

PROJECT ORIENTED COMPUTER PROGRAMMING TRAINING

AHMET NAYIR¹

ABSTRACT

A life-long approach that includes extra curriculum activities centered on project based learning must be implemented. Project based learning requires that the teachers acts as consultants to the students to motivate them during the sometimes various stages of the work. Students who are used to classical educational methods may find this new approach sometimes redundant. Lack of information in the available sources may require that the students develop a more creative approach. Experience gained by the author in implementing an integrated approach to computer programming is proving to be prospects in the future if every party involved in the education chain reacts favorably to the needs for change. In the study curriculum that can be applied in computer programming training has been offered through examining others universities' curricula for the computer programming departments.

Key Words: Education, Employment, Computer Programming, Curriculum, Oriented, Project,

1. Introduction

A fast change is witnessed in electronics, design and developments in technology as a result of the problems faced in industry, globalization and increasing competition. Managing the change is possible in case of having a life long education. The intensive communication traffic in the age of knowledge does not only human being's needs for learning but also decreases the process of informing. People today are in a process of gaining much more information in a limited time. The use of computer is increasing very fast depending on developments in technology. Use of computer is very common in all kinds of vocations and it is an inevitable fact to know how to use computer for one who performs his profession. It is need to answer the question how a productive education can be performed through computer programming training[1,2].

When the curriculums of universities that provide computer programming are examined, it is noticed that the names of the courses, course contents and the terms they are located differ although a Standard structure exists. That is because of the fact that there is no discrimination between information systems and newly developed technologies. And as a result course contents and course plans become outdated

A curriculum that can be applied in computer programming training has been offered through examining others universities' curricula for the computer programming departments. In the offered course plan compulsory basic courses are given in the first year and in the second year elective courses are provided through categorizing into three branches as Computer Networks and Systems Department, Internet and Multimedia Technologies Department and Computer Programming Department in order to let students to master in a field.

2. Computer Programming At Fatih University

Computer programming has the vision of being a model program that has a pioneer role in vocational training and its graduates are demanded by the business world and society. Our program which accepts the business world as a strategic ally to define principles and policies, adopts providing diversity in education methods and programs as an important part of our mission in order to bring up

¹Fatih University, 34500 Büyükçekmece, Istanbul, Turkey, anayir@fatih.edu.tr

well-qualified vocational personnel, having vocational proficiency standards, which are required by the business world.

Official length of programme: 2 years, 2 semesters per year, 14 weeks per semester

Access requirement(s): Student may apply to undergraduate programs.

Programme requirements: The Associate Degree is awarded to students who have successfully completed all courses in the curriculum, including a 30 days industrial training period, and have obtained a cumulative grade point average of at least 2.00 on a 4.00 scale.

Objectives : To develop individual talent and creativity of the students and to promote an up-to-date awareness of new technologies in the field of Computer Programming. To teach the students to computer network installation and management, software (for PC, network and internet), hardware maintenance and fixing and computer use.

Working Areas

Our graduates have the alternatives mentioned below, as well as the opportunity to take place in informatics sector mentioned below.

Which titles they can get and at which positions they can work?

- Software Development Specialist,
- Project Leader,
- Database Specialist,
- Consultant, Solution Developer,
- Software Quality Specialist,
- Database Designer,
- Database Support Specialist

Aim of the Program

It aims to bring up individuals who will take place in informatics sector which is constantly developing, follow technological developments, highly motivated and have tendency towards teamwork. This program has the modern physical infrastructure, educational curriculum congruent to the necessities of the new era which are the requirements of bringing up qualified vocational personnel.

In order to realize the programme's aims a large variety of training courses about employment and entrepreneurship are and seminars that is given by authorities from other universities and business world are organized. In this way, local employment has been established and the well qualified students' and alumni's' business skills have been improved. Therefore it provides a great opportunity for them to be employed. Through the applied programme it is aimed to

- Determine educational strategies that will increase the rate of employment by setting a database for alumni.
- Setup a advisory board made up with authorities.
- Encourage the disabled youngsters to attend the programme
- Generate employment through providing vocational possibilities for last year students in work places where they can do practice instead of spending their times looking for a job.
- Assist students through vocational possibilities in both national and international level.
- Make this practice a good example to other universities

It is also aimed to qualify students and alumni as the ones

- Who can make and manage a Project
- Who knows the management administration
- Who observes the developments in his environment
- Who can provide add value and become highly qualified individuals

Table 1 Computer Programming Curriculum [3]

First Semester			Theo.	Prac.	Credits	ECTS	Workload
BİLG	101	Information Technologies	2	2	3	5	5
BİLG	103	Calculus I	3	0	3	4	6
BİLG	121	Fundamentals of Network Technologies	2	2	3	4	5
BİLG	141	Algorithms and Program Development I	2	2	3	4	5
BİLG	161	Graphic Design	2	2	3	4	5
ATA	101	Ataturk Principles and History Of Turkish Revolution I	2	0	2	2	4
İNG	101	English I	3	0	3	4	6
TÜRK	101	Turkish I	2	0	2	2	4
İŞLT	111	Career Management I	0	1	Noncredit	1	1
					20	30	41

Second Semester			Theo.	Prac.	Credits	ECTS	Workload
BİLG	104	Calculus II	3	0	3	4	6
BİLG	106	Database Management System	2	2	3	5	6
BİLG	122	Communication Infrastructure and System Design	2	2	3	4	6
BİLG	142	Algorithms and Program Developing II	2	2	3	5	6
BİLG	162	Web Site Development Techniques	2	2	3	5	6
ATA	102	Ataturk Principles and History Of Turkish Revolution II	2	0	2	2	4
İNG	102	English II	3	0	3	4	6
TÜRK	102	Turkish Language II	2	0	2	2	4
İŞLT	112	Career Management II	0	1	Noncredit	1	1
					20	30	41

Third Semester			Theo.	Prac.	Credits	ECTS	Workload
BİLG	201	Term Project / Sector Application I	1	4	3	8	9
BİLG	xxx	Division I	2	2	3	4	6
BİLG	xxx	Division II	2	2	3	4	6
BİLG	xxx	Division III	2	2	3	4	6
BİLG	xxx	Area Elective I	2	2	3	4	6
XXX	xxx	Area Elective II**	3	0	3	4	6
					20	30	43

Forth Semester			Theo.	Prac.	Credits	ECTS	Workload
BİLG	202	Term Project / Sector Application II	1	4	3	6	9
BİLG	xxx	Division IV	2	2	3	4	6
BİLG	xxx	Division V	2	2	3	4	6

Electronic Journal of Vocational Colleges-May/Mays 2013

BILG	xxx	Division VI	2	2	3	4	6	
BILG	xxx	Area Elective III	2	2	3	4	6	
XXX	xxx	Area Elective IV**	3	0	3	4	6	
STJ	200	Industrial traineeship *	-	-	Noncredit	2	4	
						20	30	43

Computer Networks and Systems Department

BILG	220	WAN Technology and Applications	2	2	3	4	6
BILG	221	Network System Architecture Design	2	2	3	4	6
BILG	222	Network Systems Management	2	2	3	4	6
BILG	223	Network Operating Systems I	2	2	3	4	6
BILG	224	Network Operating Systems II	2	2	3	4	6
BILG	225	Network Systems Security	2	2	3	4	6

Internet and Multimedia Technologies Department

BILG	261	3D Modeling and Animation I	2	2	3	4	6
BILG	262	3D Modeling and Animation II	2	2	3	4	6
BILG	263	Dynamic Web Site Development Techniques	2	2	3	4	6
BILG	265	Vector-Based Graphics	2	2	3	4	6
BILG	266	Multimedia Applications I	2	2	3	4	6
BILG	267	Multimedia Applications II	2	2	3	4	6

Computer Programming Department

BILG	241	Object Oriented Programming Design I	2	2	3	4	6
BILG	242	Object Oriented Programming Design II	2	2	3	4	6
BILG	243	Development of Data based Programming I	2	2	3	4	6
BILG	244	Development of Data based Programming II	2	2	3	4	6
BILG	245	Visual Programming	2	2	3	4	6
BILG	248	Internet Programming and E-Commerce	2	2	3	4	6

*Every Program does its Industrial Traineeship in the traineeship director in the particular period.

**Student takes lessons from the other programs with the confirmation of advisor.

Graduation Credit : 80

Total Credit : 120

PROJECT MANAGEMENT

Time and productivity is a competitive advantage today,. Therefore, projects need to be delivered, at the right time and at the level of the effective productivity. The power of project management comes into play here. But, unfortunately, as can be seen from the table below Project Management Incompetence is the main reason for Poor Performance in projects.

Unsuccess in projects



Figure 1 Reasons for Poor Performance in projects

why is Project management, necessary?

, increasing need for many different disciplines at the same time while developing product

- The necessity of integrated operations being used in the development of products

- The necessity of considering cultural and environmental factors in order to present things in the right time right place and right way to compete in the global marketplace.

Use of the project management techniques has become necessary a Products that have become increasingly complex, bringing together a multi-disciplinary accumulation of targeted features, cost and time, it has become imperative to use the.

INFO 201 Term Project / Sector Application I and II, ECTS 8 Credits (1 +4) 3

Term Project / Sector Application second grade I and II classes III has a special significance. and IV. Taught as a compulsory period, two-semester course. Students in both periods from start to finish at least one project is not completed to prepare a detailed way. Projects prepared by graduate students each semester so that activities can display URLs will be ready for a job interview cv.

BiLG 201 Term Project / Sector Application I and II, ECTS 8, Credits (1+4) 3

Term Project / Sector Application I and II is a two-semester compulsory course that is given at the second year and has a special importance Students are. graded for at least one project being prepared in a very detailed manner in both terms Graduate students would be ready to present such activities in their CVs for job interviews.

In this course, students will decide with their advisors whether they will perform a term project and sector application. In the term project, as students and instructors' common decision, according to the student's branch, internet and multimedia technology, computer programming or computer network and systems related to a project is performed. The content of the project, analysis, design, implementation, testing, and transfer of the project document is performed. In the sector simulation, the student will practice in a company of her/his or the advisor's choice, which operates on a topic about the program, one day a week. The application will be a project which is authorized in collaboration with the company and the advisor.

Learning Outcomes:

- Complete the Project
- Observe the steps pf the Project

- Simulate business world
- Choose solution methods
- Prepare progress report

CONCLUSION

Adapting to changes and innovation, leading the changes is only possible by participating in continuing education possible. Instructor has the task of guiding in this method promoting the lifelong learning. the results that will improve the quality of of education will be obtained in a shorter time if " Project Oriented Training" method is applied to the whole training period. One of the most important aspects survive economically at the international level is to create productive and entrepreneurial community that can perform research and development based innovations . Therefore, it is necessary to make students getting technical training and new graduates technicians do studies that are based on the research and development through providing professional education and to help them create their own job opportunities using entrepreneurship aspects . It should be our common duty to make Computer Science graduates or students find, jobs in different firms being equipped with different skills and knowledge, to help them set up their own business through presenting them a different alternative, and finally to make a good example for all other universities in the country by this training program being planned successfully and similar studies should be conducted in this regard.

REFERENCES

- [1] Ahmet NAYİR, Ali OKATAN, "Proje Merkezli Mühendislik Eğitimi", EEB'05:Elektrik, Elektronik, Bilgisayar mühendislikleri eğitimi 2. ulusal sempozyum ve sergisi, 2005, pp. 27-29
- [2] Nayir A. "Bilgi Çağında Mühendislik Eğitimi", Pedagoji Tedgigatlar. Bakü.1997. pp.141-148
- [3] <http://imyo.fatih.edu.tr/btp/?mufredat>