

Kingdom of Saudi Arabia  
Ministry of Higher Education  
Umm Al-Qura University



المملكة العربية السعودية  
وزارة التعليم العالي  
جامعة أم القرى

# Computing College at AlQunfudah Department of Computer Science

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## Graduation project Handbook

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2016-2017

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This document outlines the contents of Graduation Project (GP) handbook, which is intended to be used by students and faculty members in the Computing College at AlQunfudah, Umm Al Qura University, Makkah Al Mukarramah, Kingdom of Saudi Arabia. It provides a framework for use in undergraduate computer science projects.

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## 1. Glossary

<b>GP:</b>	Graduation Project.
<b>CS:</b>	Computer Science department
<b>CCG:</b>	Computing College at AlQunfudah
<b>Supervisor:</b>	A fulltime faculty member in the Computing College at AlQunfudah responsible for the supervision of a group of <b>GP</b> .
<b>External Supervisor:</b>	In case of an industrial project, a person assigned by the external organization as a supervisor.
<b>Examiner:</b>	A expert of the relevant area chosen from respective department, or other departments of the College.
<b>Coordinator:</b>	A faculty member appointed by the department to coordinate the GP tasks, and prepare GP ABET course files.
<b>Student:</b>	A student registered for <b>GP</b> in Computer Science department at CCG, Umm Al Qura University, KSA.
<b>Group/Team:</b>	A group of students formed as a team to work on the <b>GP</b> .

## 2. Graduation Project Course Objectives

Graduation Project (GP) is an important part of every engineering and computer science discipline at undergraduate level. The main purpose of these projects is to encourage students to apply the knowledge acquired during their studies. Students are also expected to show how proficient they are in solving real world problems with certain constraints for the outcome-based evaluation suggested by ABET and ACM/IEEE Computing Curricula 2001 [1]. State of the art research shows that undergraduate students' projects have the potential to nurture the nascent minds of students toward the advanced knowledge of industry and research domain, in addition to fulfillment their academic needs. In order to emanate the most out of students and their supervisors, a GP need to follow several standards.

Many students deem the GP course very different from normal lecture-based courses because it demands independent objective formulation, activity planning and time management. Hence, a structured template and lifecycle for GP is essential for this course [2]. It can help students to the standards necessary to be followed to obtain a high quality GP course [3]. This handbook is written to serve the same purpose for undergraduate students, enrolled in a GP course at Umm Al Qura University.

A GP course at Umm Al Qura University consists of a number of activities for producing world class outcomes called "GP Deliverables". This handbook contains a minimal document set (GP Deliverables and assessment rubrics) and the content of each document, based on timeline, look and feel as well as the structure of some standards [4] [5] [6] [7] [8] [9] [10].

### 3. Overview of GP Process

The GP is by default spread over the last two semesters (e.g. 7<sup>th</sup> and 8<sup>th</sup> for 4 year curriculum or 9<sup>th</sup> and 10<sup>th</sup> for 5 year curriculum), called semester 1 and semester 2 (two-semester plan). In special circumstances and with the approval of the respective department, GP can be carried out in one semester (one-semester plan). Semester 1 and Semester 2 will be marked separately based on the work progress shown, final presentation done, and deliverables submitted by the students in each semester. Prior to Semester 1, students are encouraged to communicate with prospective supervisors of their respective department to complete a project proposal. However, the actual registration of the GP course will formally start at the onset of Semester 1. By the end of the Semester 1, the students have to complete the project proposal, project management plan, project requirement specification, and do a presentation, which shall be marked and graded. For the next semester, grade is awarded at the end of the Semester 2 after the demonstration and presentation of the project and submission of the project report. Following are some important facts in the GP process.

#### Assigning Students to Supervisors and Projects

- A supervisor must be a full time faculty member in the College of Computer and Information Systems and may be assisted by an external supervisor in case of an industrial project.
- In the semester prior to starting the GP, supervisors will be encouraged to submit their project ideas to the GP Coordinator, which will be published to respective departmental website and similar publishing areas. Students can also contact with their earlier chosen supervisor and submit their own ideas.
- At the beginning of Semester 1 of the project, an orientation session will be conducted to educate the prospective final year students, where this GP handbook will be presented and explained.
- The students formally register for the GP course in the 1<sup>st</sup> week of Semester 1. They can start formally by submitting the Final Year Project Start Form (see Appendix A) to the GP Coordinator, throughout the 2<sup>nd</sup> weeks.
- Students have to form a group or team consisting of 3, 4 or 5 students, depending on the total number of students and the availability of the faculty staff.
- The GP Coordinator, in coordination with each supervisor, is responsible to prepare a list of the proposed projects and supervisors.

## Project Supervision and Deliverables

- After the first startup meeting in the 2<sup>nd</sup> or 3<sup>rd</sup> week, the students have to write a formal project proposal (see Appendix A) with the guidance of its supervisor.
- The students are required to submit a finalized project proposal to the GP Coordinator for registration no later than the 4<sup>th</sup> week of the Semester 1.
- The groups continue submitting project deliverables to the supervisors (see Section 5 for detail on project deliverables). It is expected that by the end of the semester 1 each group should complete project proposal, project management plan, project requirement specification, and prepare either an oral or poster presentation.
- To keep track on weekly student-supervisor meetings and to monitor student progress, the students are required to fill a Regular Supervision Record Form (see Appendix A) that contains the meeting minutes and submit it to the respective supervisor after the meeting to ensure that it is accurate. Finally, copies of the meeting minutes will be stored in the GP course file.
- Each group will submit a report (project details, design, modeling, execution plan...) to their supervisor by 15<sup>th</sup> week of Semester 1.
- Semester 1 project evaluation and marking of final grade of the Semester 1 is held on the Saturday of the 18<sup>th</sup> week of the semester 1. Each group delivers a presentation detailing the work done in Semester 1 and early demonstration of the work, if any, in front of the supervisory committee as per schedule announced by GP Coordinator. The final grade of Semester 1 will be marked by the supervisory committee in consultation with the supervisor.
- The form of presentation in the Semester 1 is either through an oral presentation using Microsoft PowerPoint slides or through a poster. The duration of each oral presentation is total 20 minutes followed by a 10 minute question and answer session.
- According to the evaluation done and suggestions received from the committee, project work should be adapted, in consultation with the supervisor, at the start of Semester 2.
- Each group submits the Final GP Report (project details, design, modeling, execution plan, implementation...) by week 14 of Semester 2.

## Project Evaluation

- The department should form an evaluation committee.
- Examiners and supervisory committee are invited to evaluate students' projects. The GP Coordinator is responsible for scheduling final project presentation, which is a public event where students of the last semester before GP should also be encouraged to attend the event.
- Evaluation should be carried out according to the rubrics provided in Appendix A.5 and each project should be marked at least by three members of the evaluation committee.
- Plagiarism should be punished by scaling down students' marks by dissimilarity scores obtained from the online integrity checker [www.turnitin.com](http://www.turnitin.com).

## Miscellaneous Notes

- The GP coordinator is responsible for providing soft copies of the final report (in pdf format) to STGP. She/he is also responsible for providing any other requested data for the purpose of maintaining a GP data repository or quality assurance.
- Students will be encouraged to fill up a survey at the end of Semester 2 (see Appendix A.5).
- Figure 1 (see Appendix A) portrays the highlight of the above mentioned GP process.
- If the students need to access resources pertaining to their project such as conducting a survey with human subjects within or outside the Umm Al-Qura University campus, access data from any proprietary database such as University Registration Department, to name a few, they need to fill up a form (see Appendix A) outlining the justification and scope of the project, get it signed by the project supervisor and the Head of the respective department.

## 4. GP Deliverables

### Overview

The following table contains a minimal set of GP deliverables along with the purpose and the deadline of submission. The set of deliverables (given in Table 1) depends upon the nature of the project. Each deliverable is mandatory and alternate can be defined in consultation with the supervisor and the GP coordinator (at least a week before submission deadline). Each submitted deliverable must be duly signed by the supervisor. The submission without supervisor's approval will not be considered. Late submissions are liable to get penalty decided by GP Committee. The students may get a zero for a particular submission.

**TABLE I – GP Deliverables (for two semester plan)**

Deliverable	Purpose	Student information	Due
Start of Semester 1			
Project Proposal	To document the problem statement, need for the project, project scope and expected benefits	Submit to supervisor	4 <sup>th</sup> week of Semester 1
Project Report	To submit project deliverables (including the recommended documents of Semester 1 shown in Table III) in the form of a single report	Submit to Supervisor	15 <sup>th</sup> week of Semester 1
Final Presentation	An examiner is invited to evaluate students' projects	Present to Supervisor, Examiners	Saturday of 18 <sup>th</sup> week
Grading of Semester 1 and End of Semester 1			
Start of Semester 2			
Final Report	To bind all project deliverables (including the recommended documents of Semester 2 shown in Table III) in the form of a single report.	Submit to Supervisor	14 <sup>th</sup> week of Semester 2
Final Presentation & Demo	An examiner is invited to evaluate students' projects	Present to Supervisor, Examiners	15 <sup>th</sup> week of Semester 2
Grading of Semester 2 and End of GP			

**TABLE II – GP Deliverables (for one semester plan)**

Deliverable	Purpose	Student information	Due
Start of Semester			
Project Proposal	To document the problem statement, need for the project, project scope and expected benefits	Submit to supervisor	3 <sup>rd</sup> week
Final Report	To bind all project deliverables (including the recommended documents of Semester 1 and Semester 2 shown in Table III) in the form of a single report.	Submit to Supervisor	15 <sup>th</sup> week
Final Presentation & Demo	An examiner is invited to evaluate students' projects	Present to Supervisor, Examiners	15 <sup>th</sup> week
End of Semester and End of GP			

**TABLE III – Documents recommended and can be part of the deliverables shown in Table I and Table II**

<b>Deliverable</b>	<b>Purpose</b>	<b>Student information</b>	<b>Due</b>
Start of Semester 1			
Project Management Plan (PMP)	To document project development approach, associated milestones, agreed deliverables and dates	Submit to supervisor	10 <sup>th</sup> week of Semester 1
Project Requirement Specification (PRS)	To document the agreed requirements, expected features, constraints, interfaces. This document is also supposed to provide the system design and modeling	Submit to supervisor	13 <sup>th</sup> week of Semester 1
Start of Semester 2			
Project Design Document	To document the design in order to provide the basis for implementation and unit test. Also describes the rationale for design decisions taken.	Submit to Supervisor	3 <sup>rd</sup> week of Semester 2
Test Document	To document how the project will be tested, and record the results.	Submit to Supervisor	14 <sup>th</sup> week of Semester 2
Grading of Semester 2 and End of GP			

### **End of GP Submission**

- Four copies of the bound report (one for boy’s departmental library, one for girl’s departmental library, one for examiner and one for supervisor)
- A CD (for the supervisor) comprising the following folders:
  - Report (soft copy of the final report, and power point presentation)
  - Code (complete source code of the project)
  - Demo (the executable in working order and a readme file containing the information about the software requirements (tools) and hardware requirements for the GP as well as the instructions or the steps (soft copy of the user manual) for running the GP executable).

## 5. GP Evaluation

### Evaluation Criteria

Following table explains a guideline for the criteria to be used for GP evaluation/assessment along with description and evaluation authority (s).

**Table IV: GP Evaluation Criteria**

<b>Criteria</b>	<b>Description</b>	<b>Evaluation Authority(s)</b>
Semester 1 and Semester 2 Process	To assess that student(s) have kept continuous contact during the work and have been on time both to meetings and in sending deliverables.	Supervisor
Semester 1 Project Presentation	To assess that student(s) have completed tasks and delivered documents expected in the first half of the course i.e. Semester 1. It includes both demonstration and presentation of the work.	Supervisor, Supervisory Committee
Semester 1 Proposal	To assess that the chosen project is worthy of being acceptable as a GP and if acceptable, register the project in the GP database.	Supervisory Committee
Semester 2 Project Demonstration	To assess the end product developed in terms of interfaces, coding standards, and originality of the work. It requires student(s) to install project and run it for real time presentation.	Supervisor, Supervisory Committee, Examiner
Semester 2 Oral Presentation	To assess problem understanding, adequate analysis, quality of the design and presentation skills. Each group is required to discuss the completeness and accomplishment of the project.	Supervisor, Supervisory Committee, Examiner
Semester 1 and Semester 2 Project Report	To assess the structure of the project report. Student(s) are required to show planning and progress in an organized way with emphasis on the interpretation of the information gathered during the project. Project reports have to be submitted in both Semester 1 and Semester 2.	Supervisor, Examiner

# Appendix A

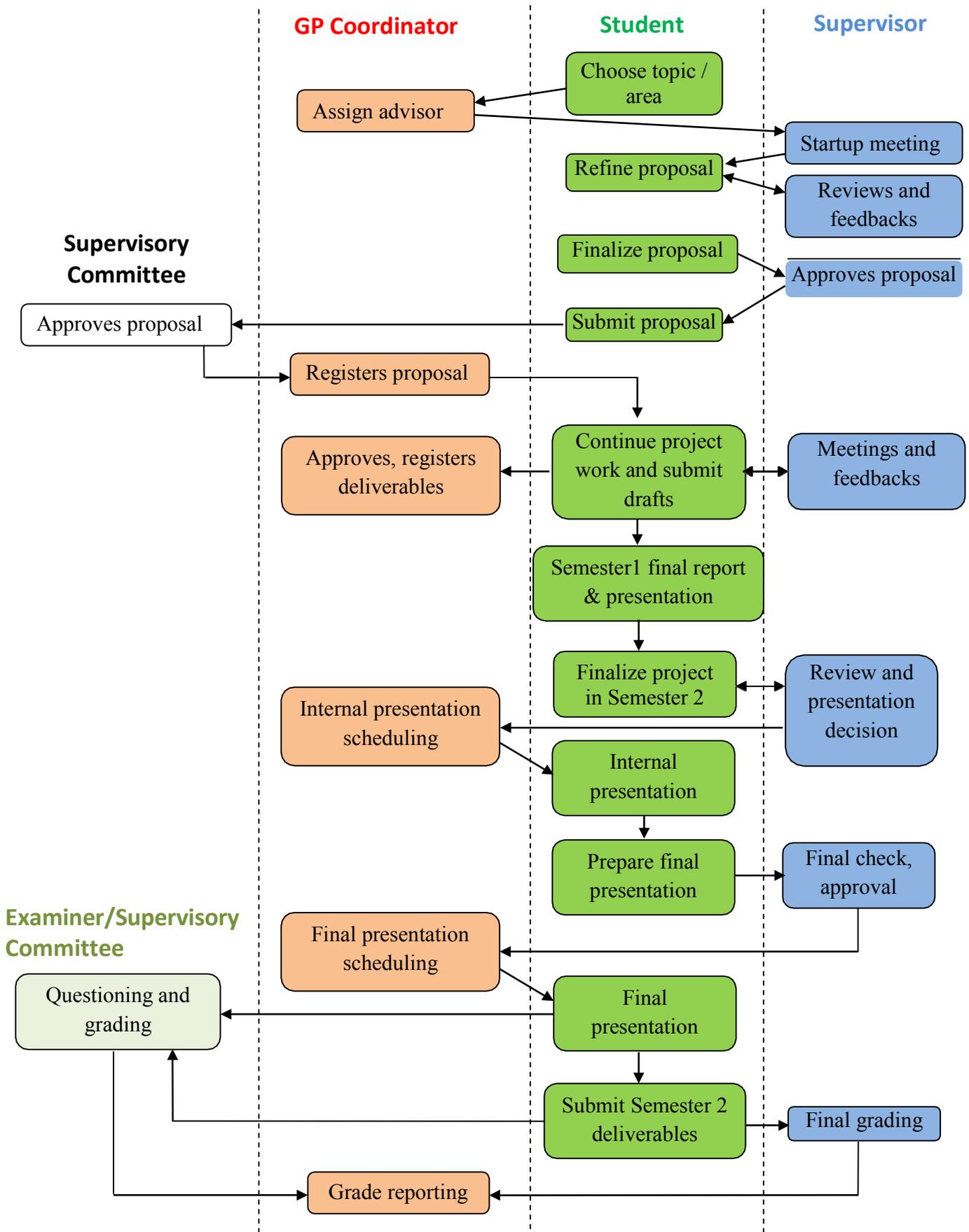


Figure 1: High level overview of GP Process

## Project Management Plan

# Project Management Plan

*Cover Page*

**Table of Contents**

### **1 INTRODUCTION**

Project Overview  
Project Deliverables

### **2 PROJECT ORGANIZATIONS**

Process Model  
Roles and Responsibilities  
Tools and Techniques

### **3 PROJECT MANAGEMENT PLAN**

3.1 Tasks

3.1. n Task-*n*

3.1. n.1 Description

Deliverables and Milestones  
Resources Needed  
Dependencies and Constraints  
Risks and Contingencies

3.2 Gantt Chart

### **4 ADDITIONAL MATERIALS**

## Project Requirements Specifications (PRS)

# Project Requirements Specifications (PRS)

***Cover Page***

**Table of Contents**

1 INTRODUCTION

1.1 Project Overview

2 SPECIFIC REQUIREMENTS

External Interface Requirements

User Interfaces

Hardware Interfaces

Software Interfaces

Communications Protocols

Software Product Features

Software System Attributes

Reliability

Availability

Security

Maintainability

Portability

Performance

2.4 Database Requirements

3 ADDITIONAL MATERIALS

## Project Design Description (PDD)

# Project Design Description (PDD)

*Cover Page*

**Table of Contents**

### **1 INTRODUCTION**

Design Overview

Requirements Traceability Matrix

### **2 SYSTEM ARCHITECTURAL DESIGN**

Chosen System Architecture

Discussion of Alternative Designs

System Interface Description

### **3 DETAILED DESCRIPTIONS OF COMPONENTS**

3.*n* Component-*n*

### **4 USER INTERFACE DESIGN**

Description of the User Interface

Screen Images

Objects and Actions

### **5 ADDITIONAL MATERIALS**

## **GP Report and Proposal Style Guideline**

### ***Paper***

Standard A4 size  
Width: 8.27"  
Height: 11.69"  
Weight: 90 Grams

### ***Fonts, Type Styles***

Font Size = 11 (Normal Text)  
Font = Times New Roman  
Title= 26 bold (Times New Roman)  
Sub-title=16 bold (Times New Roman)  
Heading 1 (Font Size) = 16 (Bold), Font = Times New Roman, UPPERCASE  
Heading 2 (Font Size) = 14(Bold), Font = Times New Roman  
Heading 3 (Font Size) = 13 (Bold, Italics), Font = Times New Roman

### ***Margins***

Top = 1.5"  
Bottom = 1.0"  
Left = 2.0"  
Right = 1.0"

### ***Spacing***

Line Spacing = 1.5  
Paragraph Spacing = 6 pts

### ***Indentation***

Indent all quotations comprising 4 or more lines by 5 spaces from left.

### ***Page Numbers***

Except for the title page, number all pages which come before the first page of the body chapters consecutively with lower case roman numerals (i, ii, iii, iv...).

The first page with Arabic numeral (1, 2, 3, and so on) starts from the page of the introduction but it is mentioned on page 2 onwards. Mention page numbers on the bottom right of the page. The first page of each section or chapter will not carry the page number; however the page number will be counted for the proceeding page.

### ***Headers***

The header will comprise the title of the Project report. On every odd page will appear the title of the report while on the even pages the title of the chapter or section will be mentioned. The first page of every section or chapter shall not carry the header.

### ***Binding guidelines***

The final report binding should have a dark blue background with Project information written in silver color.

## **GP Report Prefatory Pages**

### **Title Page**

The title page should include the title of the report along with the name(s) of the department and university for which the report is written, month & year of submission and the project number. Each project will be assigned a Project number for future reference. Also included on the title page should be the name(s) of the author(s) of the report. Title Page is followed by a blank page. A sample title page is shown below.

*BSc Project*  
*CS Department*  
*Project ID: CCG-CS -YYYY-xx*  
*Month Year*



# **Centered Title Times Font Size 26 Bold**

**Centered SubTitle Times Font Size 16 Bold**

**Centered Author(s) TimesFontSize18Bold**

Dept. of \_\_\_\_\_

Computing College at AlQunfudha

Umm Al-Qura University, KSA

## **Contact Information**

Below is a sample contact information page. It follows the blank page (after the title page) and contains information about the author(s), external supervisor (if any), internal supervisor and the examiner.

This project report is submitted to the Department of Computer Science at Umm Al-Qura University in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer science department.

**Author(s):**

Firstname Lastname

Address: If applicable

E-mail: If applicable, a long-term e-mail (not your student e-mail)

**University supervisor(s):**

Firstname Lastname

Department name

**Co-supervisor(if applicable):**

Firstname Lastname

Company/Organization full name

Address:

Phone: International standard, e.g. use +

Dept. of Computer science  
Computing College at AlQunfudha  
Umm Al Qura University  
Kingdom of Saudi Arabia

Internet: <http://www.uqu.edu.sa>  
Phone: +966 xxxxxxxxx  
Fax : +966 xxxxxxxxx

## **Intellectual Property Right Declaration**

Below is a sample for intellectual property right declaration page. It follows the contact information page.

# Intellectual Property Right Declaration

This is to declare that the work under the supervision of \_\_\_\_\_ having title “ \_\_\_\_\_ ” carried out in partial fulfillment of the requirements of Bachelor of Science in \_\_\_\_\_, is the sole property of the Umm Al Qura University and the respective supervisor and is protected under the intellectual property right laws and conventions. It can only be considered/ used for purposes like extension for further enhancement, product development, adoption for commercial/organizational usage, etc., with the permission of the University and respective supervisor.

This above statement applies to all students and faculty members.

Date: \_\_\_\_\_

## Author(s):

Name: Firstname Lastname

Signature: \_\_\_\_\_

Name: Firstname Lastname

Signature: \_\_\_\_\_

Name: Firstname Lastname

Signature: \_\_\_\_\_

## Supervisor(s):

Name: Firstname Lastname Signature: \_\_\_\_\_

## **Anti-Plagiarism Declaration**

Below is a sample for Anti-plagiarism declaration, it follows the intellectual property right declaration page.

## Anti-Plagiarism Declaration

This is to declare that the above publication produced under the supervision of \_\_\_\_\_ having title “\_\_\_\_\_” is the sole contribution of the author(s) and no part hereof has been reproduced illegally (cut and paste) which can be considered as Plagiarism. All referenced parts have been used to argue the idea and have been cited properly. I/We will be responsible and liable for any consequence if violation of this declaration is proven.

Date: \_\_\_\_\_

### Author(s):

Name: Firstname Lastname Signature: \_\_\_\_\_

Name: Firstname Lastname Signature: \_\_\_\_\_

Name: Firstname Lastname Signature: \_\_\_\_\_

## **Acknowledgement**

Below is a sample for Acknowledgement page, it follows the Anti-Plagiarism Declaration page.

## **ACKNOWLEDGMENTS**

This work is dedicated to my dear parents, the most loving in this world.

## **Abstract**

Below is a sample for Abstract page. It follows the Acknowledgement page.

## **ABSTRACT**

[Abstract text]

**Keywords:** 3-4 keywords, maximum 2 of these from the title, which starts one line below the Abstract.

## **Table of Contents**

Below is a sample for Contents page. It follows the Abstract page.

## **TABLE OF CONTENTS**

[Table of contents]

## **GP Report Chapters**

From here onwards this document should be organized into different chapters specific to each project. Rest of the section outlines chapters to be included and the recommended contents of each chapter.

### **Chapter 1 – Introduction**

#### **Chapter 1 INTRODUCTION**

- Purpose of the Project
  - Purpose of this Document
  - Overview of this Document
  - Existing System
- Existing system description
- Problems in the existing system

### **Chapter 2 – System Analysis**

#### **Chapter 2 SYSTEM ANALYSIS**

- Data Analysis
- Data flow diagrams
- System requirements
  - Clients, customer and users
  - Functional and data requirements
  - Non-functional requirements
- Look and feel requirements
- Usability requirements
- Security requirements
- Performance requirement
- Portability requirements
- Proposed Solutions
- Alternative Solutions

### **Chapter 3 – Design Considerations**

#### **Chapter 3 DESIGN CONSIDERATIONS**

- Design Constraints
- Hardware and software environment
- End user characteristics
  - Architectural Strategies
- Algorithm to be used

Reuse of existing software components  
Project management strategies  
    Development method  
    Future enhancements/plans

## **Chapter 4 – System Design**

### **Chapter 4 SYSTEM DESIGN**

    System Architecture and Program Flow  
Major modules  
Sub modules  
    Detailed System Design  
Detailed component description

## **Chapter 5 – Implementation and Validation**

### **Chapter 5 IMPLEMENTATION AND VALIDATION**

## **Appendices**

### **Appendix A CODE**

### **Appendix References**

## Deduction Rules

One of the most important objectives of GP course is to train students for effective time management, which is essential for successful project completion. To keep students on track and to maintain the flow of the project, GP Coordinator is responsible for announcing deadlines for upcoming deliverables. Supervisor continuously assesses students on a process criterion (see Appendix A) during the project. Late submissions and irregular meetings may result in deduction of marks depending upon the supervisor's judgment.

Criteria for late project report submission is as following:

Report Delay	Marks Deduction
1 day	(1/3marks)
2 day	(2/3marks)
3 day	(0 marks)
No Oral Presentation without report submission	

## Plagiarism

Plagiarism will result in 0 marks in Project Report, Project Presentation and Project Demonstration and may only get marks for Semester 1 & 2 processes. This means student (s) may lose 80% of the marks. In order to detect plagiarism, we will resort to the following online tools

- <https://www.turnitin.com/static/index.php>

## Result Compilation

At the end of the Oral Presentation, marks and grades submitted by the project supervisor, supervisory committee and examiners are collected and compiled for letter grades.

## Bibliography

- [1] The Joint Task Force on Computing Curricula, "Computing Curricula 2001," *IEEE Computer Society, Association for Computing Machinery*, December 15 2001.
- [2] Declan Delaney and Stephen Brown, "Document Templates For Student Projects in Software Engineering," Department of Computer Science, National University of Ireland, Maynooth, August 2002.
- [3] Richard Hall Thayer and Andrew D. McGettrick, "IEEE Software Engineering Standards: A Students' Version," in *20th Conference on Software Engineering Education & Training*, 2007.
- [4] IEEE Std. 1008-1997, IEEE Standard for Software Unit Testing.
- [5] IEEE Std. 1012-1998, IEEE Standard for Software Verification and Validation.
- [6] IEEE Std. 1016-1998, IEEE Recommended Practice for Software Design Descriptions.
- [7] IEEE Std 1058-1998, IEEE Standard for Software Project Management Plans.
- [8] IEEE Std 1540-2001, IEEE Standard for Software Life Cycle Processes – Risk Management.
- [9] IEEE Std. 829-1998, IEEE Standard for Software Test Documentation.
- [10] IEEE Std. 830-1998, IEEE Recommended Practice for Software Requirements Specifications.

# Miscellaneous Forms

**GRADUATION PROJECT PROPOSAL**

Supervisor Name :

Email :

Project Title :

Description :

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Plans to achieve the project goal – Timeline:

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.....  
.....  
.....

For project committee

- Approved                       Rejected                       Approved with conditions

**Comments:**

.....  
.....  
.....

Committee chair signature

Date: .....



# UQU Final Year Project Start Form

Fill in the information below as detailed as you can when submitting your project idea.

Team Members			
Student ID	Name	Email	Credit Hrs *

Area of interest (Tick one or more)			
Development Track		Research Track	
1. Desktop application		1. Requirement Engineering	
2. Web application		2. Design & Architecture	
3. Client-Server application		3. Verification & Validation	
4. Computer Game		4. Project Management	
5. Mobile application/Game		5. Tools	
6. Others:		6. Others:	

Preferred supervisor (if any): \_\_\_\_\_

Project description:

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**Proposal for**

**FINAL YEAR PROJECT IN CS/CE/IS  
Umm Al Qura University**



---

<Project Title>

---

Team Name

Team Logo

Team Name

Team Logo

Team Members

< Student name> <Student ID>  
< email@uqu.edu.sa>

Project Leader

< Student name> <Student ID>

Project Supervisor

< name >

< email >

Start – end

< DD.MM.YYYY> — < DD.MM.YYYY >

Credit Hrs

## Proposal for

### FINAL YEAR PROJECT IN CS Department Umm Al Qura University



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<Project Title>

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Background	<i>One paragraph introducing and motivating the problem. Should answer: Which area of computer science/computer engineering/information systems is this about? What particular part of that area? Why is this important?</i>
	<i>2-3 paragraphs giving more detailed background. Should answer: What has been done by others in this area? What is the current state of the art?</i>
Project Scope	<i>Project scope statement</i>
Project Description	<i>1-2 paragraphs detailing the gap in our current knowledge. Should answer: What is missing in our current knowledge? What is the main purpose of doing this project? What are the main features of this project?</i>
Expected Outcome	<i>State the concrete results that will be the deliverables/output from the project.</i>
Method/Approach	<i>In what way and process that you can reach your goal/result?</i>
Relevant references	<i>Books, journals, conference papers, and (not many) some internet links</i>



## GP Regular Supervision Record Form

Before each weekly project meeting with supervisor, the students will fill this form and will submit it to GP coordinator after the meeting. Copies will be submitted in the Course's file at GP Coordinator office.

<b>SECTION -1</b> (to be completed by the STUDENT prior to meeting)	
Students' Names:	Supervisor Name:
Date:	Date of previous meeting:
Work undertaken since last meeting:	
Issues you would like to discuss in this meeting:	
<b>SECTION -2</b> (to be completed by the SUPERVISOR at the meeting)	
Work student should undertake between now and next meeting:	
<b>SECTION -3</b>	
Date of next meeting:	
Signatures:	Student (Team Leader):
	Supervisor:





# GP Final Project Rubric – Semester 2

Project Title : .....

Supervisor : ..... Signature..... Date .....

Group Members		Evaluation Criteria																Grade								
Student ID	Name	Design (20)				Implementation (20)				Testing (15)				Team Work (15)					Project Report (15)				Oral Presentation (15)			
		S	M	P	AVG	S	M	P	AVG	S	M	P	AVG	S	M	P	AVG		S	M	P	AVG	S	M	P	AVG

(S : Supervisor M: Member P : President )

Project Evaluation Committee	
Committee President	Committee Member
Name : _____ Signature: _____	Name: _____ Signature: _____

Head of CS Department



## GP Resource Request Form

Before asking resources relevant to any project, certain approvals will be needed. If the subject of the request is confined to your own class, office, or department, please obtain approval from your Head, Dean, Coordinator, Director, or other appropriate manager. As well, it is necessary to obtain approval if your request pertains to human subjects. Copies will be submitted in the Course's file at GP Coordinator office.

<b>SECTION -1</b> (to be completed by the STUDENT prior to request)	
Students' Names:	Supervisor Name:
Date of request:	Expected date of completion of using the resource(s):
Briefly describe the resources you are requesting, address of the resource and its purpose:	
How will you use the data/information and who will it be shared with?	
<b>SECTION -2</b> (to be completed by the SUPERVISOR)	
Please justify the above request:	
<b>SECTION -3</b>	
Signatures:	Student (Team Leader):
	Supervisor:
	Chairman/Dean:



## GP Course Learning Outcomes

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1. Identify and formulate relevant thesis, problem or research question; set goals and scope of the problem and systematically outline a plan for solving the problem.
2. Find and organize appropriate resources associated with a particular problem.
3. Gain in-depth understanding of the relevant research or engineering problem by using literature and other resources.
4. Successfully analyze, specify, design, and implement a solution to the selected problem including all aspects of the project like risk and time management, team coordination, and purchasing.
5. Report the outcomes of the project by means of verbal and written presentation

***Relationship between CLO's and Student Outcomes (SO's). Entries in the table indicate which CLO's relate to which SO's.***

Student Outcomes – Mapped to Course Learning Outcomes											
CLO's	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	X				X						
2					X						
3	X									X	
4		X	X								
5				X			X				

# GP Survey Form

(Survey) You are able to	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	5	4	3	2	1
<p><b>Section 1: Learning Outcomes</b></p> <p>My Senior Design Project has prepared me for professional practice in the field of Software Engineering because I am able to:</p>					
1. Apply knowledge of mathematics, science, and engineering					
2. Design and conduct experiments, as well as to analyze and interpret data					
3. Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability					
4. Function on multi disciplinary teams					
5. Identify, formulate, and solve engineering problems					
6. Understand professional and ethical responsibility					
7. Communicate effectively					
8. Understand the impact of engineering solutions in a global, economic, environmental, and societal context					
9. Recognize the need or, and an ability to engage in, life-long learning					
10. Gain a better knowledge of contemporary issues					
11. Use the techniques, skills, and modern engineering tools necessary for engineering practice					
12. Analyze, design, verify, validate, implement, apply, and maintain software systems					

3. Apply appropriately discrete mathematics, probability and statistics, and relevant topics in computer science and supporting disciplines to complex software systems					
4. Work in one or more application domains					
5. Manage the development to software systems					
<b>Section2:Facilities and Support</b>					
The available hardware equipments and software tools have been sufficient for accomplishing my project tasks					
The administration supports acquiring new hardware equipments and software tools.					
The staff support has been adequate.					
<b>Section3:Overall Evaluation</b>					
1. Overall, I am satisfied with my Graduation Project					
2. What did you like during the project?					
3. What did you not like during the project?					
4. Additional Comments(if any):					

# GP Assessment

Course : 6001439-4 –Project Implementation		Student-outcomes Mapping						
Number of students : 4		Design	Implementation	testing	Team Work	Project Report	Oral Presentation	
Semester : 1: 1436/1437								
Student Outcomes								
1. Outcome a.		✓	✓	✓				
2. Outcome b			✓	✓				
3. Outcome c.		✓						
4. Outcome d					✓	✓	✓	
5. Outcome e								
6. Outcome f		✓						
7. Outcome g								
8. Outcome h		✓	✓	✓				
9. Outcome i		✓	✓					
10. Outcome j		✓	✓	✓				
11. Outcome k			✓	✓				
Course : 6001439-4 – Project Implementation		Student-Score						
Student name :		Design (20)	Implementation(20)	Testing (15)	Team Work(15)	Project Report(15)	Oral Presentation(15)	Total
Semester :								
Student Outcomes								

