KINGDOM OF SAUDI ARABIA

THE NATIONAL COMMISSION FOR ACADEMIC ACCREDITATION & ASSESSMENT

COURSE SPECIFICATION
HASEB 242

Revised March 2007

Course Specification

For Guidance on the completion of this template, please refer to   of Handbook 2 Internal Quality Assurance Arrangements

Institution	Almajmaah University
College/Department	Al-Majma'ah Community College / Department of Natural and Applied Sciences

A Course Identification and General Information

1. Course title and code: Combining & Maintaining a Computer System (Haseb 242)
2. Credit hours: 3 hours
3. Program(s) in which the course is offered.   (If general elective available in many programs indicate this rather than list programs)   Computer Science Major /   Qualification Program
4. Name of faculty member responsible for the course   Mr. Mohammad Fayez Aabed
5. Level/year at which this course is offered : 4th Level
6. Pre-requisites for this course (if any)   Programming using Visual Basic (Hasar 110)
7. Co-requisites for this course (if any)   N/A
8. Location if not on main campus   Community College at Al-Majma'a / Class: 2-A-2 / LAB: 6-A-1

B Objectives

1. Summary of the main learning outcomes for students enrolled in the course.

- Understanding Hardware parts of Computer System.

- Understanding Software packages of Computer System.

- Gaining the skills of combining and maintaining Computer System from aspects of Hardware and Software.

- Learning the techniques and skills of developing computer system features, such as upgrading hardware parts by replacing with newer ones, installing latest up-to-date software packages, and doing maintenance for both (hardware and software).

2. Briefly describe any plans for developing and improving the course that are being implemented. (eg increased use of IT or web based reference material, changes in content as a result of new research in the field)

 This Course is one of the frequently revised courses by committee of study's scheduling and planning to ensure its follow-up to the up-to-date development in its related major, from the following aspects:

1- Using up-to-date topic-related references

2- Revising scientific achievements that are related to course field.

3- Keeping track of activities for Associates and companies that are interested in course field.

4- Following-up outcomes from related scientific researches.

5- Attending Scientific conferences.

C. Course Description (Note: General description in the form to be used for the Bulletin or Handbook should be attached)

1 Topics to be Covered		
Topic	No of Weeks	Contacthours
An Introduction about Computer System, naming its hardware parts, and how to combine them into a case.	3	6 Hours /Theoretical 6 Hours /Practical

An Introduction about Computer's basic Software packages	2	4 Hours /Theoretical 4 Hours /Practical
Computer System, How it works and how input-output flows from and to it.	1	2 Hours /Theoretical 2 Hours /Practical
The Relation between Hardware and Software, Preparing Computer System to start (boot-up), Formatting and partitioning Hard-disk drive, and Installing an Operating System (Windows XP).	3	6 Hours /Theoretical 6 Hours /Practical
Hardware Drivers Installation, Defining Computer's Software Categories, Installing basic software packages.	2	4 Hours /Theoretical 4 Hours /Practical
System tools and how to use	2	4 Hours /Theoretical 4 Hours /Practical
Computer hazards and faults: types, detection, and tolerance + Revision	2	4 Hours /Theoretical 4 Hours /Practical

2. Course components (total contact hours per semester):			
Lecture: 30 Hours	Tutorial:	Practical/Fieldwork/Internship: 30 Hours	Other:

3. Additional private study/learning hours expected for students per week. (This should be an average :for the semester not a specific requirement in each week)

 N/A

4. Development of Learning Outcomes in Domains of Learning

For each of the domains of learning shown below indicate:

a. Knowledge

(i) Description of the knowledge to be acquired

- Defining basic parts of Hardware and listing basic Software packages for a Computer System.

- Understanding the work-flow of computer system, and the integration between hardware parts and

software packages to start it.

- Gaining skills of combining computer hardware parts, ensuring their compatibility, and installing suitable software packages to get maximum stability and performance.

- Learning various methodologies of detecting computer hazards and faults, locating them, and recovery techniques for those failures by suitable actions.

(ii) Teaching strategies to be used to develop that knowledge

- In-Class Lectures

- In-Lab Lectures

- Outside-Learning resources

- Team Discussions (Students and Teacher)

(iii) Methods of assessment of knowledge acquired

- Paper-based Exams   - Practical Exams   - Quizes

b. Cognitive Skills

(i) Cognitive skills to be developed

- The Ability of describing computer hardware parts by seeing them within computer's case cabinet.

- The Ability of combining and removing Computer's hardware parts

- The Ability of starting a Computer system and prepare it for software installation.

- The Ability of Installing different types of software packages to start, maintain, and use Computer System.

- The Ability of knowing various software packages depending on the type of computer system being used.

- The Ability of doing maintenance for the software of Computer System by detecting, locating, and recovering from various software faults.

- The Ability of doing maintenance for the hardware of Computer System by detecting, locating, and recovering from various hardware faults.

(ii) Teaching strategies to be used to develop these cognitive skills

 Analyse, simplify, and discuss above listed skills through lectures and practical training sessions and simulate them by examples related to several real-life maintenance cases and discussions about latest technologies from Computer's market.

(iii) Methods of assessment of students cognitive skills

- Give Students the chance to discuss how computer's hardware parts are combined together and how combine and remove parts from computer's case cabinet.

- Give Students the chance to define types, models, and prices of hardware parts and software packages from local and international markets.

- Give Students the chance to check, detect, maintain, and recover from various hardware failures by applying those strategies to a real computer system (An In-Lab Computer, A Computer owned by one of the students ...etc).

- Give Students the chance to format a hard-disk drive, detect and recover software failures, and install new software packages.

c. Interpersonal Skills and Responsibility

(i) Description of the interpersonal skills and capacity to carry responsibility to be developed

- The Ability to work in a team to combine or remove hardware parts, install or remove software systems, detect and recover various types of faults, and maintain a computer system to improve its performance.

- The Ability to work individually to accomplish a specific task.

- The Ability to interact with other colleagues by discussions.

(ii) Teaching strategies to be used to develop these skills and abilities

- create study groups to exchange info and experiences in Computer Construction and maintenance techniques between members per each group.

(iii) Methods of assessment of students interpersonal skills and capacity to carry responsibility

- Frequent evaluation for team-work projects (Hardware Combination process, Software Installation, and faults detection and recovery).

- Frequent evaluation for accomplished individual assignments.

d. Communication, Information Technology and Numerical Skills

(i) Description of the skills to be developed in this domain.

- The Ability of combining, removing, attaching Computer's hardware parts.

- The Ability of using operating systems.

- The Ability of using different basic software packages.

- The Ability of downloading maintenance software tools.

- The Ability of using Internet and its tools.
- The Ability of searching and retrieving info from the Internet.
- The Skills of doing presentations and discussions with others.

(ii) Teaching strategies to be used to develop these skills
- Discussions by In-Lab Maintenance cases (like: combining, removing, replacing, and maintaining hardware parts. In addition to Installing, removing, modifying, and maintaining software packages).
- Assigning several exercises.
- Giving take-home assignments and home-works.
- Preparing some related topics to be presented In-class by students themselves

(iii) Methods of assessment of students numerical and communication skills
- Evaluating In-Lab training sessions and exercises.
- Evaluating take-home assignments and home-works.
- Evaluating Student's performance by their In-class presentations and discussions.

e. Psychomotor Skills (if applicable)

(i) Description of the psychomotor skills to be developed and the level of performance required
- The Ability of using maintenance tools (like: scraw-drivers)
- The Ability of Handling Computer's parts, and define the places of attaching or removing them.

(ii) Teaching strategies to be used to develop these skills
- Practical training sessions discussing different maintenance mechanisms for computer system

(iii) Methods of assessment of students psychomotor skills
- Evaluating student's ability to control and use different maintenance tools to combine and remove hardware parts, in addition to the capability of knowing right ways of attaching those parts in their correct places taking in consideration all safety conditions to do so in the maintenance Lab at the time of practical sessions.
- Measuring student's efforts by several paper-based and practical tests, also, evaluating the level of their discussions in Maintenance Lab.

5. Schedule of Assessment Tasks for Students During the Semester			
Assess ment	Assessment task (eg. essay, test, group project, examination etc.)	Week due	Proportion of Final

			Assessment
1	Assignments – Home-works – Tasks	Once per a week	10%
2	Quizes	2,4,6,10,12	20%
3	First Exam (Paper-based + Practical)	8	15%
4	Second Exam (Paper-based + Practical)	11	15%
5	Final Exam (Paper-based + Practical)	Scheduled later	40%

D. Student Support

1. Arrangements for availability of faculty for individual student consultations and academic advice.

(include amount of time faculty are available each week)

- A Direct Supervision should be by the teacher for students at the time of In-Lab practical training.

- On Average, 4 hours per a week for Office ones.

E. Learning Resources

1. Required Text(s)

The Complete PC Upgrade and Maintenance Guide, Mark Minasi, 16th Edition, SYBEX Inc., 2005.

2. Essential References

Build Your Own PC For Dummies, Mark L. Chambers, Wiley Inc. 2009.

3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List)

CompTIA A+ Complete Study Guide, Toby Skandier, SYBEX Inc., 2006.

4-.Electronic Materials, Web Sites etc

Resources on the Web:

http://www.pc.com

http://www.howstuffworks.com

http://www.motherboards.com

5- Other learning material such as computer-based programs/CD, professional standards/regulations

Preparation for A+ Certification for PC Maintenance (CD-ROM).

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (ie number of seats in classrooms and laboratories, extent of computer access etc.)

1. Accommodation (Lecture rooms, laboratories, etc.)

Computer Lab with 30 seats + A Lecture room with 30 seats

2. Computing resources

 5 PCs (at least) for Computer Maintenance Lab + 1 PC for Data-show in lecture room.

3. Other resources (specify --eg. If specific laboratory equipment is required, list requirements or attach list)

Software Compact Disks related to the following:

- 5 CDs (at least) of Microsoft Windows XP SP2

- 5 CDs (at least) of Microsoft Office 2007

- 5 CDs (at least) of Computer Maintenance tools

- Projector + Smart Board or normal one, at both Lecture room and Lab.

- Special Tools for combining and removing Computer Hardware parts.

G   Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching

- Evaluating the course by taking students opinions at the end of the semester from several aspects, like: teaching techniques, topics covered,...etc.
- Doing some interviews with a randomly selected group of students, and asking them about their

recommendations to develop the course for next semesters.

2 Other Strategies for Evaluation of Teaching by the Instructor or by the Department

- An Evaluation should be made by the members of the department for the teacher of the course and the

tools that were used in the teaching process.

- An Evaluation by guest teachers.

- Out-of-department revision.

- An Evaluation by the teacher of the course himself.

- A frequent local revision for the course by the committee of study's scheduling and planning.

3 Processes for Improvement of Teaching

- Availability for latest up-to-date PCs and maintenance support for them.

- Getting all benefits as much as we can from all in-campus and global revision processes.

- Taking in consideration all comments and recommendations made by department's committee about the teacher of the course by direct tracking for his teaching performance.

- Encourage self learning.

- Encourage extra readings from other resources.

- Encourage students doing presentations and mini-lectures.

- Encourage students interacting with each other by discussion's groups.

4. Processes for Verifying Standards of Student Achievement (eg. check marking by an independent faculty member of a sample of student work, periodic exchange and remarking of a sample of assignments with a faculty member in another institution)

- Recheck procedure for randomly selected papers from one of course exams by external examiners.

- Revision procedure for randomly selected papers from one of course exams by a special committee of teaching members of department.

- Arrange some kind of group checking procedure with all teaching members at the department.

5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.

- Compare this course with similar ones at other related departments.

- update the contents of course material to contain latest up-to-date info in this field of science.

- Use new technology tools to present and teach the course.

- Getting benefits from the evaluation made by students to add, modify, and update course material and teaching methodologies.

- A frequent and continuous revision should be made for the course description by the committee of study's scheduling and planning.