

COURSE DESCRIPTIONS

FIRST YEAR- FRESHMAN YEAR

Fall Semester

ENG 101 English I

Focusing on grammar and developing of all language skills. The aim of this course is to enable students follow their courses in English and also to express themselves in English.

MAT 171 Mathematics I

This course is aimed at providing a comprehensive treatment of selected topics in both finite mathematics and calculus. It will make students as comfortable as possible in an environment of quantitative analysis with computers.

MAN 101 Introduction to Business

Broad integrative course covering all functional areas of business; finance, human resources, management sciences, and information systems and marketing. In addition, relationships among business, government and society are considered.

ECON 101 Principles of Economics I

Basic concepts of economics and mainly elementary microeconomics. Topics covered are: The economic problem, supply and demand, elasticity, marginal analysis of consumers' and firms' behavior, the theory of profit maximization, analysis of markets, pricing in competitive and non- competitive markets.

CIS 131 Introduction to Computer Information Systems

This course provides an overview of information systems. Topics include hardware and software fundamentals, use of software packages, effective use of networks, Internet, and other communication tools, the design of management information systems, as well as the ethical use of computers in business and society.

ATA 101 Principles of Atatürk I

The principles of Atatürk will be discussed analytically and historically in both semesters.

TUR 101 Turkish as a Foreign Language I (for non-natives)

The course is designed for students who are interested in learning about other cultures and languages, and who have no previous knowledge of Turkish language. This course mainly introduces the student to Turkish language, through the development of the basic skills: listening, speaking, reading and writing. Also included is an examination of Turkish culture through an exploration of its historical roots and its most significant social, literary and artistic trends. The ultimate goal of the course is that students will gain awareness and appreciation of and insight into the Turkish culture.

Spring Semester

ENG 102 English II

This course aims to take students to a more advanced level of English.

MAT 172 Mathematics II

Limits and continuity; average rate of change and slope; derivatives, instantaneous rate of change, higher order derivatives; optimisation, concavity of inflection points; maxima and minima; revenue, cost and profit applications, anti derivatives, rules of integration, differential equations, mathematics of finance, simple and compound interest, present value, effective interest, future value, annuities.

ECON 102 Principles of Economics II

Elementary macroeconomics, deSEMESTERination of national income, the role of government, the banking system, problems of inflation, unemployment and growth.

MAN 102 Principles of Management

Principles of management, the basics of management, theory and practice, the nature of planning, decision making, the nature and purpose of organising, basic departmentation, line/staff authority and decentralisation, human resource management and selection, motivation, leadership, and the system and process of controlling.

CIS 132 Introduction to Algorithms & Programming

This course introduces students the logic of programming. The course aims to give an introduction to problem solving techniques using structured programming approach. The course will provide the analytical foundations for proceeding courses that requires critical thinking in programming. Students earn required skills about the thought of programming using flowcharts and pseudo-code.

ATA 102 Principles of Atatürk II

The principles of Atatürk will be discussed analytically and historically in both semesters.

TUR 102 Turkish as a Foreign Language II (for non-natives)

The course is designed for students who are interested in learning about other cultures and languages, and who have previously taken TUR101 or have already a command of basic Turkish. Throughout the course, the students will be presented with learning opportunities for increasing their intermediate language skills: listening, speaking, reading and writing. The culture portion of the course will focus on the exploration of a number of significant issues in Turkish history, political and legal systems, institutions and society at large. The ultimate goal of the course is to give students a foundation for a deeper understanding and appreciation into the Turkish culture.

SECOND YEAR – SOPHOMORE YEAR

Fall Semester

ENG 201 Business Communication

This course aims to improve the student's ability to understand and use English grammar and vocabulary in business context.

ACC 202 Financial Accounting I

Financial accounting the basis for business decision; recording changes in financial position; measuring business income; completion of the accounting cycle; accounting for merchandising activities; the control of cash transactions; accounts receivable, and notes receivable; inventories and cost of goods sold.

MAT 281 Statistics I

Frequency distributions and their graphs, measures of central tendency, measures of dispersion and skewness, basic concepts and rules of probability, probability distributions: Binomial, poisson, normal, and Chi-Square distributions, sampling concepts, sampling distributions.

CIS 205 Programming Language I

Fundamentals of programming in C language, identifier and variables, statements and commands of C language, data types, constants, Input/Output operators, control structures, pointers and dynamical memory structures, functions and procedures, arrays, structures.

CIS 243 Data Structures

Stacks, queue, circular queues, linked lists, data structure techniques, trees, binary trees, database structures.

Spring Semester**MAT 282 Statistics II**

Summary of discrete distributions, summary of continuous distributions, descriptive statistics, point estimation, interval estimation and the control limit theory, inferences in the mean and variance of a distribution, inferences on proportions, comparing two means and two variances, simple linear regression.

CIS 232 Programming Language II

Introduction to Delphi; components of Delphi projects; organization of forms and units; using the components palette in Delphi; properties of components and the available options; events and event triggering; file structure of a Delphi project; files of PAS, DFM & DPR extensions; forms with multi document interface; linking of Windows-Based applications to Delphi projects (OLE); the data access method.

CIS 246 Database Management

The database, the database management system, components of DBMS environment, database design, roles of the database environment, data and database administrator, database designers, application programmers, end-users, the history of DBMS, data independence, database language, function of DBMS, components of a DBMS, relational model, relational data structure, database relations, properties of relational databases, relational keys, representing relational database.

CIS 202 Operating Systems

Introduction to operating system concepts; classification and structure of operating systems; single-user (DOS) and multi-user (UNIX) character oriented operating systems; graphical multi-user operating systems; multi programming and multi-environment, virtual memory and purging; device management, I/O system and I/O processing; dead-locks; system software: loaders, assemblers; Network applications.

Elective

THIRD YEAR – JUNIOR YEAR

Fall Semester

MARK 303 Principles of Marketing

To provide fundamental concepts and to introduce related business activities within a systems perspective, supported with managerial and functional approaches for planning, pricing, promoting and distributing, satisfying products to target markets in order to achieve organisational objectives.

CIS 331 Systems Analysis Design & Methods

This course provides 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 are 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 such Structured charts, PDL, Flowcharts, Waterfall models and Agile modelling), input/output/user interface design, team organizations, system integration and architecture, system interfaces, control and security.

CIS 363 Software Engineering

The aim of this course is to give students an introduction to the principles and practice of analysis, design and in O.O.D implementation of software engineering principles. Through experience of building a significant software system in a team, their experience and understanding of the problems that arise in building complex software systems. They will develop the analytical, critical and modeling skills that are required by a successful software engineering. The students will also be familiarized with the UML and Visual Pradagiem (tool) to model software development and Agile software development methodology. Additionally, they will learn the principles of software life cycle and software documentation

CIS 340 Internet Programming

Internet concepts; HTML programming principles; HTML commands; writing and testing HTML code; embedding pictures and graphics into HTML documents; using FrontPage to develop internet applications; Graphical User Interface design principles; uploading and testing internet applications.

CIS 386 Database Programming I (Structured Query Language, SQL)

SELECT, FROM, WHERE and ORDER BY. Aggregate, date and string functions. GROUP BY and HAVING. Table joins: Cartesian, inner, outer and UNION joins. Indexes. Subqueries: EXISTS, IN. DML: INSERT, UPDATE and DELETE statements. Transactions with commit and rollback. DDL: Creating database objects (Tables, Views, Indexes, etc.), column data types. Data integrity with constraints. Concurrency and locks.

Spring Semester

MAN 308 Operations Management & Research

The fundamentals of operational research and modelling; the development, application and computation of the basic operations research techniques; the topics covered are: Application of scientific methodology to business problems and mathematical modelling, linear programming, scientific approach to decision making.

CIS 348 E-Business Systems

This course covers emerging online technologies and trends and their influence on the electronic commerce marketplace. Students will learn various revenue models and how to market on the Web. Next, the course covers online auctions and various legal and ethical issues. Students will learn about important security issues, such as spam and phishing, their role in organized crime and terrorism, identity theft, and online payment fraud. Finally, students learn how to plan for electronic commerce.

CIS 352 Programming Language III

Introduction to Visual Basic; components of Visual Basic projects: labels, text boxes, command buttons, list boxes, combo boxes, timers, image boxes, picture boxes; organization of forms and units; properties of components and the available options; events and event triggering; file structure of a Visual Basic project; small Visual Basic application programs.

CIS 342 Ethical & Social Issues in Information Systems

This course will enable the student to evaluate ethical issues that Information Technology professionals face in a corporate setting. The student will examine the classical normative ethical theories based on notions of duties, rights, consequences and virtue based ethics as well as the contemporary codes of conduct established by professional organizations. The student will explore, analyse, and critique case studies in order to develop skills in ethical thought and written communication.

CIS 356 Object Oriented Programming Language I

Primitive data types, expressions and arithmetic operators, Input and Output, the if statement, counting, sentinel-controlled and result-controlled loops, objects and object references, class structure, method parameters, encapsulation and visibility modifiers, overloading, for statement and arrays, inheritance, abstract classes and polymorphism.

FOURTH YEAR – SENIOR YEAR

Fall Semester

MAN 404 Human Resource Management

The course aims at showing the importance of human resource management (The management of people) and its link with productivity, quality of work life, and profits in today's highly competitive world. Human resource management activities examined include job analysis, human resource planning, recruitment, selection, orientation, training and development, performance appraisal, career development, compensation management, labor relations, and employee health and safety.

CIS 468 Object Oriented Programming Language II

Introduction to Computing and Programming, Data Types and Expressions, Methods and Behaviours, Creating Your Own Classes, Making Decisions, Repeating Instructions, Arrays, Advanced Collections, Introduction to Windows Programming, Programming Based on Events, Advanced Object-Oriented Programming Features, Debugging and Handling Exceptions, Working with Files, Working with Databases, Web-Based Applications.

CIS 403 Graduation Project Proposal

This is the first phase of graduation project course. Graduation topics are identified. Students can either select topics from offered list or they can individually find their topics and submit it to the graduation project committee for approval. When approved, students carry out literature search and work on the theoretical aspects of the project. The students are required to work in teams and

the chair person assigns a project supervisor from the department which is relevant to their topics. According to these specifications the systems analysis, design and development processes are covered. A project proposal report is developed and presented to the committee.

CIS 406 Summer Training

As fulfillment of the degree programme, students should work for duration of 45 work days in Information Technology or Information Systems related companies. Following 6th academic semester, students are able to work in the summer training internship. At the end of the word period, student submits a written report. and granted as PASS grade if all the requirements are fulfilled.

Elective

Elective

Elective

Spring Semester

CIS 400 Graduation Project

This is the second phase of graduation project course. Depending upon the type of project students are required to develop a software, mobile application, web development, information systems security etc... Students should implement their projects and present it to the graduation project committee. The final project should consist of functional software/hardware, preparing user and system manuals and a report of the procedures, performance checks, and testing results.

CIS 411 Management Information Systems I

Define the Management Information System (MIS), and its sub systems (transaction processing systems, information reporting systems, decision support systems, and office automation systems). Sometimes the course will focus on organization, model and decision making.

Elective

Elective

Elective

Elective

LIST OF ELECTIVE COURSES

CIS 242 Animation Technologies

Computer graphics and applications course introduces students to the use of computer technology in the process of graphic design. Students will learn about basic visual communication skills using a variety of industry standard graphic programs creating animations using software packages.

CIS 250 Information and Communication Technologies

The main objective of this course is to teach the principles and foundational logic of Information and Communication Technologies and how to use of ICT for personal and educational purposes.

CIS 416 Computer Networks

Principles of standards and protocols, network topologies, switching techniques, media access techniques, type of networks (LAN, MAN, WAN), performance management of networks, network design, distributed systems and applications, introduction to remote procedure calling, client/server computing, TCP/IP protocols, internet security.

CIS 420 Information Systems Security

The aim of the course is to introduce students to the very important topic of security and risk management in the field of information technology. In this course students learn critical security principles that they can apply to plan and develop secure and risk free systems. The course includes both theory and practice and students learn about the software, hardware, communications, applications, and the policies related to the development of secure IT based systems.

CIS 421 Software Testing

This course is designed to enable a clear understanding and knowledge of the foundations, techniques, and tools in the area of software testing and its practice in the industry. The course will prepare students to be leaders in software testing. Whether you are a developer or a tester, you must test software. This course is a unique opportunity to learn strengths and weaknesses of a variety of software testing techniques. Applications of testing techniques in health care industry (e.g. pacemaker), nuclear industry (e.g. plant control), aerospace industry (e.g. Mars Polar Lander), security (e.g. smart card), automobile industry (e.g. automotive control systems), and others will be considered.

CIS 430 Information Systems for Communications

The aim of this course is to teach students the skills of communications using the information systems, and how communication is used in global organizations in the world. The key elements of the course are information systems, software and hardware, data communication technologies, and people. The course teaches how all these components can be put together and managed to create competitive advantage to an organization. Students learn how information systems are used in organizations and how the quality, speed, and reliability can be improved by using these tools correctly. In addition, the course provides an introduction to the principles of technology acquisition and the use of various application software in modern organizations in order to improve the communication skills and the overall organizational efficiency.

CIS 435 E-Learning Systems

This course aims to combine the networked information technologies and organizational strategy. Students learn to implement a rich variety of business models in the national and global contexts with the aim of connecting individuals and businesses together. In addition, students learn e-business strategies and the development of applications for e-businesses.

CIS 450 IT Project Management

This course aims to understand and articulate the importance of Project Management in any business project, clearly define project objectives, create a project work Breakdown Structure, develop a manageable project schedule, understand scope creep and change control.

CIS 460 Mobile Application Development

Students learn to write both web apps and native apps for Android using Eclipse and the Android SDK, to write native apps for iPhones, iPod Touches, and iPads using Xcode and the iOS SDK, and to write web apps for both platforms. The course also touches on Windows 8 application programming, so as to provide students with a stepping stone for application development in the mobile operating system of their choice. Additional topics covered include application deployment and availability on the corresponding app stores and markets, application security, efficient power management, and mobile device security.

CIS 486 Database Programming II (Oracle)

DDL: Creating altering and dropping database objects (Tables, Views, Indexes, etc.). Oracle data types, meta data and its uses, Common Oracle aggregate, string and date functions, application of data integrity: domain, entity and referential. Constraints, SQL Plus settings and spooling, PL/SQL introduction: blocks, variables and their scope, cursor declarations, SELECT..Into, loops and conditional statements. Transaction: COMMIT and ROLLBACK. Procedures,

Functions and Packages: IN, OUT parameters. Cursors: basic LOOP and the for CURSOR LOOP. Exception handling. Table triggers. Dynamic SQL.

CIS 488 Web Development (PHP/MySQL)

This course follows a step-by-step introduction to the topics concerning PHP programming with MySQL. Topics include introduction to Web development and PHP, working with data types and operators, building functions and control structures, manipulating MySQL databases with PHP, managing state information.

