

K H A Z A R U N I V E R S I T Y

School of Engineering and Applied Sciences

C o u r s e S y l l a b u s

Computer Applications in Engineering

COMPUTER APPLICATION IN ENGINEERING

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| Identification | Department: | Computer Science |
| | Subject: | Computer Applications in Engineering (CMS 202) |
| | Instructor: | Etibar Rzazadeh |
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| | Term: | Spring 2010 |

Prerequisites Introduction to Computer Science (CMS 101)

Textbooks and Materials:

Core Textbook:

1. MS Excel 2007
2. MS Access 2007
3. Microsoft Office 2007
4. L.Muradkhanova, E.Rzazadeh. Introduction to computer science, Khazar University, Baku, 2001.

Supplementary:

1. Introducing MS Windows-95 for distribution only with a new PC
2. Timothy J.,Leary O., Linda I. Computer Essential. 2007
3. Computer Exercise. 2007.

For class presentations and discussions, the students should utilize the Newspaper, Journal and Internet materials. Moreover, the course does not limit the use of learning materials available at Khazar University library.

Useful Sites

www.dushkin.com/powerweb , <http://www.azders.com> , <http://www.translate.ru> , <http://www.computertest.ru>

Objectives

Generic Objective of the Course:

To meet general requirements of Khazar University

Specific Objectives of the Course:

- To support the students academically, to improve their chance of realizing their potential
- To encourage students participation and interaction and fostering and atmosphere of tolerance and respect
- To develop an understanding of the theory in Computer science.
- To furnish the students with the "Mathematical Way of Thinking"
- To build background for the students' further computer development

Developed Skills

Throughout the course the students should develop and maintain the

following skills:

- Analytical thinking
- Critical reasoning
- Team building and management
- Leadership
- Presentation
- Other...

Visual aids

Computers, Education slides, Alone open computer case, HDDs, FDDs, Bus, Different computer generation supplements, Multimedia projector.

Evaluation

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| Lab. works: | 30% |
| Mid-term Examination: | 20% |
| Activity | 10% |
| Final Examination | 50% |
| Total | 100% |

Learning and Teaching Methods

This course considers active learning process rather than passive one. Lectures, discussions, practice, typing.

| Weeks | Topics | Lecture | Practice |
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| 1. | Application suite, MS Office – 2007 & 2003. Spread sheets. Using worksheets to make business decisions. Starting Excel. The Excel window. Workbook. Entering data, editing. Formulas. Formulas Auditing. | 2 | 2 2 |
| 2. | Data formatting, printing a worksheet, data sorting Working(creating) with lists, data sorting by multiple keys. Conditional formatting. Conditional Formulas. | 2 | 2 2 |
| 3. | Laboratory work 1. Absolute and relative values; protecting and Locking cells. Summarising data in lists and tables subtotals. | 2 | 2 2 |
| 4. | Analyzing data with pivot tables. Create a Pivot Change the layout of a Pivot Table. Add or remove a field in a Pivot Table. | 2 | 2 2 |

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| 5. | Working with function. Financial, Math & Trig, Statistical, Logical Functions. Condition and look up functions. Laboratory work 2 Composite functions. Nested IF function. | 2 | 2 2 |
| 6. | Excel charts. Creating charts. Updating a chart Data analysis. Analyzing statistical data. Data filters. Advanced filter. Performing what-if analysis on worksheet data. Modifying an Excel chart. Formatting chart labels. | 2 | 2 2 |
| 7. | Producing information in graphic format for planning and designing worksheet layouts. Consolidation Creating macros. Laboratory work 3. | 2 | 2 2 |
| 8. | Midterm Exam | | 2 2 |
| 9. | Integrating worksheets with other software applications. Introduction to Database Concepts. The Access and Database Windows. | 2 | 2 2 |
| 10. | Starting Access. Working with existing Database. Access objects. Sorting. Creating an Access Tables. | 2 | 2 2 |
| 11. | Importing data from other MS Office Files. Printing a Table. Access data formats. Validation. Relations. | 2 | 2 2 |
| 12. | The Query window. Creating and running a Query Creating and Printing a Query. Filtering Data Laboratory work 4 Defining Record Selection criteria for Query. | 2 | 2 2 |
| 13. | Creating and Printing a Form Creating a Printing a Report Modifying the structure of an Access Table. | | 2 2 2 |
| 14. | Updating a Database Laboratory work 5 Co acting a Database. Formulas in query. Formulas with parameters. Access functions. | | 2 2 2 |
| 15. | Creating a Power Point Presentation. The Power Point Window. Starting Power point. Viewing slides in slide view. Animations, effects. Editing the presentation in view. | | 2 2 2 |

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| 16. | Changing the Design Template. Changing the Slide Layout. Creating speaker Notes. Viewing the completed slide show. Printing the completed slide show. Laboratory work 6 | | 2 2 2 |
| | Final Exam | | |