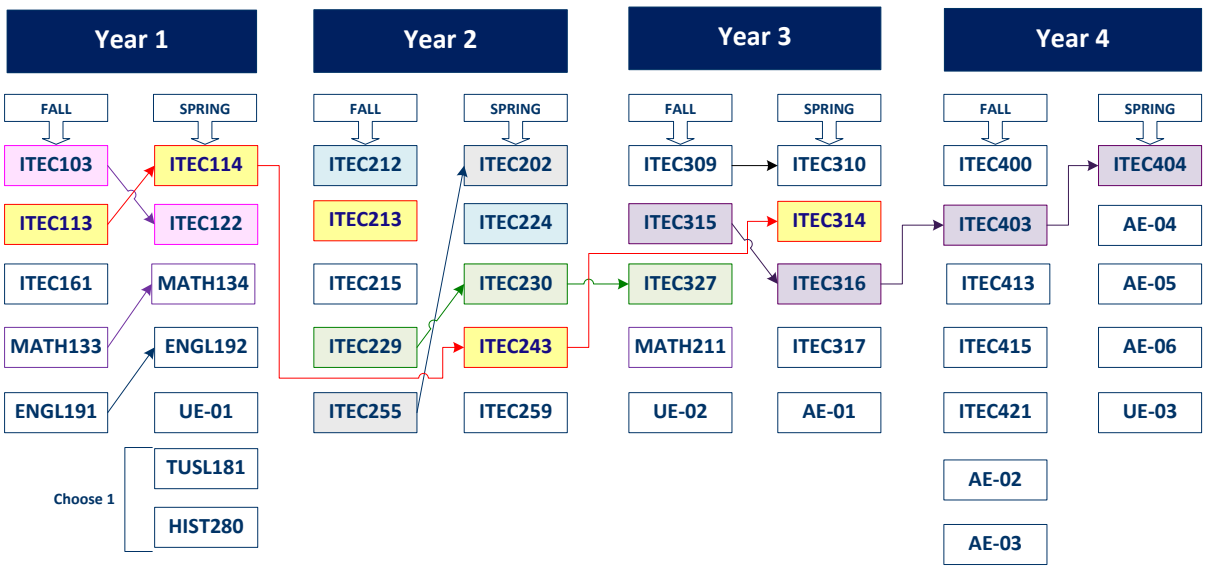

Figure 1. Pre-Requisite Chains in the IT curriculum.

Structure of the IT curriculum

All area courses of the IT curriculum are designed to allow experiential learning through the integration of intensive, hands-on activities built into the courses and through the two semester long graduation project completed in the final year of study.

The degree of BS in IT requires three categories courses: required support courses, required core courses and elective specialization track courses. Required support courses include two semester long graduation project as well as summer training. The program allows students to specialize in one of the two IT tracks via elective courses.

1) Software Development Track

This track intends to provide students with a solid foundation and up to date skills related to software application development.

2) **Web Applications Track**
This track provides hands on experience and a solid foundation for developing effective, interactive and data-driven web based applications.

As a student successfully proceeds through their required support and core courses, they are expected to select from one of two specialization tracks. These tracks will provide the student with an opportunity to explore, in depth, a specific area of information technology. Students take 4 of the 6 area elective courses from the track they wish to specialize in. For the remaining 2 area elective courses, they can take courses from the other track or from the free area electives.

Required Support Courses

The IT major requires the following support courses to provide the students with communication skills, mathematics and IT background as well as social and humanities knowledge deemed appropriate for Information Technology graduates. These courses form 11% of the curriculum in terms of EMU credits. The following are the required support courses:

ENGL191 Communication in English I

ENGL192 Communication in English II

MATH133 Basic Mathematics

MATH134 Discrete Mathematics for Information Technology

MATH211 Introduction to Statistics

Required Area Core Courses

The IT major also requires that students complete core courses to provide a sufficiently broad exposure to the key areas of information technology such as hardware, software development, web design, systems analysis and design, networks and applications. These courses including capstone project and summer training requirement form 66% of the curriculum in terms of EMU credits. The following are the required area core courses:

ITEC103 Information Technology Fundamentals

ITEC113 Algorithms and Programming Techniques

ITEC114 Structured Programming

ITEC122 Introduction to Multimedia

ITEC161 Introduction to Business

ITEC202 Operating Systems

ITEC212 Database Management Systems

ITEC213 Data Structures and Applications

ITEC215 Human Computer Interaction

ITEC224 Database Programming

ITEC229 Client- Side Internet and Web Programming

ITEC230 Rich Internet Application (RIA) Development

ITEC243 Object Oriented Programming

ITEC255 Computer Organization and Architecture

ITEC259 Digital Logic Design

ITEC309 Computer Networks I

ITEC310 Computer Networks II

ITEC314 Multi-Platform Programming

ITEC315 System Analysis & Design

ITEC316 Software Engineering

ITEC317 Ethical and Social Issues in Information Systems

ITEC327 Server Side Internet and Web Programming

ITEC413 Information System Security

ITEC415 Analysis of Algorithms

ITEC421 Management Information Systems

General Knowledge Courses

Apart from the required support and area core courses, 10% of the curriculum includes 3 university elective courses and the two courses listed below:

TUSL181-Turkish as a Foreign Language / HIST280-History of Turkish Reforms

Area Elective Courses

The remaining 13% of the curriculum is made up of the 6 Area Elective courses as discussed in Requirement 2.

IT Summer Internship

The IT curriculum requires the students to work for duration of 40 days in the IT sector under the supervision of an IT professional as part of the ITEC400 Summer Training requirement of the curriculum. During the academic semester immediately following the summer training period, the student submits a log book, a report and takes an oral examination. The log book contains an entry for each day of the summer training describing the tasks performed by the student as well as the supervisor's evaluation of the student's performance during the summer training period. If all these requirements are satisfied, the students receive a PASS grade for summer training. For detailed information visit http://sct.emu.edu.tr/it/itec400.

IT Capstone Project

As part of the mandatory core of the IT curriculum students work on a two semester long graduation project as their capstone project. Students work on all phases of an IT project under supervision of an academic staff member as part of a team. The first Course ITEC403 is a one-credit course where the students normally concentrate on requirements gathering, analysis and system analysis and design phases. At the end of the semester the students submit their preliminary graduation project report to the graduation project committee and also fulfill other requirements such as attending or

giving presentations or taking oral examinations as announced by the graduation project committee.

For the ITEC404 Graduation project grade, in addition to the advisor's mark, each team is required to present the finished product in front of a jury. Additionally each product is evaluated by at least two of the three technical committees for database design and implementation, programming design and implementation and multimedia techniques and applications used in the project. Detailed information on the graduation project including the members and chairperson of the graduation project committee can be found at the graduation project website at http://sct.emu.edu.tr/it/itec403. The following are the graduation project courses:

ITEC403-Graduation Project Orientation, ITEC404-Graduation Project

Specialization Tracks

The core courses provide the student with a solid foundation in the IT field. Normally after two years of study in the department, the students are mature enough to choose a specialization track. Currently the IT program offers two tracks: Software Development and Web Track. More tracks may be added in the future to accommodate the needs of the industry and students.

Practical as well as some theoretical courses are offered in each specialization field to equip the students with not only the practical abilities that will aid them in finding their first job but the theory necessary to endow them with the appropriate self-learning abilities.

Additionally some technical electives that do not fit into any of these categories are offered each semester in order to give the students the opportunity to broaden their views in the IT field.

Software Development Track

This track intends to provide students with a solid foundation and up to date skills related to software application development. The courses offered for this specialization in the recent years are listed below:

ITEC318 Visual Programming

ITEC319 Rapid Application Development

ITEC354 Programming Languages

ITEC419 Windows Application by .NET

ITEC420 Framework Based Internet Applications

ITEC422 Managing Systems Development Project

ITEC429 Extreme Programming

ITEC443 Cryptography and Network Security

ITEC474 Advanced Topics in Database Systems

ITEC499 Mobile Information Device Programming

BTBS393 Fundamentals of Character Modeling (medium of instruction: Turkish)

BTBS499 Mobile Application Development (medium of instruction: Turkish)

Web Applications Track

This track provides hands on experience and a solid foundation for developing effective, interactive and data-driven web based applications. The elective courses offered in recent years for the Web track are listed below:

ITEC420 Framework Based Internet Applications

ITEC422 Managing Systems Development Project

ITEC438 E-Commerce Applications

ITEC444 Web Site Management

ITEC447 WEB Projects

ITEC450 3D Modeling and Animation

ITEC456 Applied Animation Techniques

ITEC457 Advanced Animation Techniques & Project Development

ITEC466 Internet Client Server Application

ITEC474 Advanced Topics in Database Management

BTBS450 3D Modeling and Animation (medium of instruction: Turkish)

Free Area Electives

Free area electives provide students an opportunity to explore different areas of the IT field. The following are the free area elective courses offered in the recent years:

ITEC211 Renewable Energy Resources and Environment

ITEC267 Introduction to CAD

ITEC356 Introduction to Story Telling with Animation

ITEC412 Expert Systems

ITEC418 Advanced Spreadsheet Application for IT

ITEC423 Data Warehousing and Data Mining Applications

ITEC460 Introduction to Neural Networks

ITEC479 Fundamentals of Wireless Networking

REGISTERING FOR COURSES

Students must adhere to the exact registration renewal dates and deadlines as specified in the academic calendar announced by the Rector's Office which can be found at http://ww1.emu.edu.tr/en/academics/calendar/general/c/1379.

Each student in the Department is assigned an *Academic Advisor* who is usually a faculty member in the department and assists the student with matters related to scheduling, course selection, registration, and related matters as mentioned before. The list of advisors is posted in bulletin boards throughout the department as well as on the department web page http://sct.emu.edu.tr/it.

Although the advisor plays a key role in the student's progress through University studies, it is ultimately the student's responsibility to meet all University requirements, and it is the responsibility of the Office of the Registrar to ascertain and certify that these requirements have been met.

According to EMU by-laws, students must obtain their advisors' approval for the following transactions:

- registration,
- selection of core and elective courses,
- adding courses to their schedules,
- dropping courses from their schedules,
- withdrawing from a course.

These operations are normally initiated by the student using the student portal account and the advisor is notified to confirm via an automatic email message.

Registration Procedures

Immediately prior to the commencement of classes each semester, certain days are designated for formal registration, as indicated on the academic calendar. At this time, all newly admitted students are advised and given class schedules. Students must register for all *mandatory courses* offered in the regular semesters (Fall and Spring) of the first (freshmen) year.

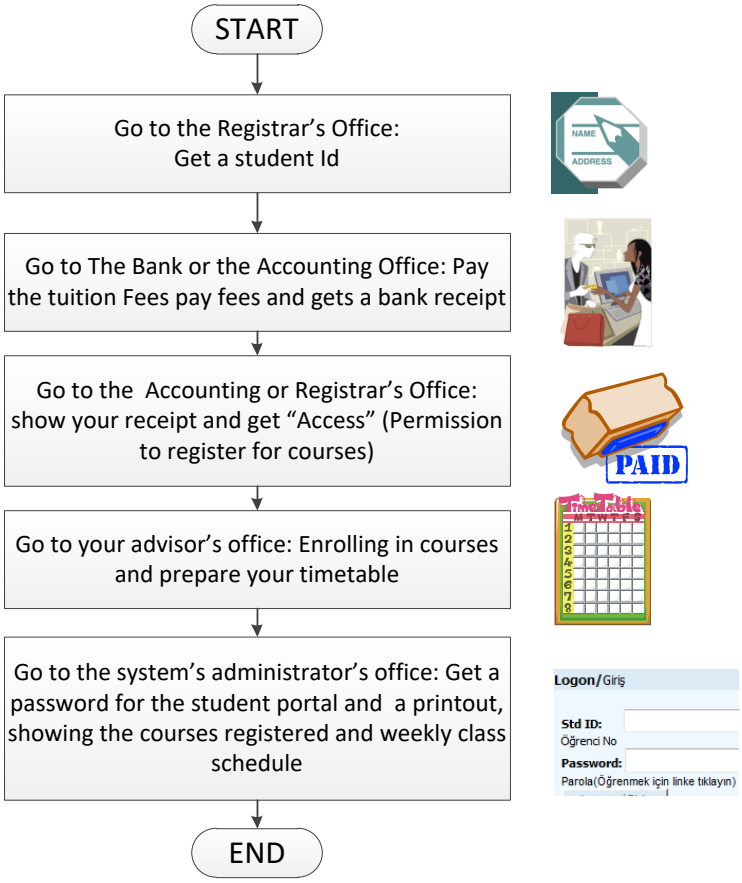

Figure 2. Registration Procedure

Adding new course/Dropping a registered course or Withdrawing from Courses

From the first day of the commencement of the classes until the deadline specified on the academic calendar, students are allowed to change their course schedule by adding a new course or dropping a registered course. Changing groups of a multi-group course is also performed by first dropping the current course group and adding the new course group.

In a semester, a student is allowed to withdraw from two registered courses at most, provided that the student does not get into part-time status. Course withdrawal should be done between the set dates specified on the academic calendar. A student who withdraws from a course will receive the grade 'W'. This grade is not taken into consideration during the calculation of the CGPA and the GPA, but appears on the transcript. A student cannot withdraw from

- a course that was withdrawn before,
- a course that is repeated (a different course with the same reference code) or
- a course that has no credit.
- any course if he or she is in the "Part-Time" student status.

Both add/drop and withdrawal operations must be initiated by the student using the student portal. Consequently, the academic advisor of the student receives a notification and confirms or rejects the requested change.

Other Course Registration issues

It is possible to take courses outside the registered program in addition to the courses required by the curriculum. These courses are not counted toward the graduation of the student. For further information see the rules and regulations for students at mevzuat.emu.edu.tr/Content-en.htm.

A student may be exempted from courses if equivalent coursework has been completed at other institutions approved by the registration office. The decision on the equivalency and competency is made by the transfer committee. Applications for exemptions should be made to the department coordinator. The maximum amount of exemptions is half of the total load in EMU.

Rules to take into account when registering for courses

The course registration system implements all the rules specified in the regulations and thus in many cases it is difficult to break the rules (accidentally or intentionally!) but you must be aware of the following rules when choosing your courses.

Prerequisite Courses

In the IT curriculum, there are some courses that you must pass before you take other courses. In such cases the course that you must take before taking another course is called pre-requisite course.

1) In order to register for a course that has a pre-requisite, a student must have obtained at least a D- grade from the related pre-requisite course.

2) Graduating students are allowed to register for courses with pre-requisites even if they score an 'F' grade from the pre-requisite course.

3) At all semesters (including the graduation semester), a prerequisite course and the course following it cannot be taken within the same semester if the prerequisite course has never been taken before or if the student obtained an (NG) or a (W) grade from it.

4) The School Council has the authority to take decisions concerning the requirements for prerequisite courses.

Repeating Courses

In some cases, a student may choose to or may be required to take courses that he or she has taken before. The following provisions are applied in repeating a course:

1) A student who obtains a (D-), (F), (NG) or (U) grade from a course must register for the course at the next available opportunity.

2) If the course to be repeated is an elective or has been excluded from the program, the student is required to take another appropriate course specified by the Department.

3) If a student wishes to improve his/her previously obtained grades, s/he can repeat a course in which he previously passed.

The grade obtained from the repeated course takes the place of the previous grade. However, the first grade still appears on the transcript.

Course Selection

Even though ideally, the students are expected to take the courses in the order they appear in the official IT curriculum, during the registration process, there will be a number of courses that can be chosen. Priorities in course selection are as follows:

1) Courses with (F), (NG), (U) or (D-) grades.
2) Courses of previous semesters that have not been taken yet.
3) Courses of the current semester that have not been registered yet.
4) Other appropriate courses.

Registration of Students on Probation or Students with Academic Warnings

1) Registration of Students with the First Academic Warning or Students on Probation

   Students who receive the first academic warning or who are on probation are obliged to repeat failed courses before registering for the new ones. These students are allowed to register for two new courses at most, on the condition that they do not exceed normal course load. (Students who wish to register in summer school or who have the part-time status are allowed to register only for one new course). A student who receives the first academic warning is not allowed to register for a new course if the number of offered previously taken courses with (D-), (F) or (NG) grades fulfill his/her load. Previously registered courses with (W) grades are considered as new courses.

2) Registration of Unsuccessful Students or Students with the Second, Third and 'Final' Warning.

These students will not be allowed to register for a new course. During registration, these students must first register in the courses from which they received the grades: F, NG or D-. However, in the case that the courses from which (F), (NG) or (D-) grades were obtained are not offered, or the student's course load being under the specified limit, the student can repeat courses from which a (D), (D+) or (C-) grade was obtained until the normal course load is met. Courses with (W) grades are considered as new and cannot be registered.

Late Registration

Late registration is possible during the period specified in the academic calendar. Late registration fees are determined by the Rectors' office in accordance with the principles set concerning this issue.

ACADEMIC EVALUATION

Examinations

For each course, a minimum of one midterm examination, a final examination, and any number of quizzes/tests are held. The detailed outlines of each course which also include information on the grading system and the relative weights of the examinations are posted at http://sct.emu.edu.tr/IT. Final examinations are held at least three days after termination of classes.

The Registrar of the University prepares and announces a schedule of examinations, for both final and midterm exams, well before the examination period designated for each term. To the greatest extent possible, the number of students with multiple examinations on a single day is reduced to the lowest figure. Individual conflicts that may arise from the schedule should be reconciled with the assistance of the course instructor. An alternative to an examination may be employed for certain courses with the approval of the Department Coordinator.

End-of-Course Grades and Grade-Points

Twelve categories of scholastic achievement, ranging from "superior" to "failure" (A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F), are recognized as *valid end-of-course grades*. These grades are indexed on a scale of "0.00-4.00" and termed *Grade-Points*. Five other symbols, (W, I, NG, S, U) are used.

A grade of "W" is used to indicate official withdrawal from a course not later than the eleventh week in a regular semester. A "W" grade has no effect on scholastic computations. A student's eligibility for a "W" grade is forfeited if, at the time of intended withdrawal, his/her unexcused absences exceeded one fifth of the total lecture or laboratory meetings to date. "W" (withdrawn), indicates withdrawal from a course before the end of a term.

The "I" grade is a temporary reporting symbol, indicating that the student is authorized additional time to submit or complete work. The student must have presented an academically acceptable explanation to his/her instructor stating why the work was not completed within the time limit specified by the instructor. The symbol

"I" (incomplete) is employed temporarily in lieu of an academic grade until a formal grade is reported. If the "I" grade is not changed by the course instructor before the deadline announced on the academic calendar, it is converted to F.

Achievement in a non-credit-hour course is indicated by the symbols "S" (satisfactory) or "U" (unsatisfactory).

The "NG" grade is given if students do not participate in coursework. A student is considered not participating in class work if he/she has high absenteeism during lecture and/or tutorial (lab) hours or he/she habitually do not submit the classworks and/or homework assigned by his/her lecturer. At the beginning of each semester, every lecturer will make clear the conditions that may cause a student to receive an NG grade in his/her particular course. In addition to special rules announced by the course instructor at the beginning of the term, in the IT department more than 40% absenteeism or missing all exams results in the "NG" grade.

A course is said to have been *successfully* completed if a student in any scholastic status, except dismiss, obtains a grade of A, A-, B+, B, B-, C+, C, C-, D+, D or S. A course in which a student receives a grade of D-, F, NG or U is not considered to have been satisfactorily completed, and the student is required to *repeat* such a course in the next semester that it is offered.

In the case of repeated coursework, the last grade earned is considered the official course grade.

The letter grades are indexed to Grade-Points equivalents as shown in Table 1 below.

Table 1. End-of-Course Grades and Grade-Points

A	4.0	Superior Pass in a credit-course
A-	3.7	Very Good Pass in a credit-course
B+	3.3	Good Pass in a credit-course
B	3.0	Good Pass in a credit-course
B-	2.7	Pass in a credit-course
C+	2.3	Pass in a credit-course
C	2.0	Pass in a credit-course
C-	1.7	Conditional Pass in a credit-course
D+	1.3	Conditional Pass in a credit-course
D	1.0	Conditional Pass in a credit-course
D-	0.7	Failure in a credit-course
F	0.0	Failure in a credit-course
NG	0.0	Failure in a credit-course due to disinterest of the student
S	*	Satisfactory (Pass in a non-credit-course)
U	*	Unsatisfactory (Failure in a non-credit-course)
W	*	Withdrawal from a course
I	*	Incomplete (work with excuse, grade to be given later)

* No grade-point equivalent is assessed for the notations I, W, S, and U.

Credit Earned

A student earns a credit based on the level of his/her achievement in a course. The *credit earned* is the product obtained by multiplication of the "Credit-Hour" and the "Grade-Point" obtained from a course.

The Grade-Point Average (GPA) and Cumulative Grade-Point Average (CGPA)

A student's academic achievement for each term is expressed numerically by an index referred to as the *Grade Point Average* (GPA). The GPA is obtained by:

1) calculating credit earned for each course;
2) adding these results for all courses in the term to obtain the total credits;
3) dividing the total credits by the total credit-hours attempted.

The GPA so obtained can range from 0.00 to a maximum of 4.00. A student's GPA is calculated and reported to two decimal places.

A student's overall academic achievement is expressed numerically by an index referred to as the *Cumulative Grade-Point Average* (CGPA). The CGPA is obtained by:

1) adding credits earned in each term completed;
2) adding credit-hours attempted in each term completed;
3) dividing the total credits earned by the total credit-hours attempted.

When a course is repeated, the last credit earned and, if changed, the new credit-hour, are substituted in place of the previous values.

Example:

A first year IT student gets the following grades during his/her first semester:

Ref. Code	Course Code	Credit Hour	Course Grade	Grade Point	Credit Earned
35711	ENGL191	3	A-	3.7	11.1
35712	ITEC103	3	B	3.0	9.0
35713	ITEC161(*)	3	D-	0.7	2.1
35714	ITEC113(*)	4	F	0.0	0.0
35715	MATH133	+ 3	C+	2.3	+ 6.9
		16			29.1

Note that the courses marked with (*) must be repeated in the next semester since it has not been satisfactorily completed.

The Grade point average is calculated as follows:

GPA = 29.1/16 = 1.81

This GPA is classified as Unsatisfactory as it is below 2.00/4.00. Since it is the first semester of the students, GPA and CGPA are the same. Unsatisfactory GPAs may require students to repeat courses according to the rules specified below.

Now, in the second term in the university, the student will be repeating ITEC161 and ITEC113 and registers to 3 other courses. Assume the student gets the following grades at the end of the second semester:

Ref. Code	Course Code	Credit Hour	Course Grade	Grade Point	Credit Earned
35713	ITEC161	3	D-	0.7	2.1
35714	ITEC113	4	C	2.0	8.0
35721	ENGL192	3	A	4.0	12.0
35722	MATH134	4	A-	3.7	14.8
35725	ITEC122	+ 3	A	4.0	+ 12.0
		17			48.9

At the end of the second semester GPA calculation is as the previous case. The summation of all credits earned is divided by the summation of all credit hours. Therefore for the second semester the GPA calculation is as follows:

GPA = 48.9/17 = 2.87

The CGPA calculation is a little bit more complicated. All courses taking by the student upto the said semester must be taken into account. But for the repeat courses, only the last grade should be used. The formula for CGPA calculation is:

CGPA = Total Credits Earned / Total Credit-hours Attempted = 75.9/33 = 2.30

where the Total Credits Earned is calculated as:

Total Credit-hours Attempted =
Total Credit-hours Attempted in the First and Second Semester
–
Total Credit-hours of Repeated Courses in the Last Semester = 33

and the Total Credit-hours Attempted are determined as:

Total Credits Earned =
Total Credits Earned in the First and Second Semesters
-
Previous Total Credits Earned from Repeated Courses = 75.9

This example also points out the importance of re-registering as soon as possible to courses from which student has failed, as the sooner he/she improves those grades the sooner he/she will improve his/her CGPA by nullifying the effect of the failing grades on CGPA and thus stay out of trouble.

Correction of Grades

A student who feels strongly that he/she has received an in-term grade that is improper may file a formal appeal if the problem cannot be resolved by the course instructor.

The student must discuss the matter with the instructor of the course within three days of the announcement of grades. If, following discussion with the instructor,

the student still feels that the grade is improper or unfair, he/she may, within the following three days, present the case to the Department coordinator in writing. The appeal is considered by a committee appointed by the Department coordinator, and a decision is reached within one week of receipt of the appeal; this decision is final.

If end-of-course grades are in question, then the time limit for a student to discuss the matter with his/her instructor is extended until the last day of registration for the following semester. Once recorded in the Office of the Registrar, grades may be corrected only if a written statement is submitted to the Registrar by the instructor and approved by the Department concerned, certifying that the first reported grade is in error.

Scholastic Status

Success rate in undergraduate for students who register in 2007-08 academic year and after is as follows:

1) Every student's success status is determined at the end of each semester, by calculating their GPA and CGPA. GPA and CGPA is calculated each semester according to the University rules, where each letter grade has a coefficient value, with two (2) decimal places (e.g. 2.33).
2) The student is counted successful, if his GPA and CPGA is 2.00 or above.
3) "Honor" degree is granted to a student, with a normal course load, whose GPA is in between 3.00-3.49 while "High Honors" degree is granted to a student, with a normal course load, whose GPA is in between 3.50 and above.
4) "Active Academic Term" refers to each fall and spring semester program which the student is registered in, except for the period the student is registered in the English Preparatory School.

End of Active Academic Term (EAT)	Successful Student	Students on Probation	Unsuccessful Student
2nd EAT	CGPA≥1.50	1.00≤CGPA<1.50	CGPA<1.00
3rd EAT	CGPA≥1.50	1.00≤CGPA<1.50	CGPA<1.00
4th EAT	CGPA≥1.50	1.00≤CGPA<1.50	***
5th EAT	CGPA≥1.80	1.50≤CGPA<1.80	CGPA<1.50
6th EAT	CGPA≥1.80	1.50≤CGPA<1.80	CGPA<1.50
7th EAT	CGPA≥1.80	1.50≤CGPA<1.80	CGPA<1.50
8th EAT	CGPA≥2.00	1.80≤CGPA<2.00	CGPA<1.80
*** Students who complete, at least, their first 4 academic terms (in terms of the 4th academic term being a spring term, end of summer session) with the cumulative grade point average (CGPA) below 1.00, they will be dismissed from their present program.			

5) Students, registered to an undergraduate program, whose CGPA lies between the limits in the above table, will be respected as "Successful", "On Probation" or "Unsuccessful" student.
    a. A student "on probation" will receive a special attention and be treated as follows: The semester following the "on probation" status, a student may take at the most two new courses. The student, therefore will also be asked to repeat the courses which he/she had already taken in the

previous semesters and received the grades F, NG, D- and/or if necessary, the ones with the grades D, D+ or C-.

b. A student whose status is "Unsuccessful" will receive a special attention and be treated as follows: The semester following the "unsuccessful" status, the student will be asked to repeat courses already taken in the previous semesters, only. These students are not allowed to register for any new courses. The courses with F, NG, and D- grades are to be repeated first. The student may also be asked to repeat courses which he/she already completed with D, D+, and C- grades.

6) If a student is transferring from another University to EMU or from another program within EMU, the transferring term will count as the student's Academic term. However, they will be treated as a satisfactory student at the end of the first Academic term in the new program.

7) Each term the student is away from the University counts as an academic term, according to the student exchange program.

8) The student's upcoming semester courses are revised by the Course Registration Regulations, depending on the student's current success rate.

9) According to the Law and Regulations, each student studying in a 4-year program must complete their education within 8 years. Leave of absence period does not count towards the education duration. In case of a student exceeding this period, the University will be able to dismiss the student. However, this period can be extended if the student is in the graduating term and has fulfilled some vital conditions. The extended period and applicable laws will be revised and organized for the student according to the "Course Registration Regulations".

GRADUATION

A student is entitled to graduate if he/she:

1) Satisfactorily completes all required courses, laboratory studies, reports and summer training; and
2) Attains a sum of credit-hours amounting to at least the minimum required for graduation. If at the time of his/her graduation a student has achieved a CGPA of 3.00 or greater, this will be indicated on his/her graduation Diploma and official transcript as follows: students with a CGPA in the range 3.00-3.49 "Honors"; students with a CGPA in the range 3.50-4.00 "High Honors."

Graduation is conferred by the University Senate upon the request of Faculties and Schools. The Diplomas are prepared by the Office of the Registrar, and describe the name of the program, the date of graduation, and the degree obtained.

ADDITIONAL REGULATIONS

Attendance Requirements

The University believes that the benefits of academic studies come not only from independent study and the preparation of materials for formal grading, but also from participation in class and laboratory activities. Regular attendance of EMU students is therefore required in all courses for which they are registered. University regulations do not permit unexcused absence or tardiness.

For flagrant violation of the spirit of regular class attendance, an EMU faculty member may report an "NG" grade whenever unexcused absences are excessive. Such action may be taken when the number of unexcused absences exceeds 20% of the total class/laboratory hours scheduled for the course.

You should be aware that your course grades can be adversely affected through absence, whether excused or unexcused.

Leave of Absence

A student, who has a compelling excuse for having a break from University studies for a period of time, may appeal for leave of absence. This period may not exceed four semesters during a course of study for a degree. Appeals are made in writing to the Chair of the Department at the beginning of each semester and are considered within five weeks of the commencement of classes. Medical cases are dealt with separately. Permission for leave of absence must be approved by the Office of the Rector upon request by the Director of the School of Computing and Technology.

Withdrawal from the University

A student who finds it necessary to withdraw from the University must initiate withdrawal procedures with the Office of the Registrar. The official withdrawal procedure requires that the student obtain clearances from the Registrar, the Library, the Bookstore, the Student Housing, and the Accounting Department.

Student Transcript of Academic Record

At the end of each semester, the EMU student is provided with a copy of his/her academic record. The accuracy of these records is of the utmost importance, and errors or suspected errors should be brought to the immediate attention of the Registrar. This record is issued for the information of the student, and should not be submitted as an official college record to individuals, institutions, or agencies outside the University.

An official transcript of a student's entire academic record will be provided upon submission of a written request from the student to the Registrar. The official transcript will be mailed by the Registrar to the intended recipient and cannot be handed directly to the student. Neither grade reports nor transcripts will be furnished to any outside agency without a written request from the student. Every official transcript issued by the University must be complete and unedited; the University will not certify partial academic records.

Summer Sessions

Summer Sessions are organized mainly to help students with low scholastic achievement. Nevertheless, courses offered during the summer sessions are open to all students and successful students who wish to graduate sooner than 8 semesters will also take summer courses. These sessions are normally held before the Fall semester and form periods of intensive study which last for eight weeks.

A student may register for summer course through the registration procedure outlined above for a normal term. The scholastic achievement is graded in the same way and included in the CGPA calculations at the end of the summer session.

DEPARTMENTAL COMMITTEES

Curriculum Committee: The main responsibility of this committee is to update the curriculum according to the latest developments in the IT field and to ensure the quality of the course contents and also to facilitate the coordination of the courses.

Graduation Project Committee: This committee ensures the suitability of the proposed graduation projects according to the departmental standards and also acts as an examining committee for the graduation projects.

Transfer Committee: This committee is responsible from evaluating and accepting transfer applications as well as giving exemptions according to departmental by-laws and the approval of the summer school courses taken outside of EMU.

Graduation Committee: At the end of every semester students that are expected to graduate are determined by this committee.

Summer Training Committee: This committee coordinates and evaluates the 40-day summer training requirement.

Quality Management Committee: The Quality Management committee is responsible for Quality planning, Quality Control, Quality Assurance and Quality Improvements.

IT STAFF

Administrative Staff

Name	Surname	Office No	Phone No	
Mustafa	İlkan	203	1246	Director of School Of Computing and Technology
Cantaş	Özerek	103	1141	Vice-Director of School Of Computing and Technology
Hasan	Oylum	213	1671	Coordinator of IT
Raygan	Kansoy	107	1131	Vice-Coordinator of IT
Şifa	Aktuğlu	200	1245	Secretary
İsmail	Serinova	009B	2880	Administrator

Full-Time Instructors

Name	Surname	Office No	Phone No	
Ahmet	Rizaner	106	2480	
Akile	Yuvka	114	1183	Coordinator of Computer Programming
Ali Hakan	Ulusoy	118	2881	Vice Director, Institute of Graduate Studies and Research
Birol	Özkaya	115	1660	
Cem	Yağlı	109	1137	
Emre	Özen	108	1358	Chairperson of Summer Training Committee
Esen	Ertunga	210	1536	
Halide	Sarıçizmeli	111	1661	
Husnü	Bayramoğlu	123F	2894	
Nazife	Dimililer	206	1034	
Şebnem	Çoban	117	1661	Chairperson of Transfer Committee
Yeşim	K. Çırak	216	2310	

Part-Time Instructors

Name	Surname	Office No	Phone No
Belma	Korkuter	207	1670
Cihan	Ünal	100	1662
Eralp	Görkan	208	1582
İsmet	Salihoğlu	207	1670
Pınar	Şahin	207	1670
Şensev	Alicik	110	1665
Atalay	Talaykurt		
Yeliz	Kumser	206	1669
Zafer	Yuca	208	1582

Technical Staff

Name	Surname	Office No	Phone No
Ersan	Güven	225	1672
Huriye	Y. Özcanlı	009A	1585

COURSE DESCRIPTIONS

ITEC103 - Information Technology Fundamentals
This course is an introduction to the world of Computing and Information Technology (IT). Today, we are all part of an exploding Information Society and in this dynamic new society people at homes, schools, institutions and businesses are engaged in an ever- growing partnership with computers. Computers and Information Technology are part of just about everything we do at work and at home. And the fact is that, computers will play an even greater role in our lives in the years to come. The course presents the basic description of information technology concepts, basic computer system hardware and software components, common terminology in information technology, application areas, and integration of computer system components.
ITEC113 - Algorithms and Programming Techniques
This course is the first ring of the chain of Algorithms and Programming courses aiming to introduce students to the manner of thought in programming. The course aims to give an introduction to problem solving techniques and programming using structured programming approach. The applications will be performed using C language. The course will provide the students with the programming and analytical foundations that will be used in all consecutive IT related courses. One of the main objectives is to endow the student with critical thinking skills in programming. In the first part of the course, students earn the required skills about the thought of programming using flowcharts and pseudo-code. In the second part, a general purposed programming language, C, is being taught to the students in order to fortify their programming skills.
ITEC161 - Introduction to Business
This course is designed to develop knowledge and understanding of the environment in which business activity takes place such as the way in which changes in that environment influence business behavior, the major groups and organizations within and outside business, the role and purposes of business activity in both the private and the public sector, the ways the main types of business and commercial activities are organized, financed and operated, how business relations with other organizations, consumers, employees, owners and society are regulated.
MATH133 - Basic Mathematics
Equations and inequalities; solving first degree equations in one variable, solving second degree equations in one variable, quadratic formula, inequalities and their solutions, absolute value relationship. Exponential and logarithmic functions and their properties, exponential and logarithmic functions with base e. Function, domain and range, types of functions; linear, quadratic, polynomial functions, graphs of linear and quadratic. Matrix algebra: Operations on matrices; addition, subtraction, transpose of matrices, scalar multiplication, determinants, cofactors, cofactor matrices, adjoin matrix, inverse matrix, elimination method, Cramer's rule. Differentiation: limits, limit properties, the derivative, rules of differentiation, first derivative test, increasing and decreasing functions, higher order derivatives, second derivative test, concavity, curve sketching. Functions of several variables: Bivariate functions, partial derivatives, extreme of functions, Lagrange multipliers. Integral calculus: rules of integration, substitution technique, definite integral, applications of definite integral.
ENGL191 - Communication in English - I
ENGL 191 is a first semester freshman academic English course. It is designed to help students improve the level of their English to B1 level, as specified in the Common European Framework of Reference for Languages. The course connects critical thinking with language skills and incorporates learning technologies such as Moodle. The purpose of the course is to consolidate students' knowledge and awareness of academic discourse, language structures and lexis. The main focus will be on the development of productive (writing and speaking) and receptive (reading) skills in academic settings.

ITEC114 - Structured Programming
This course is a continuation of the study on the concepts of programming structures with main emphasis on one and two dimensional arrays, functions, files processing, pointers, characters and strings, fundamental concepts of data structures including stacks, queues, link list, trees, sets, and graphs.
ITEC122 - Introduction to Multimedia
This course aims to introduce the basic multimedia elements namely text, sound, image, video, animation, and to show how to sew these elements together to produce a multimedia project using the current computer technology. It is also designed to provide students with the knowledge of the hardware/software and file types involved in multimedia technology. Upon successful completion of the course, students should be able to understand the major media elements in detail; gain experience of some commercially used multimedia software; develop good-quality multimedia products.
MATH134 - Discrete Mathematics for Information Technology
This course introduces the fundamental techniques in Discrete Mathematics for the application in information technologies. Topics include mathematical induction, set theory, prepositional calculus (Logical operations, Truth tables), relations (graphical representation of relations, matrix representation of relations, properties of relations, composite relations, and inverse relations), Boolean algebra, graphs, trees, basic counting arguments, and discrete probability.
ENGL192 - Communication in English - II
ENGL 192 is a second semester freshman academic English course. This course is designed to further help students improve their English to B2 level, as specified in the Common European Framework of References for Languages. The course aims to reconsolidate and develop students' knowledge and awareness of academic discourse, language structures, and critical thinking. The course also incorporates use of technologies on MOODLE that will promote self-study and Microsoft computer skills. The course will focus on reading, writing, listening, speaking and introducing documentation, and will also focus on presentation skills in academic settings.
TUSL181 - Turkish as a Foreign Language
The aim of this course is to introduce the Turkish language to students with no or a little knowledge of Turkish. The course incorporates all four language skills (reading, writing, listening, speaking) and covers basic grammar, vocabulary and pronunciation. The topics covered are part of the syllabus for level A1 of the Common European Framework of Reference for Languages.
HIST280 - History of Turkish Reforms
The aim of this course is to teach students under what conditions the Republic of Turkey was established; to make students understand the principles of Ataturk's reforms; the phases of the Reforms; Ataturk as a military hero and a statesman; Ataturk's concept of nationalism that defies racism; Ataturk's attempts to maintain global peace based on causes and effects; the relations between the Turkish Republic and the establishment of the Turkish Republic of Northern Cyprus; Turkish Cypriot years of national strife. This is a general education course
ITEC212 - Database Management Systems
This is an introductory course in Database Management Systems. The main aim of the lectures is to teach students how to model the data at the conceptual level and finally implement the model in SQL. The emphasis of the lectures is on practical aspects of data modeling such as creating entity relationship diagrams and normalization. SQL is taught in the laboratories using Oracle. Lab work is designed to teach SQL and in particular Select statement in depth.

ITEC213 - Data Structures and Applications
This course is designed to cover the basic block structures of the C language and data structure. Pointer, structure, linked lists, stacks, queues, and tree topics will be introduced and discussed with examples. Upon completion of this course, the student should understand how to create and manipulate stacks, queues, and binary trees. Also student will discuss each of the major types of data structures and implement programs that create and manipulate these data structures.
ITEC215 - Human Computer Interaction
The purpose of this course is to provide students with an understanding of human computer interaction concepts and theories. It mainly focuses on how human perceives and interacts with computers. Upon successful completion of the course, students will become aware of a great variety of interaction techniques, and also acquire the ability to apply the correct principles in the process of designing graphical user interfaces.
ITEC229 - Client-Side Internet and Web Programming
This course focuses on the client-side of web-application development. The course provides an overview of the history and the development of the Internet and World Wide Web. It is an introduction to the technologies and tools used for searching & programming the web. Key topics include eXtensible HyperText Markup Language (XHTML) & HyperText Markup Language (HTML) - as the primary language of the web, Cascading Style Sheets (CSS) – for styling the web, and JavaScript – as the most popular language for client-side scripting. Upon completion of the course, students will have acquired the tools and skills necessary to design develop and implement interactive web sites.
ITEC255 - Computer Organization and Architecture
This course covers basic topics about computer architecture and organization. The course provides the study of the structure, characteristics and operation of modern day computer systems including a basic background on the computers evolution, its design process and its internal characteristics which includes processor components, control unit architecture, memory organization and system organization.
ITEC202 - Operating Systems
This course is an introduction to the basic concepts of operating systems, with both theoretical and practical issues being considered. Upon completion of the course, the student should understand the fundamental concepts and issues involved in operating systems design, and know about the basic services provided by operating systems in general. Topics include process description and control, deadlock, process scheduling, threads, SMP, partitioning, paging, segmentation, memory management algorithms, disk scheduling and file systems. In addition to theory and concepts, specific implementation related information is covered using the Linux Operating System.
ITEC224 - Database Programming
This course is the second database course in the curriculum. Information Management Concepts such as data quality, accuracy, timeliness, backup/recover, business rules, reengineering, data integration and data organization architecture, replication, data are introduced. Details of the conceptual and logical database design procedure for an enterprise level database, advanced concepts in database design and implementation from the programming perspective are studied in detail in the lectures. Common problems and their solutions, security and access considerations in database design are covered. Tasks related to managing the database environment are also discussed. Object Based and XML databases and related query languages are introduced. The labs cover efficient use of SQL for complicated tasks and teach a 3GL database language. The main topics of the laboratory applications are: use of triggers, stored procedures and functions for efficient and more secure implementations of database applications.

ITEC230 - Rich Internet Application (RIA) Development
This course focuses on technologies for building Rich Internet Applications (RAIs). Throughout the semester enhancing static web applications by providing dynamic and interactive content using JavaScript will be discussed. Topics include JavaScript basics, JavaScript language as object-based language, Interacting with the User through HTML forms, Programming the Browser, Document object Model (DOM), Framework JQuery and Asynchronous JavaScript and XML (AJAX).
ITEC243 - Object Oriented Programming
Main objective of this course is to teach students object oriented programming techniques using C++ programming language. Main topics covered include: classes and objects, data abstraction and encapsulation, information hiding, composition, inheritance, templates, function overloading, operator overloading, friend functions and classes, and dynamic memory allocation.
ITEC259 - Digital Logic Design
Digital logic design is concerned with the design of digital electronic circuits which are employed in the design and the construction of the systems such as digital computers and many other applications that require digital hardware. The course presents the basic tools for design of digital circuits and provides the fundamental concepts used in the design of digital systems.
ITEC309 - Computer Networks - I
This course provides a broad introduction to the fundamentals of computer networks with focus on the functions performed at each layer of the network architecture and common layer protocol standards. Upon completion of the course, students develop an understanding of the general principles of networking. The content of the course is based around the Internet Model (TCP/IP) which deals with the major issues in the bottom two (Physical, Data Link) layers of the model. Specific attention is given to the introductory concepts of networking, principles of network architecture and layering, telecommunication aspects of physical layer, transmission media, switching, error detection and correction, issues related to data link control, LANs and WANs.
ITEC315 - System Analysis and Design
This aim of this course is to provide the students with theoretical and practical skills related to system design and analysis process with an emphasis on object oriented approach. An overview of systems development projects and approaches is followed by thorough coverage of systems analysis and design issues equipping the students with the ability to perform OOA using the OMG Unified Modeling Language (UML). The topics covered are project management and planning, requirements gathering, documentation, analysis and modeling, input/output/user interface design, team organizations, system integration and architecture, system interfaces, control and security.
ITEC327 - Server-Side Internet and Web Programming
This course focuses on development of web-based server-side Internet applications. Designing web forms and developing database Internet applications will be covered throughout the semester. In order to develop web forms, HTML form elements will be discussed in short. As relational database management server which will be introduced during the semester, an open source one, MySql has been chosen. One of the most popular open source server-side programming language named PHP is the main focus of the course. Beside MySql and PHP, Ruby on Rails and Web Servers will also be covered. How to implement web sites with authentication and access rights and how to model and Implement web sites ready for e-commerce are the other topics which will be discussed among the semester.

MATH211 - Introduction to Statistics
Variables and Graphs; Statistic, population and sample, inductive and descriptive statistics. Variables; Discrete and continuous. Frequency Distributions; General rules of forming frequency distributions. Histograms and frequency polygons. Measures of central tendency; the arithmetic mean, the median and the mode. Harmonic and geometric mean, root mean square, quartiles deciles and percentiles. Measures of dispersion; the range, the mean deviation, the semi-interquartile range, the 10-90 percentile range, the standard deviation, the variance. Elementary probability theory; conditional probability, probability distributions, expectation, relation between population, sample, mean and variance. Some discrete probability distributions; binomial and normal distributions, Poisson distribution, multinomial distribution. Elementary sampling theory. Curve fitting and method of least squares.
ITEC310 - Computer Networks - II
This course provides the student with fundamental knowledge of the various aspects of computer networking and enables students to appreciate recent developments in the area. The content of the course is based around the Internet Model (TCP/IP) which deals with the major issues in the upper three (Network, Transport, Application) layers of the model. Specific attention is given to IP addresses, network layer protocols such as IP, ARP, ICMP and IGMP, delivery, forwarding and routing of packets in the Internet, services and duties of the transport layer introducing protocols like UDP, TCP and SCTP, congestion control and quality services. The course also discusses DNS and some common applications protocols in the Internet.
ITEC314 - Multi-Platform Programming
This course is aiming to introduce students to analyzing, designing, and developing application software for multiple operating systems. The fundamentals of the multiplatform programming techniques with restrictions and benefits are taught in this course. The given theory is supported with exercises and sample applications using Java programming language (J2SE). Students get experience on “Write once and run everywhere” approach of programming.
ITEC316 - Software Engineering
The aim of this course is to introduce some fundamental principles of software engineering discipline and illustrate the application of those principles in the context of the graduation project. Main topics covered are software process models, rapid software development and prototyping, software metrics, risk analysis and management, testing and quality assurance, software estimation techniques, software quality and configuration management and software reengineering.
ITEC317 - Ethical and Social Issues in Information Systems
Main objectives of the course are basic understanding of history of IT, awareness of current issues, and familiarity with ethics. The course provides an overview of ethical theories and related problems such as privacy, networking, security and reliability. The course presents issues such as government supervision, computer crimes, and intellectual property from all points of view. Global issues such as cyberspace, cybernetics, social networking, and online crimes will be reviewed. This course aims to challenge students to think critically and enables them to draw their own conclusion. Besides they will learn to balance divergent thoughts which eventually prepare them to become responsible and ethical professionals as a team, as well as individual users of innovative technologies.
ITEC400 - Summer Training
As a part of the fulfillment of the graduation requirements, all students must complete 40 work days of summer training after the second and/or third year, during summer vacations. The summer training should be carried out in accordance with the rules and regulations set by the department.

ITEC403 - Graduation Project Orientation
This course is the first stage of the two-semester long graduation project of the IT program. The students are required to form teams, find a project supervisor from the department and propose a real life project to the graduation project committee. Each team should explore the needs and requirements of their project, carry out systems design and develop a prototype, if possible, of their project under the guidance of their project supervisors.
ITEC413 - Information System Security
This course focuses on basic concepts, principles and practice of Information Systems Security (ISS). It is containing the topics like: Ethics, legality and the need for ISS, overview of networking and operating systems, their vulnerabilities and prevention. Active-passive attacks and their countermeasures. Access, authentication and user privileges. Foot printing. Scanning. Enumerations and system hacking. Trojans and backdoors. Sniffers. Denial of service attacks. Social engineering techniques. Session hijacking. WEB servers and WEB applications, vulnerabilities, attacks and countermeasures. Wireless networks, vulnerabilities, attacks and protection techniques. Malicious programs; viruses, worms, bacteria. Physical security issues. Evading IDS, honey pots and firewalls. Buffer overflow attacks. Cryptography and crypto analysis. Penetration testing methodologies.
ITEC415 - Analysis of Algorithms
The main aim of this course is to introduce the students to the analysis and the design of algorithms for improving students' analytical thinking skills. The course focuses on algorithms and problem solving techniques. Major concepts include; runtime analysis, complexity analysis of sorting, searching, divide and conquer algorithms, dynamic programming, greedy algorithms, graph algorithms, cryptographic algorithms, and string matching algorithms.
ITEC421 - Management Information Systems
This course demonstrates how information technology (IT) continually enhances our capabilities to observe, to relate, and to decide at various managerial positions in an enterprise and how it provides us with new models to organise economic activity within and across firms. In this respect, students are taught to observe how IT has been shaping the way we do business over the past decades and extrapolate such trends into the future in order to critically discuss the strengths and shortcomings of contemporary information systems so that as future managers they become more discerning about how they deploy IT in their enterprise. The main topics include strategic use of information systems, enterprise (ERP) systems (including various intranet and extranet applications regarding employees, suppliers, and customers), electronic commerce, knowledge management systems, and decision support systems. Issues regarding systems development, outsourcing, global IS systems, and financial evaluation of IS investments are also discussed in relation to the main topics.
ITEC404 - Graduation Project
This course is the final phase of the two-semester long graduation project of the IT program. The students are required to implement their projects and present to a jury which is formed by the graduation project committee. The final submission includes functional software/hardware package, user and system reference manuals and a final report which includes all the details of the procedures, performance checks, and testing results.

A word from the Coordinator of the IT Department

Welcome to the IT department of the School of Computing and Technology, the oldest school in EMU. You have chosen a department that leads to an escalating career path. As a Department we are now in our 18th year. Our IT program was the first program to offer BS in IT in north Cyprus. The program was accredited by ASIIN starting June 2011. We are proud to say that our program is the only program accredited in the field of Informatics in the region. Furthermore, we have the honor of ranking among the first three programs to have received the Euro-Inf label in the whole world.

The courses at the Information Technology are designed to give you an excellent grounding in the fundamental principles underlying the IT field. A significant proportion of coursework in the IT department is spent in our modern, well equipped laboratories where we emphasize the practical and applied aspects of the IT field. The elective courses build on the strong foundation laid by the core courses in the curriculum to prepare you for an interesting, challenging and rewarding career.

Good Luck and Have Fun!

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