



Rawan Hamed Alghamdi

Teaching Assistant

Personal Data

Nationality | Saudi

Department | Computer Information Systems

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Language Proficiency

Language	Read	Write	Speak
Arabic	Native	Native	Native
English	Fluent	Fluent	Fluent

Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
2017	Bachelor's in Computer Information Systems	Imam Abdulrahman Bin Faisal University	Dammam, Saudi Arabia

Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work			Date
Teaching Assistant	Department of Computer Information Systems	College of Computer Science and Information Technology	Imam Abdulrahman Bin Faisal University	2019-Present
Computer Trainer	New Horizons Computer Learning Center	Al Khaleej Training and Education Company	Khobar, Saudi Arabia	2017-2019



Teaching Activities

Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Project Proposal	CIS 511	Co-supervising Senior Project.
2	Communication & Network Fund	CIS 315	Responsible of five labs for one semester.
3	Introduction to Computing	CS 211	Responsible of three labs for one semester.
4	System Analysis & Design (2)	CIS 421	Responsible of one lab for one semester.
5	Web-Based Systems	CIS 423	Responsible of three labs for one semester.
6	IT Infrastructure Management	CIS 326	Responsible of six labs for two semesters.
7	Project Implementation	CIS 521	Co-supervising Senior Project.
8	Computer Skills	COMP 131	Responsible of ten sections (Lectures) for one semester.
9	Database Concepts and Design	CIS 321	Responsible of five labs for one semester.

Brief Description of Undergraduate Courses Taught: (Course Title – Code: Description)

Project Proposal:

This semi-structured course is intended to guide students into the initiation, planning and designing of their graduation projects. In this context, they are expected to decompose a business-based IS problem into manageable components. Problems can be identified through the evaluation of organizational processes and identifying possible areas of improvement where IS can bring value. Students are expected to apply the project life cycle in-line with the organization's strategic plans. While working in groups, students are supposed to design IT projects, data and information management solutions to provide competitive advantage and high quality user experience. Groups will be evaluated based on the submitted documentations that are reporting on their solution using appropriate standardized templates. Along with that, they will be delivering these solutions in an effective oral presentation.

Communication & Network Fund:

This course provides the fundamentals of data communication and networking. It covers topics related to network layered architectures including connectivity, topology, TCP/IP and OSI models. For Physical Layer, it introduces the essential elements of transmission media including analogue and digital signals, time and frequency domains concepts, and types of channels. For Data Link Layer, it covers framing, switching and forwarding techniques, LAN addressing and ARP. For



Network Layer, it covers network service models, forwarding and routing, and IP addressing, and network design and development for different sized business organizations. At the Transport Layer it covers TCP and UDP protocols, operating principles, congestion control, error control and flow control. At the Application Layer students first learn application layer principles and core application protocols and then go on to discuss the Quality of Service requirements for business applications and their implications on network requirements. Network security and security devices are introduced and security requirements of business organizations are discussed. Students will be trained on the practical aspects of infrastructure solutions in network design and development for business organizations through hands-on exercises on device configuration including Cisco switches and routers. Popular simulation software including Cisco Packet Tracer and Wireshark are used for the analysis of network traffic and protocol behavior within the context of a business organization.

Introduction to Computing:

This course introduces the main concepts of Computer Science. It includes the basics of computing: hardware, software, connectivity and users, the different types and features of computers. It presents also the data types and data representation. A simple computer system architecture is presented so to emphasize on main components, secondary storage devices, types of memory, hardware, software and people. The principal peripheral devices are also presented: input, output and storage, data preparation, factors affecting input, input devices, output devices, secondary storage devices, communication between CPU and input/output devices. Software aspects are introduced like problem-solving and programming: algorithm development, flowcharts, looping, some programming features, pseudo code, some structured programming concepts, documentation, as well as programming languages: machine language and assembly language, high-level and low-level languages, assemblers, compilers and interpreters. Finally, the course presents the computer and communication aspects, as well as different features of Operating Systems.

System Analysis & Design (2):

This course introduces the analysis and design of information systems within the context of an organization. The course approaches this by identifying the need for IT to enable organizational change and bring business value. Business process management and modeling techniques are used to analyze and model business requirements. This includes data, user and security requirements. The course lays down different approaches to systems analysis and design including SDLC, agile and UML. Finally, the course demonstrates the different options organizations have to develop information systems including package systems, outsourced and in-house development. The lab component will exhibit these concepts using system analysis and design software tools. Students are expected to demonstrate their understanding of these concepts in a form of a project. Students learn how to write Systems Requirements Specifications to communicate systems requirements at different organizational levels in a business organization.



Web-Based Systems:

This course provides the students with an introduction to web based systems development with an emphasis on current web tools, techniques and practical application in an enterprise environment. The course includes client side and server-side technologies. The client side covers HTML, CSS, and JavaScript for presentation and client-side interactivity. The server side includes PHP language for the business logic and MySQL as the back-end database. It also covers installation and configuration of a development server through the use of XAMP (Apache, MySQL and PHP) software bundle. In addition to the use of web services and API, the course will expose students to new opportunities that will facilitate achieving an organization goals using web technology and enhancing existing processes to create value. The course also focuses on knowledge and practical skills for the implications of adopting digital business and evaluation of digital business capabilities for business organizations.

IT Infrastructure Management:

This course covers advanced concepts in data communications and computer networks including Media Access Control Mechanisms, wireless and mobile networks, and routing protocols. It then focuses on the services and solutions available through IT infrastructure in an organizational context. Students develop knowledge and skills for communicating effectively with professionals whose special focus is on hardware and systems software technology, and for designing organizational processes and software solutions that require in-depth understanding of the IT infrastructure capabilities and limitations. The course focuses on Internet-based solutions, business continuity, and the role of infrastructure in regulatory compliance. Students are given practical training on the configuration and analysis of WLANs and routing protocols through a more in depth use of Wireshark and Packet Tracer. It also covers the analysis of network performance for a business organization. Case studies of noteworthy examples of success of IT infrastructure deployment in businesses help students build the skills of successfully applying infrastructure solutions in businesses and choosing the correct options.

Project Implementation:

The Project Implementation course is intended to allow the students to continue their work that started in CIS 511 Project Proposal. They are expected to produce a realization of their IS solution. The students will be working in groups to create a software solution that fulfills the design defined in the proposal course. Along with that, they are expected to produce a Test Plan that documents how lays out the test-cases that needs to be carried out. Another deliverable of this course is a user manual to facilitate user experience. The final submission provides a holistic view of the project starting from inception to closure, demonstrating how the solution would improve organizational processes to bring



value. These results and working prototypic solution will be presented to a panel of evaluators in an oral presentation.

Computer Skills:

A course taught in preparatory year for introducing the computing fundamentals and Microsoft Office (Word, Excel and Access).

Database Concepts and Design:

Course Description

This course introduces students to basic database concepts. The course teaches students relational database terminology, as well as data modeling concepts, building Entity Relationship Diagrams (ERDs), and mapping ERDs. It introduces relational languages, and The Structured Query Language (SQL) is used to interact with a relational database and manipulate data within the database. Relational database systems are the main focus, but other types, including object-oriented databases, are studied. This course will also cover topics such as file organization, indexes, transactions and transaction management, concurrency control, and database recovery. Leveraging project-based learning techniques, students will create and work with projects which challenge them to design, implement, and demonstrate a database solution for a business or organization using modern software tools.

Student Academic Supervision and Mentoring

#	Level	Number of Students	Academic Year
1	Senior Students	26	2019-2020
2	Prep Year Students	2 Sections	2020-2021 First Semester
3	Students from different levels	15	2020-2021 Second Semester

Committee Membership

#	Academic year	Position	Organization
1	2019-2020	Coordinator	Faculty Search Unit
2	2019-2020 2020-2021	Coordinator	Student Academic Advising Unit
3	2019-2020 2020-2021	Member	Scientific Research Unit
4	2019-2020	Member	Coop Training Unit



5	2019-2020 2020-2021	Member	Students Activities Unit
6	2019-2020	Member	New Undergraduate Program Development Unit
7	2020-2021	Member	CYS Curriculum

Last Update

4th of February, 2021