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| **Identification** | **Subject** | CMS 202 - Computer Application in Engineering-3 credits |
|  | **Department** | Computer Science |
|  | **Program** | Undergraduate |
|  | **Term** | Fall, 2017 |
|  | **Instructor** | Rashad Khaligov |
|  | **E-mail:** | rkhaliqov@khazar.org |
|  | **Classroom/hours** | 41 Mehseti str. (Neftchilar campus), Room #402N |
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| **Prerequisites** | Elementary English |
| **Language** | English, Azeri |
| **Compulsory/Elective** | Required |  |
| **Required textbooks** | ***Core textbook:*** |  |
| **and course materials** |  |
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|  1. Microsoft Excel 2016, Step by Step. Curtis D. Frye. (O’Reilly Media Inc., 2016) 2. Microsoft PowerPoint 2016, Step by Step. Joyce Cox and Joan. Lambert ( Microsoft Press, 2016) 3. Microsoft Access 2016, Step by Step. Joyce Cox and Joan Lambert. (Microsoft Press, 2016)  |

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|  | For class presentations and discussions, the students should utilize the Newspaper, |
|  | Journal and Internet materials. |
| **Course outline** |  This course intends to facilitate students with foundation in Computer Science. Lecture notes given in classes will be conducted by examples which are crucial for better understanding of material. First lectures are designed to give an overview on computers’ generation and their history. Later, computer components, computer languages, computer network types and system design will be discussed. Next classes will be dedicated to detailed observation on different computer based applications. Mainly, Microsoft Office programs (Access, Excel, and PowerPoint) will be explained with complementary examples and exercises. At the end, Internet and Internet browsers will be discussed. |
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| **Course objectives** | This course is designed for the students of the School of Engineering and Applied |
|  | Science.  |
|  | *Generic Objective of the Course:* |
|  | * General objective of this course is to provide students with core understanding of computer science and its application in business;
 |
|  | *Specific Objectives of the Course:* |
|  | * To familiarize students with computers’ history, its components and system design;
* To get acquainted with different Microsoft Office programs (Excel, Access, Power Point);
* Internet and Searching
 |
| **Learning outcomes** | Upon successful completion of this course students will be able to explain simple computer structure and system design, to provide core understanding in computer systems and applications. Student will gain advanced working experience in Microsoft Office Programs (Excel, Access and Power Point) |
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| **Teaching methods** | **Lecture** |  |  | x |
|  | **Group discussion** |  |  | x |
|  | **Experiential exercise** |  |  | x |
|  | **Lab** |  |  | x |
|  | **Case analysis** |  |  |  |
|  | **Course paper** |  |  |  |
|  | **Others** |  |  |  |
| **Evaluation** | **Methods** |  | **Date/deadlines** |  | **Percentage (%)** |
|  | **Midterm Exam** |  |  |  | 30 |
|  | **Case studies** |  |  |  |  |
|  | **Attendance** |  |  |  | 10 |
|  | **Assignment and** |  |  |  | 20 |
|  | **quizzes** |  |  |  |  |
|  | **Project** |  |  |  |  |
|  | **Presentation/Group** |  |  |  |  |
|  | **Discussion** |  |  |  |  |
|  | **Final Exam** |  |  |  | 40 |
|  | **Others** |  |  |  |  |
|  | **Total** |  |  |  | 100 |
| **Policy** | **Preparation for class** |  |  |  |
|  | The lecture material will focus on the major points introduced in the text. Reading the assigned chapters and having some familiarity with them before class will greatly assist your understanding of the lecture. After the lecture, you should study your notes and work relevant problems. |
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* **Withdrawal (pass/fail)**

This course strictly follows grading policy of the School of Engineering and Applied Science. Thus, a student is normally expected to achieve a mark of at least 60% to pass. In case of failure, he/she will be required to repeat the course the following term or year.

**Cheating/plagiarism**

Cheating or other plagiarism during the Quizzes, Mid-term and Final Examinations will lead to paper cancellation. In this case, the student will automatically get zero (0), without any considerations.

**Professional behavior guidelines**

The students shall behave in the way to create favorable academic and professional environment during the class hours. Unauthorized discussions and unethical behavior are strictly prohibited.

**Ethics**

Students should not arrive in late to class.

All cell phones must be turned off and stowed away before entering class.

Use of any electronic devices is not allowed in the classroom and violators will be punished accordingly.

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| **Week** | **Date/Day** | **Topics (6 hours)** | **Textbook/Assignments** |  |
| **(tentative)** |  |  |
|  |  |  |  |  |
| 1 |  | **Fundamentals Of Computers.** Basic Concepts. Computer |  |  |
|  |  | Organization. Data. Software / Languages. Communication |  |
|  |  | and Computer Network |  |  |
|  |  |  |  |  |
| 2 |  | **Spreadsheet.** Basic Concepts of Spreadsheet . Using |  |  |
|  |  | worksheets to make business decisions. Starting Excel. The |  |
|  |  | Excel window. Workbook. Entering data, editing. Formulas. |  |  |
|  |  | Formulas Auditing. |  |  |
| 3 |  | **Spreadsheet.** Data formatting, printing a worksheet, data |  |  |
|  |  | sorting. Working (creating) with lists, data sorting by |  |
|  |  | multiple keys. Conditional formatting. Conditional |  |  |
|  |  | Formulas. |  |  |
| 4 |  | **Spreadsheet.** Analyzing data with pivot tables. Create a |  |  |
|  |  | Pivot Change the layout of a Pivot Table. Add or remove a |  |
|  |  |  |  |
|  |  | field in a Pivot Table. |  |  |
| 5 |  | **Spreadsheet.** Working with function. Financial, Math & |  |  |
|  |  | Trig, Statistical, Logical Functions. Condition and look up |  |  |
|  |  | functions. Excel charts. Creating charts. Updating a chart. |  |
|  |  | Data analysis. Analyzing statistical data. Data filters. |  |  |
|  |  | Advanced filter. data. Modifying an Excel chart. Formatting |  |  |
|  |  | chart labels. |  |  |
| 6 |  | **Spreadsheet.** Performing what-if analysis on worksheet. |  |  |
|  |  | Validation. Comments. Nested logical function. |  |
|  |  |  |  |
|  |  | Macros. |  |
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|  |  | Introduction to Database. |  |
|  |  |  |  |
|  |  |  |  |  |
| 7 |  | **Database Management.** Integrating worksheets with other |  |  |
|  |  | software applications. Introduction to Database Concepts. |  |
|  |  | The Access and Database Windows. Starting Access. |  |  |
|  |  | Working with existing. Database. Access objects. Sorting. |  |  |
|  |  | Creating an Access Tables. |  |  |
| 8 |  | **Midterm examination** |  |  |
| 9 |  | **Database Management.** Importing data from other MS |  |  |
|  |  | Office Files. Printing a Table. Access data formats. |  |
|  |  | Validation. Relations. The Query window. Creating and |  |  |
|  |  | running a Query. Creating and Printing a Query. Filtering |  |  |
|  |  | Data |  |  |
| 10 |  | **Database Management System.** Starting Access. Working |  |  |
|  |  | with existing |  |
|  |  |  |  |
|  |  | Database. Access objects. Sorting. |  |
|  |  |  |  |
|  |  | Creating an Access Tables. |  |
|  |  |  |  |
| 11 |  | **Database Management System.** The Query window. |  |  |
|  |  | Creating and running a Query |  |  |
|  |  | Creating and Printing a Query. |  |  |
|  |  | Filtering Data |  |  |
|  |  | Defining Record Selection criteria for Query. Updating a |  |  |
|  |  | Database. Co acting a Database. Formulas in query. |  |  |
|  |  | Formulas with parameters. Access functions. |  |  |
| 12 |  | **Database Management System.** Creating and Printing a |  |  |
|  |  | Form. Creating and Printing a Report. Modifying the |  |  |
|  |  | structure of an Access Table. |  |  |
| 13 |  | **Creating a Power Point Presentation.** The Power Point |  |  |
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|  |  | Window. Starting Power point. Viewing slides in slide view. |  |  |
|  |  | Animations, effects. Editing the presentation in view. |  |  |
| 14 |  | **Creating a Power Point Presentation.** Changing the Design |  |  |
|  |  | Template. Changing the Slide Layout. Creating speaker |  |
|  |  |  |  |
|  |  | Notes. Viewing the completed slide show. Printing the |  |
|  |  |  |  |
|  |  | completed slide show. |  |
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| 15 |  | **Future Trends in Information Technology.** Fundamentals |  |  |
|  |  | of Internet. |  |  |
| 16 |  | **Final Exam** |  |  |

This syllabus is a guide for the course and any modifications to it will be announced in advance.