CCIS
College of Computer & Information Science
King Saud University

Version 1.0.0

Software Engineering Department Handbook

Software Engineering Department, College of Computer & Information Sciences
http://www.ksu.edu.sa/sites/Colleges

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1. Introduction and Correspondence information:

This document reveals precise yet clear information that a prospective student might need concerning the Software Engineering Dept at College of Computers and Information Sciences (***CCIS***) located in arms of the leader in education strata in the Kingdom, **King Saud University**. This handbook is a result of the efforts put in to present the students with the information in a concise and coherent manner. A glance at this document will provide you with all the necessary and relevant information and the contact details of the personnel concerning admission and other queries that you can think of.

Just in case even after going through this document shall the students need any other information they may contact us:

Department	Query Type	Contact Number
Software Engineering, Public relations and Counseling.	Queries related to Engineering program, General Enquiries	
Admissions	Semesters, transcripts, etc.	

2. Software Engineering? What it is?

Software engineering is a systematic, creative, logical and sound computing approach to an application development. It encompasses techniques and procedures, often regulated by a software development process, with the purpose of improving the reliability and maintainability of software systems.

Software engineering, The Definition:
Software engineering has been defined by various experts in their own way based on their experiences and expertise, a few selected of them which best describe Software Engineering are as follows:

"The establishment and use of sound engineering principles (methods) in order to obtain economically software that is reliable and works on real machines"

- **[***Bauer 1972***].**

"The application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software"

- [*IEEE 1990***]**

Software Engineering = 90% Documentation + 10 % Coding

- [*As Observed by field experts*]

3. Software Engineering as an Engineering Discipline

The study and practice of software engineering is influenced both by its roots in computer science and its emergence as an engineering discipline. Software engineering degree programs are being developed by academic units as well as by engineering colleges. Thus, the discipline of software engineering can be seen as an engineering field with a stronger connection to computer science discipline than the more traditional engineering fields.

In the process of compiling this document, the major focus is applying the practices of engineering to the development of software, and to prepare for the more detailed development of these ideas, this section examines the engineering methodology and how it applies to software development.

3. Software Engineering at CCIS, Why?

The department of Software Engineering at College of Computers and Information Sciences (***CCIS***) enjoys the services of the competent and dedicated academicians, possessing more that 2 decades of experience in imparting the knowledge in the field of core and applied computing at undergraduate and graduate levels and experts at placing greater reliance on objective oriented teaching.

Our Software Engineering provides the student's an insight into various other aspects of the field.

3.1. Vision:

Aspires to be a leader in the field of software engineering

3.2 Mission:

To prepare creative, systematic and analytic minds so that they can play an effective role in the existing IT society thereby contributing to the national goal of acquiring a fair share in the forth coming knowledge society.

4. Facilities:

Software Engineering department provides wide range of state-of-the-art modern facilities to their students. These include lecture halls, libraries, laboratories and IT services. As per requirements of industry, we have latest hardware and software technology; it shows our team work, focus on student's professional education and interactive learning. In Software Engineering department we are providing all the facilities to our students that they need according to their curriculum.
The Software Engineering department is provides connectivity to the network with T1 lines (2Gbps) to their students at their dorm rooms via Ethernet and Wireless connectivity too.
The Software Engineering department also provides the facility to download software and their notes and other material related to their course online.
In Software Engineering department primary focus is on research that focuses on contributing in Saudi Arabia's development as a scientific technological hub. It is conducted at the academic departments and research centre.
We are also providing the facility of scholarship to encourage the brilliant and hardworking students, national as well as international level. In our university we are providing housing facilities near campus and also transportation for those students that are living outside the campus.

5. Accreditation:

The Curriculum was modeled after recommendations of Software Engineering 2004 and meet the requirements set by ABET (Accreditation Board of Engineering and Technology) www.abet.org and also it fulfill the local requirements.

6. Faculty of Software Engineering:

Faculty members of the department of SE participate in all kinds of the local media including:

- Daily, weekly columns and articles in journals and newspapers.
- Radio and TV interviews
- Public / guest lectures
- Faculty members and websites and personal blogs.

Training courses and workshops:

The department participates in several training courses and workshops aiming at providing computer skills, training and computer literacy programs to community organizations and Government Agencies.

Projects Supervisions and Consultancy Services:

Faculty members of the department provides consultation services and supervised projects that are essential to the community with various organizations

Running Projects:

List of Software Engineering Faculty:

SN	*Name*	*Designation*	*Highest Degree*	*University*	*Specialization*
1	Dr. Abdullah S. AlGhamdi	Chairman	Ph.D	Ottawa University, Canada	Web Engineering, MCR Lab
2.	Dr. Pervez Anwar Ahmed	Associate Professor	Ph.D	Concordia University, Canada	Pattern Recognition, Intelligent Software Development Environment, Incremental S/W Development.
3.	Dr. Khalid N. AlMutib	Assistant Professor	Ph.D		Robotic & Intelligent Control
4.	Dr. Salah M. Rahal	Assistant Professor	Ph.D	National Polytechnic Institute of Grenoble - France	Signal Processing.
5.	Dr. Abdulaziz O. Alsadhan	Assistant Professor	Ph.D	University of Bradford, UK	Unified Modeling Languages, Knowledge Management System, Project Management Techniques, Software Engineering Methodologies.
6.	Dr. Ahmed M. Ghoneim	Assistant Professor	Ph.D	Otto-von-Guericke-University, Germany	Software Engineering Model, Design Pattern, Object Oriented Model, Reflection System
7.	Dr. Elgasim E. Ali	Lecturer	Ph.D	University of Khartounm	Networking & Internet Distributed Applications, Computer Graphics, Speech Processing, Image Processing, Genetic Algorithm, Neural Networks.
8.	Dr. Obeid S. Fares	Lecturer	Ph.D	Mansoura University	
9.	Mr. Ahmad A. Hussain	Lecturer	Masters of Science in Computer Science		Application & Web Developer, Clear wave broadband Internet Services

10.	Mr. Fetouh M. Kallel	Lecturer	Masters in Computer Science	Technical University Berlin, Germany	Networks, Telecommunications
11.	Mr. Mohammed Wakil Ahmed	Lecturer	Masters in Computer Science & Applications	Aligarh Muslim University, India	Digital Design, System Design, Database & Information System, Algorithm design & Analysis.
12.	Mr. Zeeshan Ahmed Siddiqui	Lecturer	Masters of Science in Computer Science	Preston University, Wyoming U.S.A, Franchised in Pakistan.	Software / Web Engineering, Database Designing & Architecture. Enterprise Resource Planning, Content based management systems.
13.	Mr. Muhammad Nasir	Lecturer	Masters in Computer Science	Al-Khair University , Azad Jammu & Kashmir, Pakistan	Programming Languages, Databases & Information Networks
14.	Mr. S.S. Amanullah Quadri	Lecturer	Masters in Computer Applications	Dr. Baba Saheb Ambedkar Marathwada University, India	Networks, Computer Communications, Databases

7. Admission Requirements:

Students aspiring to seek admission in the department of software engineering must fulfill the following:

7.1 General Requirements for Male Students

- Must have a score of 92% over all, in high school diploma (science branch), with 94% in mathematics, 94% in physics and 90% in English
- It should be noted the final acceptance depends on the availability of seats, and it also considers the equivalent percentage which is calculated as (70 % high school diploma + 30 % skills test).

7.2 General Requirements for Female Students

- Must have a score of 92% over all, in high school diploma (science branch), with 94% in mathematics, 94% in physics and 90% in English
- It should be noted the final acceptance depends on the availability of seats, and it also considers the equivalent percentage which is calculated as (70 % high school diploma + 30 % skills test).

8. Core & Elective Tracks / Credit Hours:

In keeping with the department's belief that there is a common body of knowledge and skills necessary for effective management in the private, public and nonprofit sectors, CCIS Software Engineering degree programs share a common core of courses.

8.1 Credit hour distribution chart, as per University/College & Department requirement:

Core Course	Credit Hours	Required By
Islamic Culture	08	University Requirement
Arabic Language	04	University Requirement
Entrance for Integration	03	College Requirement
Mathematics Set	03	College Requirement
Linear Algebra	03	College Requirement
General Physics	04	College Requirement
Probability & Statistics Engineering	03	College Requirement
Computer Programming 1 & 2	04 + 04	College Requirement
Data Structure	03	College Requirement
Operating System	03	College Requirement
Introduction to Software Engineering	03	Department Require.
Web Application Development	03	Department Require.
Software Engineering Requirement	03	Department Require.
Software Engineering Strict	04	Department Require.
Software Design & Architecture	03	Department Require.
Software Quality Assurance	03	Department Require.
Software Engineering Lab 1 & 2	02 + 02	Department Require.
Software Testing	03	Department Require.
Software Eng. Project Management	03	Department Require.
Program Standards & Management	03	Department Require.
Tools & Methodologies of SE	03	Department Require.
Software Maintenance	03	Department Require.
Draft 1 & 2	02 + 04	Department Require.
Practical Training	01	Department Require.
Data Foundation	03	Department Require.
Computer & Telecom Networks	03	Department Require.

8.2 Elective Courses

Students are encouraged to select those electives that best suit their backgrounds and career interests. Each of the 13 areas lists available study options, including developing a concentration in a functional or program area; completing a Undergraduate Diploma program concurrently with a degree program, or taking a specialized degree program. Following are the list of Electives at CCIS Software Engineering Department.

Elective Course	Credit Hours
Knowledge Management Software	03
Web Application Engineering	03
Interactive Human Computer	03
Advance Software Engineering	03
Embedded System Design	03
Selected Topics in Software Engineering	03
DBMS Architecture	03
Information Security	03
Integrated Information System	03
E-Business	03
Computer Architecture for CS	03
Classes & Simulation System	03
Artificial Intelligence	03

Note:

Student will choose 04 electives, maximum 12 credit hours.

8.3 Total Credit Hours for the program

Preparatory Year	:	30 Credit Hours
University Requirements	:	12 Credit Hours
College Requirements	:	30 Credit Hours
Department Requirements	:	51 Credit Hours
Optional	:	12 Credit Hours
Free	:	03 Credit Hours
Total	**:**	**138 Hours**

10. Program Summary / FAQ's:

Our program abstract and summary covers every perspective. There are many things which require your attention & interest. This section covers most frequently asked questions (FAQ's).

Q: How many years do I require to complete my BSE?
Answer: You will complete your BSE in 04 academic years.

Q: How many credit hours I need to become a full graduate?
Answer: You need 138 credit hours, Please view the following chart

Area	Credit Hours
Core Courses: 93 Credit Hours	
Islamic Culture & Arabic language	12
Mathematics, calculus & algebra	09
Physics, probability & statistics	07
Programming, Data Structure & Operating Systems	14
Software Engineering	45
Web Application Development	03
Networks	03
Elective Courses:	
Software Engineering	24
Web Application Engineering	03
Free	03

Q: What are the recommended numbers of credits per quarter?
Answer:

Q: How many times a student can repeat a particular course?
Answer:

Q: What is the minimum GPA required to consider a graduate?
Answer:

Q: What are the punishments of Plagiarism?
Answer:

Q: How many lecturers will be per semester?
Answer:

Q: How many labs will be per semester?
Answer:

Q: What are the requirements of attendance per semester?
Answer: 75% attendance is required to qualify for the semester exam.

Q: Negative Advertisement about Plagiarism?
Answer:

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