" حيث تصبح الرؤية واقعاً"

"When Vision Becomes Reality"

" عراقة وجودة"

Tradition and Quality

Brief course description- Course Plan Development and Updating Procedures\ Department Software Engineering	QF01/0409-3.0E

Faculty	Science & IT	Academic Department	Software Engineering	Number of the course plan (2020-2021)
Number of Major requirement courses	9			

This form is just for the major requirement courses

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
0104714	3	**Advanced Software Testing**	-

This course will examine advanced software testing techniques. In particular, the important phases of testing will be reviewed, emphasizing on the significance of each phase when testing different types of software.

Students will learn the state of the art in testing technology for object-oriented, component-based, concurrent, distributed, graphical-user interface, and web software. In addition, closely related concepts such as model checking and program analysis will also be studied. Emerging concepts such as test-case prioritization and their impact on testing will be examined. Students will gain hands-on testing/analysis experience by proposing new solutions to open research problems in the field of software testing and experimentally demonstrating the strengths/weaknesses of their solutions.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
0104716	3	**Advanced project management**	-

This course describes the key aspects of a software project. It begins with the job description of a software manager and then addresses those topics germane to successful software development management, including organizing the software development team; interfacing with other engineering organizations (systems engineering, quality assurance, configuration management, and test engineering); assessing development standards; selecting the best approach and tailoring the process model; estimating software cost and schedule; planning and documenting the plan; staffing the effort; managing software cost and schedule during development; risk engineering; and continuous process improvement. Personnel management topics, including performance evaluations, merit planning, skills building, and team building, are also covered. This course introduces software engineers aspiring to become technical team leaders or software project managers to the responsibilities of these roles. For those software engineers who have advanced to a software development leadership position, this course offers formal training in software project management.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
0104713	3	**Advanced Software development**	-

Successfully design rich enterprise web applications using the detailed information in this Oracle Press volume. Oracle Fusion Developer Guide goes beyond the predominant drag-and-drop methods in Oracle JDeveloper and provides a wealth of examples that address common development scenarios when using Oracle Fusion Middleware. Work with Oracle JDeveloper, define navigation rules, accept and validate user input, build page layouts and skins, and incorporate drag-and-drop functionality into web applications. This authoritative resource also explains how to secure and internationalize your applications

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
0104712	3	**Advanced Software Architecture and Design**	-

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This course describes architectural patterns for various architectures, such as broker, discovery, and transaction patterns for service-oriented architectures, and addresses software quality attributes including maintainability, modifiability, testability, traceability, scalability, reusability, performance, availability, and security. Complete case studies illustrate design issues for different software architectures are also discussed in this course

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
0104711	3	**Advance software Requirements**	-

One of the main challenges in software development is to make sure one is developing the right system, i.e. to understand the requirements that need to be fulfilled. The focus of this course is how to find and collect requirements from relevant sources both at the start and during a software development project.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
0104755	3	**Advanced System Analysis and Design**	-

Systems Analysis and Design helps students develop the core skills required to plan, design, analyze, and implement software applications. Students are guided through the topics in the same order as professional software developer working on a typical real-world project.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
0104718	3	**Research methodology**	-

This course will prepare students for advanced research by examining how to plan, conduct and report on empirical investigations. The course will cover techniques applicable to each of the steps of a research project, including formulating research questions, theory building, data analysis (using both qualitative and quantitative methods), building evidence, assessing validity, and publishing. It will particularly focus on research involving software, developing statistical tools to measure software performance and the ways in which people interact with software tools..

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
0104754	3	**Advanced Software Modeling**	-

This course provides an advanced view of the software Models. The student in this course will learn how to create, built, drew, test and refactor software models; specifically UML models. The course aims to give the students real challenges so they can put their modeling knowledge into practice.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
0104715	3	**Advance software quality**	-

This course defines the quality of the software, the foundations of quality measurement system, quality management, assurance of quality, planning, quality of product and process quality, software product metrics, management of the quality factors of the software and its effectiveness, global scale ISO 9001, check the software and plans and techniquesfor quality.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
0104761	3	**Advanced Database management system**	-

This module builds on the introductory module in databases. It intends to introduce more advanced topics in databases such as data mining and data warehousing, distributed databases and client server architecture after introducing the DBMS implementation

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Course number	Credit hours	Title of the course	Prerequisite- co-requisite
0104754	**3**	**Advanced Software Engineering**	**-**
The purpose of this course is to study different agile methods and find out the best one for software development. Each important agile method offers own practices, release planning methodology, sprint planning. They differ in sizes and principles			