



### CIT102 – Information Technologies in Education Course Syllabus

<b>Course Name</b>	Information Technologies in Education II
<b>Course Code</b>	CIT102
<b>Type of Course</b>	Compulsory
<b>Course Level</b>	Undergraduate
<b>ECTS Credits</b>	7
<b>Weekly Theory Hour</b>	3
<b>Weekly Practice Hour</b>	2
<b>Weekly Laboratory Hour</b>	-
<b>Year</b>	2013
<b>Term</b>	Spring
<b>Instructor (s)</b>	Assist. Prof. Dr. Seren Bařaran
<b>Teaching System</b>	Lecturing; This course utilizes the Moodle course management system to share information and resources. To access the course site, log on to this link: <a href="http://elearning.gau.edu.tr">http://elearning.gau.edu.tr</a> and select the course from list of courses. All course materials will be posted here.
<b>Education Language</b>	ENGLISH
<b>Prerequisite Course</b>	-
<b>Other Recommended Matters</b>	-
<b>Training Status</b>	-
<b>Course Objectives</b>	<ol style="list-style-type: none"> <li>1. Presenting new information technology developments regarding education of computer technologies</li> <li>2. Gaining a general perspective on most recent technologies used today: world wide web, mobile devices, operating systems, computer network and web-based technologies.</li> <li>3. Learning to use MS Word, Excel , PowerPoint and Access efficiently.</li> <li>4. Learning the purpose of different multimedia technologies.</li> <li>5. Learning the fundamentals of structured query language(SQL).</li> <li>6. Develop computational thinking, pseudocodes, algorithms and flowcharts.</li> </ol>
<b>Learning Outcomes</b>	<p>At the end of this course students should :</p> <ol style="list-style-type: none"> <li>1. Learning to use Ms Word, Ms Excel, Ms PowerPoint and MS Access efficiently</li> <li>2. Having a perspective and idea on recent information technology developments in education</li> <li>3. Learning the fundamental and underlying concepts in information technology and database management systems (DBMS).</li> </ol>

		<p>4. Gaining decent level of knowledge in programming environments, programming languages and techniques.</p> <p>5. Using algorithms to solve computer programming problems.</p> <p>6. Creating pseudo codes, algorithms into flowcharts</p>	
<b>Course Content</b>		<p>The course aims to acquire students fundamental skills on computer, information and integration literacy.</p> <p>The course covers advanced Word processing and spreadsheet editing, managing numbers: spreadsheets, database management. I also introduces the fundamental logic of computer programming as pseudocodes, algorithms and flowcharts. Introducing multimedia and multimedia authoring tools with basic web page design by using HTML tags, are also within the scope of this course.</p>	
<b>Weekly Detailed Plan</b>		<b>TOPICS</b>	
	<b>WEEK</b>	Theoretical	Lab (Practical)
	1	Word Review, track changes, citation, bibliography, table of contents	Advanced Word Features exercises, "track changes"
	2	Excel Review, Data Analysis, using predefined functions of Excel	Real life context data analysis exercise,
	3	Excel Review creating chart in MS Excel( determining the nature of data, types of comparison as item, component, frequency distribution, correlation, time series	charts exercise(scatter plot, bar, column, line, pie charts)
	4	PowerPoint review combine different media in a presentation Introducing effective presentation techniques Learning how to present your work effectively	presentation exercise Assigning Project1
	5	Different programming paradigms (object oriented, structured), different programming languages (C++, C#, Java), script languages (JavaScript, VBScript), server-side script languages (ASP, PHP, JSP) and their usage areas.	

	6	Defining multimedia Introducing multimedia authoring tools including image and video editors. Real time and asynchronous formats. Compression formats and standards for data, images, audio and video Basic web page design	Basic web page design exercise Applying effective presentation tips exercise Assigning Project2
	7	Midterm exam	
	8	Introducing MS Access and Database management systems. Identify main differences between MS Excel and MS Access regarding database usage. Identifying fields, tables and records in a database	MS Access database exercise, creating tables, forms, reports, queries, reports
	9	Database, tables, Tools, Primary Key, Foreign Key	Database exercises using relationships (1-1, M-M, 1-M/M-1)
	10	Introducing SQL(structured query language)	SQL query exercise using create, select, update and some operators; LIKE, BETWEEN, ?, _, *
	11	Learning basic commands in SQL such as; insert into, delete, drop table	SQL exercise by executing SQL commands in MS Access as insert into, delete, drop table
	12	Introducing basic programming techniques. Understanding pseudo codes, computer algorithms learning to draw flowcharts	Basic exercises on pseudocodes, algorithms and flowcharts Drawing flowcharts to solve problems : decision making, arithmetic and logical operations
	13	Learning and Content Management Systems	Moodle, WebCT, BlackBoard, Joomla, Sakai
	14	Revision	
	15	<b>Final</b>	
<b>Textbook/Recommended Readings</b>	<ul style="list-style-type: none"> <li>• Capron, H. L. (2000) <i>Computers: Tools for an information age</i>. Upper Saddle River, NJ: Prentice Hall.</li> <li>• Long, L.&amp;Long,N.(2005) <i>Computers: Information Technology in Perspective</i> 12th Edition Prentice Hall, ISBN: 01309298913.</li> </ul>		

	<ul style="list-style-type: none"> <li>MS Office tutorials in PPT</li> </ul>
--	--

**ASSESSMENT METHODS**

Term Activities	Number	Semester(Year) Contribution %
Assignment1	1	20
Assignment2	1	20
Midterm	1	20
Final	1	40
<b>TOTAL</b>		<b>100</b>

**Percentage of Classroom Activities**

**40**

**Percentage of Exam Activities**

**60**

**TOTAL**

**100**

**Calculation work load within the framework of learning, teaching and evaluation activities**

Activities	Number	Time (Hour)	Total Work Load (hour)
Weekly Theory Hour	14	3	42
Weekly Practice Hour	14	2	28
Assignment 1	1	40	40
Assignment2	1	40	40
Midterm	1	25	25
Final	1	35	35

**TOTAL WORKLOAD (hour)= 210**

**COURSE ECTS CREDIT=Total Work Load (hour) /(30 hour/ECTS)= 210 / 30 = 7**

**Additional Information about the Assignments(100 points each):**

Individual projects are assigned to students on a specific topic .

Assignment 1: Preparing a PPT presentation on introducing our university by locating the information assigned by embedding different media and applying effective presentation techniques.

Assignment2: Preparing an instructional game by using PowerPoint on an assigned topic in the field of study.

## Programme and learning outcomes

Learning Outcomes (LO)	Programme Outcomes (PO)																
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16	PO 17
LO1	5					2			3					4			
LO2	5					2			2					4			
LO3	5					1			4					4			
LO4	5					1			4					4			
LO5	5					1			4					4			
LO6	5		3	3	3	3								5			

**Contribution Level:**

- 1 very low
- 2 low
- 3 medium
- 4 high

## **CITT Department Programme Outcomes**

- 1.** Having adequate level of knowledge and skills in current/new computing and educational technologies.
- 2.** Having sufficient communication and teaching skills in teaching profession.
- 3.** Being able to teach updated computing technologies efficiently in English.
- 4.** Being able to identify information technology problems through using various analysis and synthesis.
- 5.** Being pragmatic to develop and apply persistent information technology solutions to educational and business problems.
- 6.** Being able to use critical and computational thinking skills to produce alternative solutions at every level of project development life-cycle.
- 7.** Being capable to work in disciplinary and interdisciplinary teamwork.
- 8.** Being sensitive, reactive and responsive to professional, social and ethical issues. Having social and ethical awareness in teaching and in providing solutions to problems.
- 9.** Having adequate level of knowledge and skills in current/new computer hardware, operating systems and computer networks.
- 10.** Adequate level of knowledge and skills in current/new programming languages, programming paradigms (procedural and object-oriented) and programming environments (visual, console-based programming).
- 11.** Being able to analyse, plan and manage educational software design and project development.
- 12.** Having the capability of evaluating and criticising educational software design and development.
- 13.** Adequate level of knowledge in using and integrating current/new e-learning and distance education systems such as learning management systems (LMS).
- 14.** Having sufficient skills and knowledge in using instructional technology and material design.
- 15.** Having skills to apply and use special teaching approaches, theories, teaching strategies, methods and techniques (such as to those people with disabilities).
- 16.** Using appropriate measurement and evaluation techniques to assess students' learning and development in addition to supporting them with good level of feedback.
- 17.** Having sufficient knowledge in the process of establishment of Republic of Turkey. Identifying social, cultural, political and economic problems through understanding Ataturk's principles and revolution.