University of Tabuk
College of Computer and Information Technology
Department of Computer Science

Syllabus

Course

Code: *CSC-490*

Title: ***Computer Science Graduation Project(1)***

Credits

1-0-0-1

Text Books

- Text Books, published research papers and design manuals relevant to the assigned project topic.

References

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Prerequisite:

Completed more than 90 credit hour

Course Description

The graduation project challenges students to go beyond the learning that occurs as the result of their prescribed educational program by developing projects that demonstrate their intellectual, technical and creative abilities. Students shall complete their projects in areas of concentrated study under the direction and supervision of faculty members. The projects will demonstrate the students' ability to apply, analyze, synthesize, evaluate information, and communicate significant knowledge and comprehension. Personal growth and satisfaction are associated with the graduation projects. Students will derive sense of accomplishment through the completion and "ownership" of bodies of works that are reflections of their interests and abilities. Opportunities to expand their personal knowledge and explore careers and apply learning to real life situations will serve to benefit the students' growth and promote lifelong learning.

Objectives:

- Understand and apply essential facts, concepts, principles, theories, and practices relating to computer science, information systems, and software applications in the context of well defined scenarios, showing judgment in the selection and application of tools and techniques, whereby, both the process and the product are integral parts of this activity.

- Identify and analyze criteria and specifications appropriate to specific problems, plan strategies for their solution, use such knowledge and understanding in the modeling and design of computer based systems, develop and implement a software system along with appropriate documentation.
- Analyze the extent to which a computer based system meets the criteria defined for its current use and future development.
- Apply the principles of effective information management, information organization, information retrieval skills, and the human computer interaction to the evaluation and construction of user interfaces web pages.
- Understand and explain the quantitative dimensions of a problem, and exercise presentation skills to a range of audiences about technical problems and their solutions.
- · Be able to work effectively as a member of a development team and under guidance.
- · Manage one's own learning and development, including time management and organizational skills.
- Appreciate the need for continuing professional development.

Course Outline

Week	Topics	Topic Details
1 2 3 4	**Phase I: Initiating**	• Problem definition(Problem Statement) • Current / Existing systems • Proposed scope and enhancement • Scope • Development of Project Objectives

Week	Topics	Topic Details
5 **6** **7** **8** **9**	**Phase II: Planning And Requirements**	**Structured approach :** • Scope Initiation • Activities definition ,sequencing and duration estimating (Use Gantt Chart, Network Diagram) • Resource Planning • Cost estimating and Budgeting. • Information Gathering / Literature Survey • Describing functional and nonfunctional requirements of the project • System Development Requirements (Environment and/or Tools, Utilities, Software, Hardware, etc...) • Scheduling and Resources Distribution (Optional) **Object Oriented approach :** • Scope Initiation • Activities definition ,sequencing and duration estimating (Use Gantt Chart, Network Diagram) • Resource Planning • Cost estimating and Budgeting. • Information Gathering / Literature Survey • Scheduling and Resources Distribution (Optional) • Requirements Management Plan. • Glossary. • Business Use Case (Optional). • Object Diagram (Optional). • Use Case Specifications. • Supplementary Specifications

Week	Topics	Topic Details
10 **11** **12** **13** **14**	**Phase III: Analysis And Design**	**Structured approach :** • Logical Data Flow (Context, Level 0,And Child) Diagram • Physical Data Flow Diagram (Optional) • Data Dictionary (Data Flow Description Form, Process Description Form, Element Description Form, Data Store Description Form, Data Structure). • Database Design (ERD). • Output Design and Input Design **Object Oriented approach :** • Use Case Diagram. • Activity Diagram. • Package Diagram. • Class Diagram. • Sequence Diagram • Collaboration Diagram. • State Diagram. • Deployment Diagram. • Output Layout.
15 **16**	**Progress Report**	The Assessment Committee will evaluate students' perception and proposed model

Grading

Upon successful completion of the course the student will be evaluated according to his/her evaluation by his/her supervisor.

Intended Learning Outcomes:

Upon completion, students will be able to:

Outcome	Assessment methods
Students recognize their role's with developing team carrying different aspects of analyzing computer systems, in terms of choosing the systems and the interaction of decisions made by various project teams.	Individual discussion, evaluation of team cooperation.
Students recognize the ethical and professional responsibility in achieving accurate analysis for safe and economical design, and its impact on the wellbeing of the society.	Individual discussion, evaluation of the awareness of project value.
Students recognize the importance of reading and understanding technical contents in English in order to achieve life–long learning and be able to carryout their responsibilities.	Reports reading and proofing
Students are encouraged to submit accurate analysis in an efficient and professional way.	Individual discussion, revision of completed work
Students are encouraged to improve their writing, communication and presentation skills	Presentations, progress reports, final report, team work activities

Method of Teaching:

- **Supervision (One hour per week)**
- **One-to-one discussion**
- **Work revision**