University of Benghazi

Bureau of Quality Assurance
and Performance Evaluation

Faculty of Information
Technology

Software Engineering Study Programme

Self-Assessment Report
Based on
Tempus IV FOCUS Project Template

March 2013

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Self-Assessment Group

The self-assessment report was prepared by Faculty of Information Technology in cooperation with Bureau of QA and Performance Evaluation at University of Benghazi to be presented to Tempus IV FOCUS Project. Experts involved in preparing the report and gathering information are:

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1 Formal Data

1.1 Name and contact details

Name of the degree programme (Arabic)	هندسة البرمجيات
Name of the degree programme (English)	Software Engineering
Language of instruction	Mostly English
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1.2 Classification within either the "more practice-oriented" or "more research-oriented" profile (only for Master's programmes)

N/A

1.3 Classification as consecutive – non-consecutive – further education (only for Master's programmes)

N/A

1.4 Degree to be awarded

Bachelor of Science (BSc)

1.5 Standard period of study

The volume of BSc study programme of Software Engineering is 131 credit hours distributed on Four years (eight semesters) period of study.

1.6 Commencement of degree programme

The program has been started in the fall semester 2006/2007. From that date, the faculty continued run the programme twice per academic year; at the beginning of fall and spring semesters.

1.7 Fees / charges

No student fees/charges are required. The study program is fully funded by the government, except foreigners they have to pay insignificant fees for registration.

2 Objectives and Demand – Reasons for Establishing the Programme

2.1 Educational Objectives and Competency Profile

2.1.1 Overall objectives of the applicant degree programme

Competent software engineering professionals are increasingly required in national and private sectors, consultancies, governmental institutions and other business units in Libya. They are required to plan, analyze, assess, implement and maintain computer and software systems of entire business unit. The department of Software Engineering (concerned study program) currently holds a total of (154) regular students at undergraduate level. To date, a total of (37) students were graduated. The vision, mission and objectives of this study program are listed below:

Vision

To prepare highly qualified graduates in the Software Engineering field by providing excellent teaching and research skills to contribute the development of the country's Software industry.

Mission

To prepare graduates for productive careers in Software industry and academia by providing an outstanding environment for applications of computing and its theories. High priority is given for establishing and maintaining innovative research programs by providing a solid foundation in Software Engineering principles that will allow graduates to adapt effectively in a quickly changing field, as well as to enhance its education quality and applying new knowledge and technologies.

Objectives

- Prepare graduates for a career in the field of software engineering by maintaining high academic standards and help them to obtain initial positions in their chosen fields;
- Prepare highly skilled graduates who can successfully compete with other graduates from other analogue faculties;
- Provide graduates with a solid learning foundation for life-long professional growth;
- Enhance graduate skills to analyze, design, verify, validate, implement, apply, and maintain software systems;
- Enhance graduate skills to define, assess, and tailor software quality practices, and software processes and methodologies for appropriate application on software development projects in a variety of domain areas;
- Prepare graduates to work effectively as a member of a team;
- Enhance graduate ability to appropriately apply formal logic, probability and statistics, and relevant topics in computer science and supporting disciplines to complex software systems;
- Prepare graduates to take leadership roles in software engineering profession;
- Raise graduate awareness of professional, ethical, legal, security, and social issues and responsibilities related to Information Technology;
- Prepare graduates to engage in a fruitful discussion about challenges of software engineering issues, both with their peers in the profession, as well as with others.

2.1.2. Description of the learning outcomes to be attained during the course of study (knowledge, skills, competences)

The learning outcomes of the programme are divided into four categories; *knowledge and understanding, mental skills, professional and practical skills, and general and acquired skills*. A study is undertaken at present in consultation with QA university's main office to check the conformity of the learning outcomes to the market needs. Descriptions of the learning outcomes per each category are given below.

On successful completion of the program students will:

A. Knowledge and Understanding:

A.1 understand programming, algorithms and data structures concepts;
A.2 know a variety of programming languages concepts and paradigms;
A.3 understand computer organization and architecture;
A.4 understand discrete mathematics, statistics, differential and integral calculus;
A.5 know a wide range of principles and tools available to the software developer, such as software process models and methodologies;
A.6 understand the software-development process, including requirements analysis, design, programming, testing and maintenance;
A.7 know the communication issues in large, complex software projects;
A.8 understand and perceive the professional and ethical issues relevant to information technology;

B. Mental Skills:

B.1 be able to provide efficient algorithms for solving software problems;
B.2 be able to investigate and improve the specification of a software systems;
B.3 be able to design and implement software solutions;
B.4 be able to identify and use testing strategies;
B.5 be able to use appropriate tools and modeling techniques.

C. Professional and Practical Skills:

C.1 be able to elicit, analyze, specify, design and construct software systems;
C.2 be able to use formal logic to specify software elements;
C.3 be able to apply testing and evaluation strategies for software systems;
C.4 be able to assess and maintain some of the software main risks;
C.5 be able to estimate size and cost of software systems;
C.6 be competitive in the job market or be admitted to a good graduate program.

D. General and Acquired Skills:

D.1 be able to communicate effectively;
D.2 be able to work effectively in a team environment;
D.3 be able to use a range of learning resources to support their work;
D.4 be able to appreciate the need for continuing professional development;
D.5 be able to recognize and quantify the effect of the time value of money on project cash flow;
D.6 be able to write software documentation;
D.7 be able to acquire new knowledge and engage in life-long learning.

2.1.3 Objectives of individual modules (detailed description in the module handbook), *including a matrix linking programme and module learning objectives.*

A Detailed description (incl. objectives, learning outcomes, contents, learning methods, grading policy, etc) for individual modules (courses) is attached to this report.

The table below shows the link between programme courses and intended learning outcomes.

Course	A. Knowledge and Understanding								Skills																	
									B. Mental Skills					C. Professional and Practical Skills						D. General and Acquired Skills						
	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	D5	D6	D7
IT Foundations	X		X																							
Programming I	X	X							X										X	X						
English I																			X	X						
Calculus I				X																						
Arabic I																			X	X						X
Political Culture I																			X	X						X
Programming II	X	X							X										X	X						
Digital and Logic Design			X	X																						
Calculus II				X																						
General Physics I + Lab I			X	X															X							X
English II																			X	X						
Political Culture II																			X	X						X
Data Structures and Algor.	X	X																	X	X						
Discrete Math and Structures				X															X	X						
Probability and Statistics				X																						
Political Culture III																			X	X						X
Foundation of Software Engineering		X			X			X					X	X								X				
Foundations of Info. Systems					X						X		X						X							X
Computer Architecture		X	X																X							
Network Fundamentals			X																X	X	X					X

Course	A. Knowledge and Understanding								Skills																
									B. Mental Skills					C. Professional and Practical Skills						D. General and Acquired Skills						
	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	D5	D6	D7
Political Culture IV																			X	X						X
Technical Writing																			X	X						X
Software Requirements		X				X				X			X	X			X		X			X			X	
Analysis of Algorithms	X	X																	X							
Database Systems						X													X		X					X
Operating Systems			X																X		X					X
Human Computer Interaction						X	X			X			X				X						X			
Formal Models & Methods		X		X						X					X											
Software Design		X			X	X			X				X	X			X		X			X			X	
Security Principles and Practices			X																X	X	X					X
Computing Ethics & Society								X												X	X					
Software Testing					X	X						X	X			X					X	X				
Software Evolution and Maintenance					X	X							X			X						X				
Internship													X	X					X	X	X				X	X
Re-use and Component Based		X				X					X					X					X					
Software Quality					X			X		X			X			X			X		X	X				
Internet Programming	X	X																	X	X	X					X
Software Development		X			X	X			X	X	X	X		X		X				X	X	X			X	
Software Project Management					X		X				X		X				X	X		X	X	X		X		
Programming Languages		X																	X			X				X

Course	A. Knowledge and Understanding								Skills																		
									B. Mental Skills					C. Professional and Practical Skills						D. General and Acquired Skills						
	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	D5	D6	D7
Intelligent Systems	X			X																						
Engineering Economics								X					X			X						X		X		
Large Scale Software Design		X			X	X			X		X		X	X		X				X	X		X			X
Software Architecture					X						X		X	X								X	X			
Agent-Oriented Software Engineering		X			X		X			X	X		X		X				X			X	X			X
IT Capstone Project													X	X					X	X	X				X	X

2.1.4 Professional focus, research focus, industrial placements, interdisciplinary cooperation, professional qualification of graduates

There are some connections to local industry, where some of our part-time instructors provide such links. This connection helps industry in many cases hiring our students. The “internship” requirement offers the opportunity for the student to be in touch with industrial sector and labour market. In addition, some services and consultations are provided by department staff (in an informal way) to students and alumni to help them plan their career, such as writing CVs and motivation/Recommendation? letters, looking for a job/internship, open lectures/seminars/training.

2.1.5 Target enrolment / targeted staff-student ratio

- Target enrolment is expected to be 30-40 students each semester
- Targeted staff-student ratio is about 1:20

2.2 Demand

2.2.1 Target group

One of the major trends in labour market is that there is an increasing demand for computer specialists that are well prepared for the work in local and international companies in Libya. Moreover, there is an increasing demand in business organisations and public institutions for computer specialists, who are able to carry out complex analysis and model computer based information systems, professionally drafting and conducting strategies for automating and optimising process. Actually, every field of science and engineering in Libya has been dramatically affected by computing, and computer specialists play a key role in interdisciplinary efforts that bring the power of computing technology to these areas. The relevancy of the programme can be demonstrated by the employment statistics and career development of our software engineering graduates. In addition, graduates are motivated towards pursuing postgraduate studies in Computer Science and an extensive training in programming.

2.2.2 Placement of graduates on the labour market

Currently, there is no structured centre/body in the university that acts as an interface between the graduates and the labour market. However, there are individual efforts from programme staff to help graduates receive internship/employment vacancies from local employers. Generally, about 75% of programme graduates obtain full-time employment, within a period of 6-12 months after graduation, either with the staff help, or by their own effort.

2.2.3 Demand from industry

The demand for software engineering professionals has been steadily growing in Libya. Many national and international companies are working in the fields where computer and its related branches provide much of the backbone for these activities. The assessment of local market need for software engineering professionals is to consult the Libyan local newspapers and other TV, Internet media most often used by national/international companies and organizations to advertise available positions. The significant amount of these advertisements is for computer professionals and its' related branches.

3 Educational Process

3.1 Entry and Admission Requirements (for Bachelor's and Master's programmes separately)

3.1.1 Entry requirements for Bachelor's degrees

To be eligible for admission to the BSc in Software Engineering, the student should obtain a total score not less than 75% (grade of Very Good) of a Libyan Secondary Certificate (Science stream), or Libyan Secondary Specialized Certificate in disciplines related to information technology. Holders of Secondary Certificate equivalent to the Libyan Secondary Certificate are also eligible for admission. An admission exam might be applied.

3.1.2 General / specialised variant of the higher education entrance qualification, qualification for entrance to the university (relevant professional training)

Only candidates of scientific stream of secondary schools or secondary specialized schools in disciplines related to information technology are allowed to apply for this programme.

3.1.3 Industrial placements, work experience

Not required

3.1.4 Foreign language skills

The programme is mostly taught in English, so sufficient English skills (writing, reading, and speaking) are required for admission.

3.1.5 Aptitude tests

Not required

3.1.6 Entry requirements for Master's degrees (selection criteria)

N/A

3.1.7 Transfers from / to the conventional system of qualification

There are two types of students transferring to the software engineering programme:

1) Students wishing to transfer to the software engineering department from other departments within the faculty have to apply to the head of department, who will then make a decision according to the following conditions:

   - The student should not have passed more than 9 credit hours of core courses in his/her original department.
   - The student's GPA should be more than or equal to 2/4.
   - Total student's semesters should not exceed 6.
   - In case of the number of students satisfying the transferring conditions is more than the quota specified by department board, students will be selected according to higher GPA.

2) Students wishing to transfer to the software engineering department from other faculties or universities have to apply to the registrar office. The Admission Committee will then make a decision according to the following conditions:

   - Satisfying the university and the department admission requirements.
   - Submitting a certified grade transcript issued by the University of Origin together with the prospectus / course contents of the program they have been engaged in.
   - Each course considered for transfer must not have less than the number of credit hours of the equivalent course offered by Faculty of IT, University of Benghazi (UOB).
   - The student should have passed the course considered for transfer with at least 50/100
   - The course content should be similar to the corresponding course offered at Faculty of IT, UOB..
   - The results of the transferred courses will not be included in the student’s cumulative average, which is confined to the courses taken at Faculty of IT, UOB.
   - Faculty of IT, UOB does not grant transferring students the required degree unless they successfully complete at least 50% of the credit hours of their study plan at Faculty of IT, UOB.

3.2 Course of Study

3.2.1 Curricular content
Bachelor’s degree programme

The BSc study programme of Software Engineering consists of 131 credit hours. Curriculum of the program contains the following course categories:

- ***General Education Courses***: these courses are required to be studied and passed by all the students who are enrolled in any bachelor degree programme within Faculty of IT, UOB, so they are required by the software engineering students as well.
- ***Core Courses***: these courses are required to be studied and passed by all the students, who are enrolled in the Bachelor of Science program in software engineering.
- ***Elective Courses***: this is a collection of optional courses. Students who are enrolled in the software engineering department have to select and pass three courses from this list. In addition, students have to select and pass other two courses called (breadth courses) from other departments and are required to pass them.
- ***Internship***: A work experience in the computer related industry/businesses where the student, under academic and employer supervision, participates in actual work functions. The student must keep extensive diary of work experiences, and submit a final report to his/her academic supervisor. All internships are supervised by department teaching staff.
- ***Graduation Project***: It is a major part of the study program. Students are expected to utilize the knowledge gained in their courses in completing the graduation project under academic supervision from faculty members in the program. This is the last semester project in which students have to present a final project based on all skills/information? they have been learning throughout their previous academic years. In the end, Students are required to present their work to the examiners for last evaluation.

The program study plan as well as the programme curriculum divided over the previous categories are presented below:

Yr	First Semester (IT Core)				Second Semester (IT Core)			
	Course #	**Course Title**	**Pre-Req.**	**Cr.**	**Course #**	**Course Title**	**Pre-Req.**	**Cr.**
I	IT101	IT Foundations	----	3	IT112	Programming II	IT111	4
	IT111	Programming I	----	4	IT121	Digital and Logic Design	IT101	3
	GE111	English I	----	3	GS112	Calculus II	GS111	3
	GS111	Calculus I	----	3	GS141	General Physics I + Lab I	-----	4
	GE101	Arabic I	----	3	GE112	English II	GE111	3
	GE131	Political Culture I	----	1	GE132	Political Culture II	GE131	1
		Semester Credit Hours		**17**		***Semester Credit Hours***		**18**
Yr	**Third Semester (IT Core)**				**Forth Semester (IT Core)**			
	Course #	**Course Title**	**Pre-Req.**	**Cr.**	**Course #**	**Course Title**	**Pre-Req.**	**Cr.**
II	IT212	Data Structures and Algor.	IT112	3	IT222	Computer Architecture	IT202, IT221	3
	IT201	Discrete Math and Structures	GS111, IT111	3	IT271	Network Fundamentals	IT221	3
	GS221	Probability and Statistics	GS112	3	GE232	Political Culture-IV	GE231	1
	GE231	Political Culture III	GE132	1	GE311	Technical Writing	GE112	3
	SE201	Foundation of Software Eng.	IT112	3	SE211	Software Requirements	SE201	3
	IS201	Foundations of Info. Systems	IT112	3	CS211	Analysis of Algorithms	IT201, IT112	3
		Semester Credit Hours		**16**		***Semester Credit Hours***		**16**
Yr	**Fifth Semester (SE Core)**				**Sixth Semester (SE Core)**			
	Course #	**Course Title**	**Pre-Req.**	**Cr.**	**Course #**	**Course Title**	**Pre-Req.**	**Cr.**
III	IT341	Database Systems	IT212	3	IT342	Security Princ. and Practices	IT271	3
	IT322	Operating Systems	IT212	3	IT301	Computing Ethics & Society	IT101	3
	SE322	Human Computer Interaction	SE201	3	SE331	Software Testing	SE201	3
	SE312	Formal Models & Methods	SE201, IT201	3	SE341	Software Evolution and Maintenance	SE201	3
	SE321	Software Design	SE201	3	-----	***Dept. Elective I***	-----	3
		Semester Credit Hours		**15**		***Semester Credit Hours***		**15**
Yr	**Seventh Semester (SE Core)**				**Eighth Semester (SE Core)**			
	Course #	**Course Title**	**Pre-Req.**	**Cr.**	**Course #**	**Course Title**	**Pre-Req.**	**Cr.**
IV	IT492	Internship	90 Cr.Hrs	3	IT499	IT Capstone Project	100 Cr.Hrs	4
	SE441	Re-use and Component Based Development	SE321	3	SE490	Software Development	IT341, SE321	3
	SE461	Software Quality	SE321	3	SE492	Software Project Mgt.	SE201	3
	CN281	Internet Programming	IT112	3		***Dept. Elective III***		3
		Dept. Elective II		3		***Breadth Elective II***		3
		Breadth Elective I		3				
		Semester Credit Hours		**18**		***Semester Credit Hours***		**16**
Total Number of Hours Achieved = 131 Hrs.								

General Education Courses:

Course Code	Course Name	Credits	Number of Weekly Hours			Pre-requisites
			Lecture	Lab.	Exercise	
IT101	IT Foundation	3	3	-		-
GE101	Arabic I	3	3	-	-	-
IT111	Programming I	4	4	2	2	-
GS111	Calculus I	3	3	-	-	-
GE111	English I	3	3	-	-	-
IT112	Programming II	4	4	2	2	GE112
GE112	English II	3	3	-	-	GE111
GS112	Calculus II	3	3	-	-	GS111
IT121	Digital and Logic Design	3	3	-	-	IT101
GE131	Political Culture I	1	1	-	-	-
GE132	Political Culture II	1	1	-		GE131
GE231	Political Culture III	1	1	-		GE132
GE232	Political Culture IV	1	1	-		GE231
IT201	Discrete Math and Structures	3	3	-	-	GS111, T111
IT212	Data Structures & Algorithms	3	3	2	-	IT112
GS221	Probability and Statistics	3	3	-	-	GS112
IT222	Computer Architecture	3	3	-	-	IT202, IT221
IT271	Network Fundamentals	3	3	-	-	IT221
IT301	Computing Ethics & Society	3	3	-	-	IT101
GE311	Technical Writing	3	3	-	-	GE112
IT322	Operating Systems	3	3	-	-	IT212
IT341	Database Systems	3	3	2	-	IT212
IT342	Security Principles and Practice	3	3	-	-	IT271
IT492	Internship	3	-	-	3	90 Cr.Hrs
IT499	IT Capstone Project	4	-	-	-	100 Cr.Hrs

Core Courses:

Course Code	Course Name	Credits	Number of Weekly Hours			Pre-requisites
			Lecture	Lab.	Exercise	
SE201	Foundation of Software Eng.	3	3	-	-	IT112
IS201	Foundations of Info. Systems	3	3	-	-	IT112
SE211	Software Requirements	3	3	-	2	SE201
CS211	Analysis of Algorithms	3	3	-	-	IT201, IT112
CN281	Internet Programming	3	3	2	-	IT112
SE312	Formal Models & Methods	3	3	-	-	SE201, T201
SE321	Software Design	3	3	-	2	SE201
SE322	Human Computer Interaction	3	3	2	-	SE201
SE331	Software Testing	3	3	-	2	SE201
SE341	Software Evolution and Maintenance	3	3	-	2	SE201
SE441	Re-use and Component Based Development	3	3	-	-	SE321
SE461	Software Quality	3	3	-	-	SE321
SE490	Software Development	3	3	2	-	IT341, SE321
SE492	Software Project Management	3	3	-	2	SE201

Elective Courses:

Course Code	Course Name	Credits	Number of Weekly Hours			Pre-requisites
			Lecture	Lab.	Exercise	
SE301	Engineering Economics	3	3	-	-	SE201
CS331	Programming Languages	3	3	-	-	IT112
SE421	Large Scale Software Design	3	3	-	-	SE321
SE422	Software Architecture	3	3	-	-	SE321
SE443	Agent-Oriented Software Engineering	3	3	-	2	SE321
CS451	Intelligent Systems	3	3	-	-	IT201, IT212
CS471	Distributed Systems	3	3	-	-	IT322
IS475	E-Commerce and E-Marketing	3	3	-	-	IS201, CN281
SE491	Special Topics in SW Eng.	3	3	-	-	90 Cr. Hrs

Additional Elective Courses (Breadth Elective Courses):

Students must select (2 courses) from other departments.

3.2.2 Orientation – national / international (classes held in foreign languages, semester abroad, bridging courses for international students)

N/A

3.2.3 Didactic concept / programme type (full-time, part-time, professional development, work-integrated, supported by Multimedia / Telematics, on-campus, distance or online programmes)

The programme is offered only on full-time basis. Most teaching activities are held on university campus. However, some special activities, such as the internship, are held outside the university. Moreover, a web-based educational portal is used to facilitate electronic registration and learning process, and to allow online interaction between teachers and their students. A Description to this portal is given below.

Overview of Educational Portal at Faculty of IT, UOB

The educational portal of IT faculty (www.itgate.org) is a Web-based electronic system aimed to automate the work and provide educational services at the Faculty. It is considered the first electronic system running in the Libyan Higher Education Institutions. Since it was launched in January 2008, the portal saves a great deal of time and effort for both students and staff. It helped to obtain statistics and indicators whenever and wherever needed. It also contains a smart electronic registration system that stores the information about regulations and relevant registration procedures as the electronic advisor deals with the student in the process of enrollment according to these regulations. This portal has been very helpful in reducing the crowd of students during the period of registration. Figures below show the interface of the portal.

Several users can benefit from this portal; faculty dean, academic head department, management and teaching staff and students. These benefits can be summarized as following:

- **For students**:
  - ✓ Accessing the portal anytime from anywhere;
  - ✓ Registering courses for new semester with the e-advisor assistance;
  - ✓ Viewing and printing out courses and exams timetables, midterm exam results for current semester courses and student's transcript for past semesters;
  - ✓ Viewing announcements issued by faculty management;
  - ✓ Exchanging (sending and receiving) messages with portal administration, teaching staff, students, academic departments;
  - ✓ Downloading course's academic material, lecture notes, course assignments and exercises;
  - ✓ Other related services.

- **For teaching staff**:
  - ✓ Viewing and printing out courses, examinations timetables, and lists of students registered in the course;
  - ✓ Sending midterm exam results and assignment results to students;
  - ✓ Sending messages to particular student or group of students;
  - ✓ Uploading course's materials, lecture notes, assignments and exercises.

- **For faculty management staff**:
  - ✓ Entering data for students, teaching staff, courses taught, rooms, courses and exams timetables, etc);
  - ✓ Sending announcements for students or group of students;
  - ✓ Responding to incoming messages from students and teaching staff;
  - ✓ Controlling and monitoring students registration process and providing help and advice whenever needed;
  - ✓ Uploading final year student's projects and scientific materials.

- **For faculty dean and academic head department:**
  - ✓ Getting information about students, teaching staff, academic departments, registration process, etc;
  - ✓ Uploading announcements and resolutions related to dean office;
  - ✓ Communicate with students, teaching staff and management staff;
  - ✓ Controlling and monitoring all activities done at the portal;
  - ✓ Supervising electronic library (e-books, final projects, scientific and research papers, lecture notes and course material, etc);

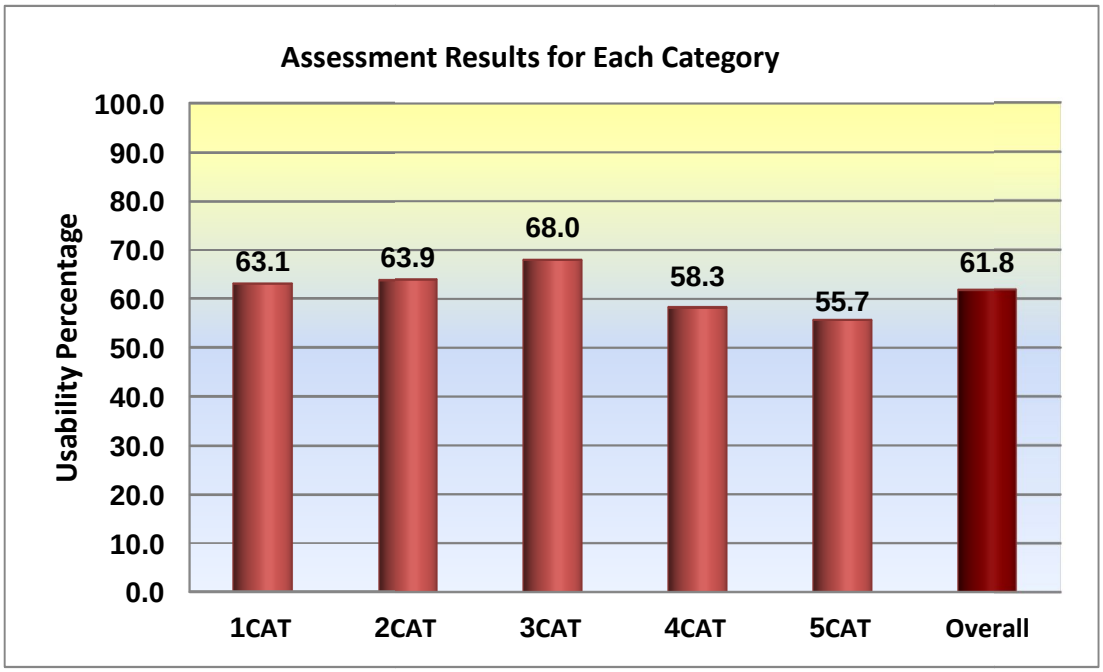
Portal Evaluation Study:

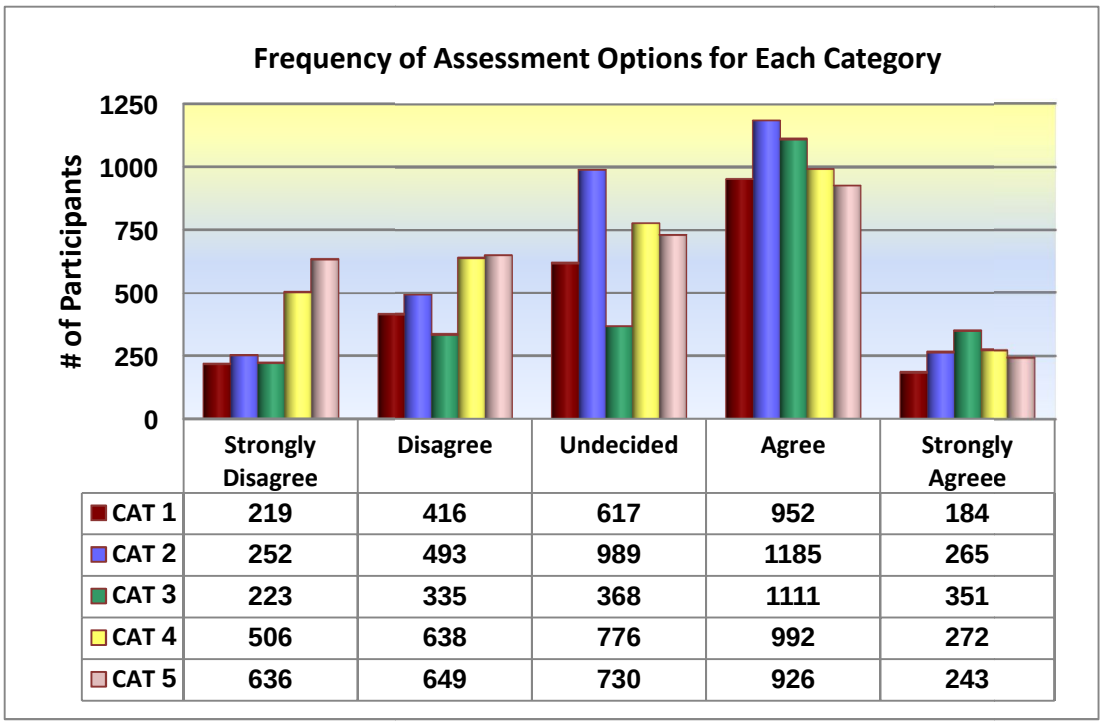
An evaluation study entitled (*An Evaluation of the Usability of IT Faculty Educational Portal at University of Benghazi*) is conducted to evaluate the usability of the Information Technology Faculty portal at University of Benghazi. Two evaluation methods were used: a questionnaire-based method and an online automated tool-based method. The study showed that some of the usability aspects have been found at the acceptable level of performance and quality, and some others have been found otherwise. In general, it was concluded that the usability of IT faculty educational portal is generally acceptable. Recommendations and suggestions to improve the weakness and quality of the portal usability are presented in this study.

The study will be presented at ICCSET 2013: International Conference on Computer Science, Engineering and Technology to be held in June 20-21, Istanbul, Turkey. Summary of this study is given below.

Sample results: Questionnaire-based method Assessment Results

Category	Usability Point	Usability %	Usability Level
CAT 1: Information, Content and Organization	3.2	63.1	Good
CAT 2: Navigation, Links and Accessibility	3.2	63.9	Good
CAT 3: Aesthetic and Visual Appeal	3.4	68.0	Good
CAT 4: Performance and Effectiveness	2.9	58.3	Moderate
CAT 5: Educational Purpose	2.8	55.7	Moderate
Overall	**3.1**	**61.8**	**Good**





	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agreee
CAT 1	219	416	617	952	184
CAT 2	252	493	989	1185	265
CAT 3	223	335	368	1111	351
CAT 4	506	638	776	992	272
CAT 5	636	649	730	926	243

3.2.4 Structure (programme structure, subjects offered, compulsory / core subjects, semi-elective subjects, minors, specialisation, modularisation, industrial placements, projects)

Refer to section 3.2.1

3.2.5 Workload / number of class hours per week during the semester and credit points, face-to-face hours, independent study

Refer to section 3.2.1

3.2.6 Credit point system / credit points for coursework and examinations

Refer to section 3.2.1

3.2.7 Examinations (oral, written, other)

Course assessment policy must be clearly stated in the course syllabus. Teachers are required to clearly explain the assessment policy of their courses at the first meeting with the students. Exam types and assessment measures differ according to the course objectives, but generally, examination policy adopted in the Software Engineering Study Programme can be summarised as follows:

Semester exams are divided into two types:

- Midterm exams (all courses have at least one mid-term).
- Final exam (compulsory written exam) is held during the last two weeks of each semester for each course.

The student will be evaluated in each course as follows:

- (20%) for Midterm exams.
- (30%) for evaluation of theoretical and practical exercises carried out by the student during the course period.
- (50%) for theoretical and practical Final exams.

The purely theory courses and purely practical course are evaluated as follows:

- (50%) for the student's work during the semester.
- (50%) for the Final exam.

The Department Board may request Faculty Board to modify this assessment policy in a maximum period of one month before the beginning of the semester.

3.2.8 Degree / examination regulations

In addition to the entry and admission requirements detailed in section (3.1.1), and examination assessment policy detailed in section (3.2.7), the following examination regulations detailed below are applied at Software Engineering Department:

Dates and duration of the exams:

- Midterm exams are held between the sixth week and the eighth week of the semester.
- The students' evaluation should be completed by the end of week thirteen of the semester.
- Final exams period is fixed at the last two weeks of the semester (fifteenth and sixteenth).
- Examination Bureau is responsible for announcing the final exams; dates in coordination with the academic departments in the school.

Exam questions and model answers:

- Exams and model answers must be prepared by the course instructor who oversees exam execution. In case the instructor is not available, the department shall nominate another member of staff to do this job.
- Copies of questions papers and model answers for the final exams are reserved in the Department.
- Copies of answer sheets are reserved in Examination Bureau for two semesters.

Exams corrections and announcement of final results:

- Final results are delivered by the course instructor to the Department within a maximum period of one week from the date of the exam.
- Results must be approved by both the academic department and the registrar, and then handed over to the Examination Bureau to be declared later on.
- The student may submit a review request for no more than two courses in a period not exceeding two weeks from the date of announcing the results.
- The Department must deliver a list of graduates to Registrar no later than one month after the end of semester exams.
- The list of graduates will be approved by Faculty Board and then ratified by the University administration.

Assessment Results:

- Course overall results is evaluated in accordance with the following grading system:

Grades	Points
A	From 3.33 to 4.00
B	From 2.67 to 3.27
C	From 2.00 to 2.60
D	From 1.00 to 1.93
F	Less than 1.00
I	Incomplete
U	Under achievement
W	Withdrawal

D		C		B		A	
Mark	**Point**	**Mark**	**Point**	**Mark**	**Point**	**Mark**	**Point**
50	1.00	65	2.00	75	2.67	85	3.33
51	1.07	66	2.07	76	2.73	86	3.40
52	1.13	67	2.13	77	2.80	87	3.47
53	1.20	68	2.20	78	2.87	88	3.53
54	1.27	69	2.27	79	2.93	89	3.60
55	1.33	70	2.33	80	3.00	90	3.67
56	1.40	71	2.40	81	3.07	91	3.73
57	1.47	72	2.47	82	3.13	92	3.80
58	1.53	73	2.53	83	3.20	93	3.87
59	1.60	74	2.60	84	3.27	94	3.93
60	1.67					95 -100	4.00
61	1.73						
62	1.80						
63	1.87						
64	1.93						

Grades	Marks
A	85 or more
B	From 75 to 84
C	From 65 to 74
D	From 50 to 64
F	Less than 50
I	Incomplete
U	Under achievement
W	Withdrawal

- In the case of student to be graduated and was failed in Elective course and the course might not be delivered anymore, it will be allowed to register for another Elective course as an alternative to the original one. course.
- Student will be given grade (I) if he/she meets the course requirements and was unable to take the final exam (due to some exceptional

circumstances beyond his/her control). This procedure must be officially approved by the school's registrar.

- The grade (I) will be replaced with the grade the student attains after being able to take the final exam in the allotted time by the instructor.
- If the student does not obey the obligations required on time, then the grade (I) will be replaced with (F) grade.
- Student obtains grade (U) for only one semester in the case of non-completion of the graduation project, at the end of the semester, and it requires additional semester.
- The student graduates within the same semester which meets all requirements for graduation.
- Student is prevented from taking the final exam of any course, if absence exceeds (25%) of the total number of course hours and will be given a grade of (F).
- A BSc with honors in Information Technology will be awarded to students who obtained final GPA of 3.50 or more, and must not have failed in any of the courses studied during the study programme.
- The final GPA needed for graduation is 1.6 and above, and in the case student obtains final GPA less than that level, the department should determine the relevant courses that the student must reset to raise the final GPA.
- The grade for each course is calculated as stated in paragraph (**Assessment Results**) and semester GPA is calculated as follows:
    1. Points obtained are multiplied by its' corresponding credits hours for each course. This process is repeated for all courses registered by the student in each semester.
    2. The total obtained in item (1) is divided on the total credits hours of all courses registered for the semester.
    3. The output of item (2) is considered the GPA for the semester.
- GPA is calculated after each semester, and Cumulative GPA is calculated in the same way previously stipulated.

Absence from exams:

- Absenteeism's excuses are acceptable for the final exams on condition providing clear and satisfactory evidence justifying the student's absence. Both the instructors and the academic department should approve this procedure within a period of one week from taking final exam.
- In the case of not accepting the absence excuse by the Department, the student will be given a grade of (F) in the course.
- In the case of accepting the absence excuse by both Department and course instructor, the Department sets another date for the exams, in coordination with course instructor, not later than one month from the date of the exam, and the student will be marked down (F), if he/she fails to attend the exam.

Graduation requirements:

Student is awarded a bachelor's degree in Information Technology (Major of: Software Engineering) if he / she meets the following conditions:

- To perform successfully all courses for the academic program prepared by the Department.
- To achieve final GPA of at least 1.6.
- To meet other conditions set forth in the list of Faculty regulations.

Warning:

- The student will be in the case of warning, if he/she earned a GPA of less than (1.6) points.
- The warning will be cancelled, if the student earns a cumulative GPA (1.6) points or more in the next semester.

Dismiss:

Student is dismissed and ceases to be entitled to continue to study in one of the following cases:

- If he/she stops study two consecutive semesters without an acceptable excuse and has exhausted the number of times to stop enrollment.
- If he/she attains GPA of less than (0.6) in the two semesters of the first four semesters.
- If he/she attains GPA less than (1.6) points in four consecutive semesters.
- If exhausted the maximum period of study stated in Faculty regulation (which is 5 years; 10 semesters, not including permissions of stop enrollment).

3.2.9 Diploma supplement:

The diploma of Information Technology (Major of: Software Engineering) consists of three main sections:

- **Certificate**: it shows the student name, graduation year and semester, and the final achieved accumulative GPA (out of 4.0 points) and grade.
- **Transcript**: it shows information about all passed courses including: course code, course name, number of credits, course grade and final achieved accumulative GPA (out of 4.0 points) and grade..
- **Supplementary grading system rules**: it explains the minimum pass grade for graduation, which is 1.6 (59%), grading system according to the general accumulative GPA, and explanation for used abbreviations.

4 Resources

4.1 Institution and Context

4.1.1 Description of the institution (institutes, laboratories, academic environment)

University of Benghazi is the oldest and first Libyan university. It was founded on 15 December 1955 as the Libyan University. The nucleus of the university was the Faculty of Arts and Education, which had an enrollment of (31) students and (6) teachers. In 1973 the University of Libya was split into two independent universities. The faculties in Tripoli constituted the University of Tripoli (previously named Al-Fateh University) while those in

Benghazi formed The University of Benghazi (previously called Garyounis University). In 2011, after the 17th of February revolution, the name of the university was changed back to University of Benghazi.

The university is spanned over an area amounted to about 530 hectares. More than eighty thousand students are now studying at the university. Nearly three thousand members of teaching staff, six thousand employees are working at the university. Since the first group graduated in the academic year 58-1959 till the year 2006, the total number of Bachelor holders are about (62,600) from different scientific disciplines. The university has different programmes for post graduation studies since 1978.

To achieve its vision, and for the purposes of graduating highly-skilled and qualified students, the university has established several research centres and advisory offices. An International Cooperation office (ICO) is an example of these. It is responsible for the development of the university's internationalization process, and serves as a facilitator to the university's international projects and relations. Through this office, the university has developed partnerships and cooperation with several national and international institutions in the field of higher education.
In addition, the university established its internal quality assurance and performance evaluation office in 2005 to promote and spread an internal quality culture and continuously improve the institutional and academic quality programs. The office, so far, played a major role towards improving quality and performance.

An Information Technology (IT) centre is also established to support and improve the university's educational process. The centre now, with other related parties at the university, developing a plan to develop a comprehensive university electronic management system with e-learning capabilities.

Recently, the university has established a center for teaching staff career development. The center starts introducing necessary training and development programs to the staff of teaching.

The university has faculties inside and outside the city of Benghazi as stated below:

Faculties inside the city of Benghazi

- Arts
- Economics
- Low
- Science
- Engineering
- Information Technology
- Education
- Medical faculties

Faculties outside the city of Benghazi

- Arts and Sciences / Alkufra
- Arts and Sciences / Ajdabiya
- Arts and Sciences / Alabyar
- Agriculture / Sellouk
- Education / Almarej
- Arts and Sciences / Almarej
- Arts and Sciences / Alwahat
- Education / Qmins

4.1.2 Committees responsible for teaching in the degree programmes seeking accreditation (commissions, Dean of Studies, etc.)

There are some committees in Software Engineering Department plays an important role in the study program. These are listed below:

1. Curriculum Review and Development committee
2. Graduation Projects committee
3. Internship committee
4. QA and Performance Evaluation committee
5. Scientific Affairs committee.

4.1.3 Research facilities, main areas of research, R&D activities including an explanation of their relationship to the degree programme seeking accreditation

The research interests of software engineering department include agent systems, software requirements, software testing, reverse engineering, software project management, component reuse, and software quality. The department shares with other faculty departments three computer labs for teaching, one computer lab for students of graduation projects, and one computer lab dedicated for students Internet access. The teaching labs are equipped with specialized software, and TV show units. Each department office has wireless internet access.

4.1.4 Degree programmes and degrees (including opportunities for further study) related to the degree programme seeking accreditation

After the completion of the BSc. degree in software engineering programme, the graduates can continue their master studies in various related fields of Computer Science and Information Technology.

4.1.5 Areas of specialisation in teaching (and research)

The main areas of specializations of the teaching staff include: Software engineering, computer science, information systems, artificial intelligence, and web applications.

4.2 Partnerships – Cooperation Related to the Degree Programme

4.2.1 Cooperation within the institution (intra-/ cross-disciplinary): comprehensive teaching matrix including imports and exports of teaching staff for the degree programme seeking accreditation

The programme study plan shown above contains some courses that are not directly related to software engineering, but considered as requirements from all programmes offered at the Faculty. These courses include: languages, maths, physics, humanities. Other courses from different departments at the Faculty, such as: information systems department, computer science department and computer networks department are considered either core or elective courses. On the other hand, a number of teaching staff of the software engineering programme teach some computer-related courses in other faculties within the university.

4.2.2 External cooperation with institutions of higher education / other institutions (incl. international cooperation)

N/A

4.3 Participating Staff

4.3.1 Composition (professors, contract teachers, academic staff, full-time / part-time academic, technical and administrative staff; types of position; number)

Staff broken down by position type, permanent posts allocated and number of individuals employed

Staff Contributing to the Degree Programme		
Position Type	**Permanent or equivalent positions**	**Total number of employees**
Professorships	5	5
Lecturers	7	7
Other academic staff (permanent)	13	13
Other academic staff (fixed-term)	0	0
LfbA (incl. junior lecturers)	0	0
Supernumerary professorships	0	0
Honorary professorships, external	0	0
Contract teachers	9	9
Other	0	0
Total academic staff	**34**	**34**
Technical staff	6	6
Other (clerical, manual) *	10	10
Total non-academic staff	**16**	**16**

* Includes administrative staff

4.3.2 Supervision (academic guidance, office hours; tutorials; mentoring programmes)

The total number of teaching and research hours/week required for full-time faculty members varies according to academic rank, as shown below. In addition to teaching and research, full-time faculty members assume responsibilities of academic guidance, office hours corresponding with their courses, tutorials if needed, participating in scientific committees.

Academic Rank	Teaching Hours	Research Hours
Professor	4	6
Associate Professor	6	4
Assistant Professor	8	2
Lecturer	10	2
Assistant Lecturer	12	2

In addition to the above hours requirements, 10 extra teaching hours/week are permitted for each full-time faculty member if necessary.

4.3.3 Relevant professional development measures / opportunities

The faculty promotes for a regular attendance and participation of local/international conferences, workshops and training. Each faculty member of staff is granted a budget sufficient to cover his/her participation to at least one conference, workshop or seminar out of the country per year.

In addition, the Faculty of Information Technology organises the 11th International Arab Conference on Information Technology (ACIT'2010) during the period December 14-16, 2010. The conference is a refereed scientific event that acts as a forum for scientists, engineers, and practitioners to present their latest research, results, ideas, developments, and applications in all areas of information technology.

4.4 Financial and Physical Resources

4.4.1 Human resources (lectureships, guest speakers, assistants, etc.)

The financial details of programme human resources are summarized in the following table:

Degree Type	Total number of staff	Monthly salary (LD)/staff	Total salary
Professor	1	3800	3800
Associate Professor	2	3200	6400
Assistant Professor	2	2600	5200
Lecturer	7	2200	15400
Assistant Lecturer	13	1800	23400
Teaching Assistants + Lab. Supervisors	6	650	3900
Other (Secretary and administrative)	10	600	6000
Part-time	9	750	6750
Total	**60**	**-**	**70850**

4.4.2 Physical resources (study trips, equipment maintenance, teaching materials, etc.)

The financial details of programme physical resources are summarized in the following table:

Description	Cost (LD)
Study trips, training programmes, workshops, conferences,	75000
Equipment Maintenance	20000
Desktop & Laptops for staff	25000
Lap. PCs, Data show and Fixed display screen	110000
Other teaching materials	15000
Total	**245000**

4.4.3 Investment funds (purchase of equipment, computer equipment, etc.)

In the University strategic plan, an amount of 25 Million LD is allocated for constructing a modern building for the Faculty of IT with latest educational facilities (labs, classrooms, offices, networking, teaching equipment, etc). It is expected to start the project next year (2014).

4.4.4 Investment funds for major equipment purchased over the past three years or about to be purchased

The major purchases of the last three years are summarized in the following table:

Description	2009/2010	2010/2011	2011/2012	Total (LD)
Equipment for teaching	54000	33000	45000	132000
Equipment for staff	32000	20000	29500	81500
Total	**86000**	**53000**	**74500**	**213500**

4.4.5 Premises (lecture theatres, seminar rooms, student workplaces, etc.)

Temporarily, the Faculty of Information Technology currently located within the campuses of the faculties of Science and Engineering until constructing its own campus, as indicated in section 4.4.3. The following table details the premises of the programme:

Lecture Theatre	Lecture Rooms	Staff Office	Labs
1	8	22	5

4.5 Supports for Teaching and Study

4.5.1 Computer facilities

4.5.1.1 Computer equipments

The department of software engineering shares with other faculty departments the following labs:

- Three computer labs for teaching. Each of them is equipped with personal computers, specialized software needed for teaching process and TV show units.
- One computer lab for students of graduation projects equipped with personal computers and teaching facilities.
- One computer lab dedicated for supporting students with free Internet-access. The lab is equipped with personal computers.
- Each department staff (teaching staff and employee) has one personal computer.
- Each department office has wireless free Internet-access.

4.5.1.2 Student supervision / qualifications of the supervisory staff

Six persons holding bachelor, or equivalent, degree in computer science are supervising the labs and IT activities presented in previous section.

4.5.1.3 Access, number of computers / pools, opening hours, etc

- Each teaching computer lab is equipped with 25 personal computers and accessible to students according to course timetable.
- Internet-access lab is equipped with 15 personal computers, and is open for all students from Saturday to Thursday (8:00 – 17:00).
- Graduation projects lab is equipped with 20 personal computers, and is open only for students of final graduation projects from Saturday to Thursday (8:00 – 17:00).
- Two pools (one for males and the other for females) include 6 sections in each of them are available and shared with the other faculty departments.

4.5.1.4 Description of the tasks performed by the students on PCs (workstations)

- Teaching computer labs are dedicated for the practical parts of the course, or fully practical courses.
- Internet-access lab is dedicated for students' internet-access, for supporting academic requirements and for personal purposes as well.
- Graduation projects lab is dedicated for students of final graduation projects to be used for programming and development process of their projects.

4.5.1.5 Restrictions / hindrances

- Teaching computer labs are used only for educational purposes.
- Internet-access lab is used for both educational support and personal purposes.
- Graduation projects lab is used for supporting only students of graduation projects. All students are required to follow the public morality and keep the school's equipment from damages. Specifically, they are warned not to:
  - ☒ Play games on the computers.
  - ☒ Take food or drink into the labs.
  - ☒ Smoke in the labs.
  - ☒ Litter in the labs.
  - ☒ Make noise in the labs.
  - ☒ Disturb other users.

4.5.2 Library / Literature / Media facilities

4.5.2.1 Inventory (monographs, journals, etc.)

The Department of Software Engineering shares a library with other faculty departments. The library plays an important role to support programme teaching and learning. Currently, it contains about 1300 books' titles (800 in English and 500 in Arabic) with about 2300 copies, 1400 in English and 900 in Arabic). A distinct graduation projects are recommended to be reserved in the library. An automated library system is being developed to facilitate library activates. Many modern resources are recently requested to support programme teaching and learning.

In addition, all university students have an online access to journals ScienceDirect and Oxford Journals through the university Website. These subscriptions provide an adequate research infrastructure both for students and faculty members.

4.5.2.2 Other media (maps, microfiche, audio)

N/A

4.5.2.3 Procurement / responsibility, coordination, etc.

At every new academic year, the library management contacts the faculty members of staff through their departments to collect their demands for the new books and resources. These requests are then sent to university central library, in order to be approved in connection with the university administration.

4.5.2.4 Student access / electronic access

The library is open to visitors (students, teaching staff, others) from (8:00 am – 17:00 pm) Saturday to Thursday. Currently, there is no electronic database for the library, but they can access the electronic databases of the ScienceDirect and Oxford Journals library through the university Website.

4.5.2.5 Staff qualifications

As the library is relatively small, there are only two employees working in the library under the supervision of the manager of faculty administrative and finance department. Both employees hold Bachelor degree in “Library Sciences”.

4.5.2.6 Workplaces for students

The library includes a reading hall of approximately 6x6m^2.

4.5.2.7 Restrictions / hindrances

- All library resources should be used for educational purposes, and can be used by both faculty staff and students eligible to borrow.
- Some resources, especially unique-copy resource, are for library hall use only.
- The Librarian reserves the right to cancel requests to borrow when necessary.
- All library visitors/beneficiaries are required to follow the public morality and maintain resources from damages. Specifically, they are required not o:

  - ☒ Play games on the library.
  - ☒ Take food or drink into the library.
  - ☒ Smoke in the library.
  - ☒ Litter in the library.
  - ☒ Make noise in the library.
  - ☒ Disturb other readers.

4.5.3 Laboratory facilities / equipment

4.5.3.1 Equipment and technical level

Refer to section 4.5.1.1

4.5.3.2 Student supervision / qualifications of the supervisory staff

Refer to section 4.5.1.2

4.5.3.3 Access, workplaces, opening hours

Refer to section 4.5.1.3

4.5.3.4 Restrictions / hindrances

Refer to section 4.5.1.5

4.5.4 Academic guidance measures for prospective and existing students

Students of Software Engineering Department are distributed on academic advisors (programme teaching) to provide them with their general education requirements and report o the head of the department. Students are required to meet with their advisors at least once a semester before registration. Records are kept on each student showing progress and dates of advisement. Current

status (unofficial transcript) is stored on each student's file. Students can view the list of courses (completed/and remaining) and register via the faculty management system (portal), but the existence of the academic advisor makes the advising of each student in the department more consistent.

5 Attainment of Objectives

5.1 Data and statistics on the success of the degree programme (from assessments of examination results, graduate surveys, student surveys, studies on graduate employment)

Department of QA and Performance Evaluation at the faculty conduct several types of questionnaires to aid faculty departments to assess their programmes. At present, students and graduates questionnaires and instructor's self-assessment report are conducted regularly since Fall 2011/2012. Other questionnaires, such as employer and final-year students are planned to be implemented at the end of Spring 2012/2013. Description and summary of results and comments for these questionnaires are presented below:

Students Questionnaire: the aim of this questionnaire is to assess teaching quality of the courses for the purpose of improving the educational process at the department. The questionnaire consists of 25 questions divided over 4 main categories: *Course (scientific material and references), Instructor personality, Preparation and implementation of the lecture by the instructor, and Effectiveness of instructor's evaluation.* Students are informed that information provided in this questionnaire will be kept confidential and used only for the purposes described. Table below shows summary of Spring 2011/2012 student's questionnaire.

Department	No. of Questionnaires	Categories				
		Course (scientific material and references)	Instructor personality	Preparation and implementation of the lecture by the instructor	Effectiveness of instructor's evaluation	Overall
General IT	3044	66.40 (Good)	68.40 (Good)	66.90 (Good)	67.60 (Good)	**67.33 (Good)**
Software Engineering	303	67.40 (Good)	68.50 (Good)	67.80 (Good)	68.80 (Good)	**68.13 (Good)**

Graduates Questionnaire: the aim of this questionnaire is to assess the quality of the programme outputs through knowing to what extent the graduates take advantage of the knowledge and skills that the department taught them. Results of Fall 2012/2013 questionnaires show that several students believe that the programme has improved their analytical and criticism abilities, provided with the broad range and variety of topics in the curriculum, equipped them with the tools required in marketplace. They believe that the program prepares students for flexible career options. On the other hand, some of graduates highlighted

specific concerns that will be taken into consideration by the departmental board.

Instructor's Self-Assessment Report: the aim of this assessment report is to evaluate the courses educational process by their instructors, and give them the opportunity to highlight the issues of concern. Information given in this report is carefully reviewed and analyzed for each course, and then discussed during department board. This kind of report together with the previous questionnaires can assist the department board to improve their future educational plans.

Internship Evaluation Report: In addition to all questionnaires mentioned above, software engineering students have an internship requirement. Companies employing them are required to provide a letter of evaluation at the end of the internship. The letter addresses how well the student performed his/her assigned tasks and duties, and includes an assessment of the skills, knowledge and abilities of the intern. These evaluations are extremely useful in assessing the programme objectives and outcomes.

Information obtained from the above questionnaires is analyzed by the Department of Quality Assurance and Performance Evaluation, which proposes solutions to the shortcomings in coordination with relevant academic departments.

5.2 Overview and assessment of external evaluation outcomes

N/A

5.3 Overview and assessment of internal evaluation outcomes

No internal evaluation process has been carried out yet. Only exploratory visit by University QA and Performance Evaluation Office was conducted last on semester Fall 2012/2013. A report of this visit that was issued indicates that the Faculty of IT is one of the university's leading faculties in education quality. An internal evaluation programme, in accordance to the standards of Libyan QA and accreditation centre, is planned to be conducted within next two semesters.

5.4 Number of students commencing each degree programme

Number of students commencing the Faculty of IT

First-Year Enrolments				
Degree programme/ Degree type	**Academic Year 2008/2009**	**Academic Year 2009/2010**	**Academic Year 2010/2011 ***	**Academic Year 2011/2012**
Faculty of IT (B.Sc.)	384	502	215	681
Total	**384**	**502**	**215**	**681**

* No students commencing the faculty at Spring 2010/2011 due to 17th of February revolution.

Number of students assigned to Software Engineering department

Software Engineering Programme: Students assignment				
Degree programme/ Degree type	**Academic Year 2008/2009**	**Academic Year 2009/2010**	**Academic Year 2010/2011 ***	**Academic Year 2011/2012**
Software Engineering (B.Sc.)	45	62	33	70
Total	**45**	**62**	**33**	**70**

* No students commencing the faculty at Spring 2010/2011 due to 17th of February revolution.

5.5 Number of students per course semester and degree programme / drop-out rates

Students Broken Down by Degree Programme and Semester of Study													
Degree programme / Degree type		**Students per Semester of Study**											
		1*	**2***	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**SPS[1]**	**Total**
Software Engineering (B.Sc.)	**Fall 2012/2013**	51	310	3	41	20	24	13	30	13	6	492	511

* Students in this semester are studying general IT courses. Assignment to academic departments started after 2nd semester (after completing 29 credit hours)

5.6 Graduates (preliminary / intermediate / final examinations passed)

Graduates, Broken Down by Degree Programme				
Degree programme/ Degree type	**Academic Year 2008/2009 ****	**Academic Year 2009/2010**	**Academic Year 2010/2011 ***	**Academic Year 2011/2012**
Software Engineering (B.Sc.)	-	13	16	8
Total	**-**	**13**	**16**	**8**

* No students commencing the faculty at Spring 2010/2011 due to 17th of February revolution.

** The 1st academic year at Faculty of IT was 2006/2007, and the 1st group graduated was in Fall semester 2009/2010

5.7 Staff-student ratio For new degree programmes, please provide the projected figures

Current faculty staff-student ratio is 1:35

6 Quality Assurance Measures

6.1 Evaluation during the degree programme (e.g. student surveys)

Refer to section 5.1

6.2 Evaluation of the success of the degree programme (e.g. graduate surveys)

Refer to section 5.1

6.3 Further development of the degree programme(s) – ongoing improvement (e.g. by study commissions)

At present, the software engineering department considers the following improvements:

- Increase the number of PhD holders among the full-time department members in the faculty.
- Increase the quality level of the final graduation projects by focusing more on the research.
- Improve the teaching techniques and emerging software tools in the learning of every course as much as possible.
- Increase the support by offering more elective courses every semester.
- Improve programme curricular and study plan. This work is undertaken by Curriculum Review and Development committee, and is expected to be finished by the end of the academic year 2012/2013.

Annexes / Enclosures

A Courses Description and Specifications (Folder name: Courses_Spec)
B Staff CV ((Folder name: Staff_CV)
C Examination and Degree Regulations (File name: Examination_Regulations.doc)
D Student's Guid (File name: Student_Guid.doc)
E Ministry of Higher Education Resolution for establishing the Faculty of Information Technology (File name: Establishment_Resol.jpg)