**Modern University FOR Business & Science**

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**SCHOOL OF HEALTH SCIENCES**

**-SHS-**

**Course Handbook**

**Health Information Systems (PCH203)**

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# Important Things to Remember

* **Make-Up Exam Policy:** Students missing an exam, a quiz or any graded assignment, must submit a **petition** to Students Affairs Office (SAO) within **(7) working days** for review. Note that make-up activities are subject to 10 %-20 % penalty depending on the nature of the excuse. Please email the petition to the respective campus using the following emails:

[Beirutpetition@mubs.edu.lb](mailto:Beirutpetition@mubs.edu.lb)

[Aleypetition@mubs.edu.lb](mailto:Aleypetition@mubs.edu.lb)

[Damourpetition@mubs.edu.lb](mailto:Damourpetition@mubs.edu.lb)

* **Attendance & Tardiness Policy:** Attendance is mandatory for all classes and constitutes 5 % of the students’ final grade. Students arriving more than (10) minutes late will be allowed to join the lecture, but no attendance will be awarded.
* **Course Materials & UMS:** A course handbook, which includes a course outline, detailing all aspects of each course will be posted on UMS. If such file does not exist, please email the corresponding Chair of the Department and carbon copy (cc) the Dean.

Dean’s email: [nalwan@mubs.edu.lb](mailto:nalwan@mubs.edu.lb)

* **Students’ Expectations:** Students are expected to have a textbook/lab manual, and where applicable, a calculator. In addition, students should adhere to the code of conduct set forth by the MUBS administration in the classroom and during examination. ***Please note that cell phone usage is prohibited in the classroom.***
* **Events Participation:** Depending on the nature of the course, students may be required to participate in certain related events. Active participation in these events may affect the students’ final grades positively.
* **Communication with the SHS:** As an SHS student, you can email the SHS for any suggestion, complain, comment, problem, etc. at:

Head of SHS Administration’s email: [rnasr@mubs.edu.lb](mailto:rnasr@mubs.edu.lb)

Dean’s email: [nalwan@mubs.edu.lb](mailto:nalwan@mubs.edu.lb)

# Course Outline

**Course:** Health Information Systems, PCH 203

**Session:** Wednesday 12:30 – 15:30

**Textbook:** A. Wager, Frances W. Lee, John P. Glaser (2013). Healthcare Information System third edition San Francisco: Jossey-Bass.

**Laboratory Manual:** N/A

**Additional Resources:** N/A

**Instructor:** Ms. Rana Hassoun

**Office Hours:** Monday 15:30-16:00

**Office:** Instructor room, School of health Sciences, Damour Campus

**Office Extension:**

**Email:** rhassoun@mubs.edu.lb

**Course Description** **Prerequisite: None**

This course (3 cr.) will give students the knowledge, skills & abilities to effectively manage both clinical and administrative information within their organizations and across the healthcare sector. In addition, it will prepare future health care executives with the knowledge and skills they need to manage information and information systems technology effectively in this new environment.

**Course Objectives**

* Compare and contrast the various definitions of health care information.
* Understand the content and uses of patient records
* Discuss the relationship between health care data and health care information.
* Discuss how accreditation, facility licensure, and certification influence the information needs of health care facilities.
* Describe the history and evolution of health care information systems
* Define the key components of an EHR system and the current status of these systems.
* Discuss implications of health care reform and new models of care on health information management needs
* Appreciate the organizational factors that can affect system acceptance and strategies for managing change.
* Gain a basic understanding of the core technologies behind health care information systems
* Identify significant threats the security of health care information.
* Describe the roles, responsibilities, and major functions of the IT department or organization.

**Learning Outcomes**

At the end of the semester, the students should be able to:

1. Describe the major types of health care information (Internal & external) that are acquired or used or both in health care organizations.
2. Discuss the challenges associated with measuring and ensuring health care data quality.
3. Discuss Patient Safety Organizations & their relevance to health care organizations and consumers
4. Describe the laws, regulations, and standards that govern patient confidentiality.
5. Identify the major types of administrative and clinical information systems used in health care.
6. Discuss the major Barriers to HER adoption and the strategies being employed to overcome them.
7. Gain a broad understanding of the major federal legislation that has passed in recent years to promote the adoption and meaningful use of electronic health record system.
8. Gain insight into the problems that may occur during the system acquisition process.
9. Discuss why it is important for a healthcare organization to adopt an overall information systems architecture.
10. Identify the major types of health care information standards and the organizations that develop or approve them.
11. Describe the basic components of business continuity and disaster recovery plans for health care information.

Teaching Methods

**Teaching Through Collaboration:** This innovative method of teaching involves encouraging student collaboration for various projects. Today, we live in a globalized world and collaboration is an essential life skill that is important for all careers and enterprises. The instructor will help foster this skill in the classroom by allowing students to learn, study and work in groups.

**Gamification :** Gamification endeavors to literally create a game out of learning in this course by theming all components of the classroom in a game metaphor; making the class like one big first-person game to enhance learning by increasing student engagement.

**Grade Allocation**

Attendance = 5% Participation = 5% Assignement = 15%

Exam I = 20% ExamII= 25% Final Exam = 30%

**Grading Scale**

Academic standing at MUBS is based upon the grading system shown below:

|  |  |  |
| --- | --- | --- |
| **Percentage (%)** | **Grade\*** | **Q-Points** |
| 97-100 | A+ | 4.0 |
| 93-96 | A | 4.0 |
| 90-92 | A- | 3.7 |
| 87-89 | B+ | 3.3 |
| 83-86 | B | 3.0 |
| 80-82 | B- | 2.7 |
| 77-79 | C+ | 2.3 |
| 73-76 | C | 2.0 |
| 70-72 | C- | 1.7 |
| 67-69 | D+ | 1.3 |
| 63-66 | D | 1.0 |
| 60-62 | D- | 1.0 |
| ≤ 59 | F | - |

**\*F- Failing W- Withdrawal I- Incomplete**

**Teaching Methods**

* Interactive and traditional lectures (PPT, board), handouts, discussions, and links will be used and will be available on University Management System (UMS).

**Course Plan**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weeks** | **Dates** | **Topics** | **Chapter (s)** | **Teaching Methods**  **(Letters)** |
| 1 | Wednesday 16/10/2019 | Introduction of the course | 0 | C,P,T |
| 2 | Wednesday 23/10/2019 | Introduction to health care Information | 1 | C,P,T |
| 3 | Wednesday 30/10/2019 | Healthcare data Quality | 2 | C,P,T |
| 4 | Wednesday 6/11/2019 | Health care information Regulations, laws & Standards. | 3 | C,P,T |
| Lebanon Primary Care Standard 28 + Assignment | 3 | C,P,T |
| 5 | Wednesday 13/11/2019 | Exam 1 (Chapters: introduction, 1, 2, &3) |  |  |
| History & evolution of health care information System. | 4 | C,P,T |
| 6 | Wednesday 20/11/2019 | Clinical Information System | 5 | C,P,T |
| 7 | Wednesday 27/11/2019 | Federal Efforts to enhance Quality of patient care through the use of health Information Technology. | 6 | C,P,T |
| **Assignment presentations** |  |  |
| 8 | Wednesday 4/12/2019 | System Acquisition. | 7 | C,P,T |
| System implementation & support. | 8 | C,P,T |
| 9 | Wednesday 11/12/2019 | Exam 2 (Chapters: 4, 5, 6, 7, & 8) |  |  |
| Technologies that support Healthcare Information System. | 9 | C,P,T |
| 10 | Wednesday 18/12/2019 | Technologies that support Healthcare Information System. | 9 | C,P,T |
| Health Care Information System Standards. | 10 | C,P,T |
| 11 | Wednesday 25/12/2019 | Holiday (Christmas & New Year) |  |  |
| 12 | Wednesday 1/1/2020 | Holiday (Christmas & New Year) |  |  |
| 13 | Wednesday 8/1/2020 | Security Of Healthcare Information System | 11 | C,P,T |
| 14 | Wednesday 15/1/2020 | Information Technology Resources | 12 | C,P,T |
| IT Alignment & Strategic Planning | 13 | C,P,T |
| 15 | Wednesday 22/1/2020 | Governance & Management | 15 | C,P,T |
| Revision |  |  |
|  | TBD | Final Exam (Chapters: 9, 10, 11, 12, 13 & 15) |  |  |

**Classroom Policies**

**Attendance:** Class attendance is mandatory and constitutes a maximum of 5 % of the final grade. If for some reason, a student has to miss class unexpectedly, it is the student’s responsibility to make certain that all assigned work is completed. Excessive absenteeism (more than 30% of the course) will be grounds for disciplinary and corrective actions by the Office of Student Affairs i.e. student will be automatically dropped from the course. Missing more than three laboratory sessions will result in dropping the student out of the course.

<http://www.mubs.edu.lb/en/current-students/policies-procedures/attendance.aspx>

**Participation:**  Participation is a necessary part of classroom learning and constitutes a maximum of 5 % of the final grade. It is not enough to merely attend courses; students must also participate in the learning process. Students are graded on participation separately from attendance, however absence from class deducts from a student’s total participation grade. Likewise, students who do not participate, or those who attend class and cause a disruption, will lose participation points. To fully participate in classes, students should read the chapter prior to the lesson and add positive commentary or questions to the session. Cell phones are strictly forbidden in class and examination rooms, and the use of cell phones constitutes classroom disruption.

**Make-Up Exams:** Exams will be given on the above scheduled dates. You will regularly be given quizzes either at the beginning or towards the end of laboratory sessions. You may be asked questions about the previous laboratory or the work to be performed during that laboratory session. However, a make-up exam ***may be given*** by written consent of the Department/School if the student sends an electronic petition within ***7 days*** of the date of the exam. The date of the make-up will be decided by the Department/School concerned as will any penalty is applied toward any exam not taken on the scheduled exam date(s).

<http://www.mubs.edu.lb/en/current-students/policies-procedures/examination-assessment.aspx>

**Academic Integrity and Misconduct:** Plagiarism is defined as the practice of (dishonestly) claiming or implying original authorship of material which one has not actually created. Plagiarism, or any form of cheating, will result in a **ZERO** for the course. In addition, it is everybody’s responsibility to provide an environment conducive for learning; therefore, mutual respect is required between students and instructors as well as between students themselves. Any notion of misconduct will be reported to the administration and may lead to suspension, probation, or dismissal from the University. The University regulations on plagiarism and unfair practice must be observed. Your attention is drawn in particular to the need to acknowledge all sources of information by clearly referencing all material using the referencing style set by the instructor. The SHS reserves the right to ask for further proof of the nature and source of material used and you are advised to keep complete records of such sources.

<http://mubs.edu.lb/en/current-students/policies-procedures/academic-integrity-plagiarism.aspx>

**Assignments & Reports:** Assignments and reports must be turned in by the **set due date**. If you are absent from class, you should call a fellow classmate to find out if there were any assigned exercises during your absence. You are responsible for any and all information given during your absence. Late submission of assignments will be accepted **only** if notified before the original due date with a valid excuse.

**Be prepared when you come to the laboratory:** Read the assigned exercise(s) in the manual in advance, to ease the osmosis of knowledge. Use the manual as you examine slides and specimens. The laboratory manual also contains step-by-step instructions for experiments. Quiz questions are often based on recognition and recall, and the manual can help you remember what you examined in the laboratory. Always check the companion website to the laboratory manual, complete the pre-laboratory questions, go through the directed presentation for that laboratory, watch any animations or videos available and take the on-line laboratory quiz available through the site. Do not forget to take the pre-laboratory on-line assessments when available.

**Go Green:** MUBS is committed to reducing the University’s carbon footprint. Please do not submit hardcopy assignments unless necessary. Make sure that you throw away recyclable items in the allocated recycling bins on campus. Conserve the use of electricity by turning off the light when your leave a room.

For more information regarding the student code of conduct as well as other related subjects, please check policy on the website:

<http://mubs.edu.lb/en/current-students/policies-procedures.aspx>

**N.B.** Cell phones are **STRICTLY** prohibited in class and in examination rooms.

# Students’ Contribution

Students’ contribution to this course is to:

* Attend all lectures
* Participate in lecture/seminar discussion and activities
* Work individually or in group on case analysis requested by the course leader(s)
* Follow-up on sessions by identifying key concepts in appropriate reference literature and reading more about them
* Access and complete Moodle tests and exercises, if applicable
* Review tasks/hand-outs by completing further examples not covered in class

# How is the Course Assessed?

There are **4** assessments for this course:

1. Assignment (Lebanon primary healthcare standards)
2. Exam I (covering chapters: Introduction, 1,2, 3)
3. Exam II (covering chapters: 4,5, 6, 7, 8)
4. Final exam (covering chapters: 9, 10, 11, 12, 13,15)

Details of the assessments can be found later in this handbook.

***The University regulations on plagiarism and unfair practice must be observed. Your attention is drawn in particular to the need to acknowledge all sources of information by clearly referencing all material using the referencing style required by the instructor.***

***The SHS reserves the right to ask for further proof of the nature and source of material used and you are advised to keep complete records of such sources.***

# IV. 1 Assessment type – Assignment

**Word count** – not applicable

**Weighing** – 15 % of final mark for the course

**Due date**: 27-11-2019

**Learning outcomes**:

1. Gain a knowledge about the implementation of HIS in Primary healthcare centers.

**What are you required to do?**

Students should read the Lebanon Primary Care Standard 28 and do a field visit to a primary healthcare center to check if the sub standards are met or not.

**Assignment structure:**

The assignment constitutes of 2 parts.

3 Questions (10 % each of total grade) and 10 sub standards audit (7% each of total grade)

**Marking scheme:**

A detailed rubric/key will be presented with every assignment.

# IV. 2 Assessment type – Exam I

**Word count** – not applicable

**Weighing** – 20 % of final mark for the course

**Due date**: 13-11-2019

**Duration**: 90 minutes

**Learning outcomes:**

1. Compare and contrast the various definitions of healthcare information.
2. Understand the content and uses of patient records.
3. Describe the major types of health care information.
4. Discuss the relationship between health care data and health care information.
5. Discuss how accreditation, facility licensure, and certification influence the information needs of health care facilities.

**How to prepare yourself for this assessment?**

Students should prepare well for their exam by studying chapters’ introduction, 1, 2, and 3.

(Students can study the material from the power point presentations).

**Exam structure:**

The exam constitutes of three different sections. Section 1 will comprise of 30 Multiple Choice Questions (45 % of total grade). Section 2 constitutes of 24 True or False (24 % of total grade). Section 3 consists of 8 Short-Answer Questions (31 % of total grade).

**Marking scheme:**

A detailed rubric/key will be presented with every exam.

# IV.3 Assessment type – Exam II

**Word count** – not applicable

**Weighing** – 25 % of final mark for the course

**Due date**: 11-12-2019

**Duration**: 90 minutes

**Learning outcomes**:

1. Describe the history and evolution of health care information systems.
2. Identify the major types of healthcare information system.
3. Describe the purpose, use, key attributes, and functions of some of the major types of clinical information systems used in health care
4. Discuss implications of health care reform and new models of care on health information management needs.
5. Gain an understanding of the health care IT industry
6. Develop a sample system implementation plan.

**How to prepare yourself for this assessment?**

Students should prepare well for their exam by studying chapters 4,5, 6, 7, and 8.

(Students can study the material from the power point presentations).

**Exam structure:**

The exam constitutes of three different sections. Section 1 will comprise of 35 Multiple Choice Questions (35 % of total grade). Section 2 constitutes of 30 True or False (30 % of total grade). Section 3 consists of 7 Short-Answer Questions (35 % of total grade).

**Marking scheme:**

A detailed rubric/key will be presented with every exam.

# IV.4 Assessment type – Final Exam

**Word count** – not applicable

**Weighing** – 30 % of final mark for the course

**Due date**: TBD

**Duration**: 90 minutes

**Learning outcomes**:

1. Gain a basic understanding of the core technologies behind health care information systems
2. Identify the major types of health care information standards
3. Identify significant threats to the security of health care information.
4. Describe the roles, responsibilities, and major functions of the IT organization.
5. Determining the distribution of IT decision making responsibilities

**How to prepare yourself for this assessment?**

Students should prepare well for their exam by studying chapters 9, 10, 11, 12, 13 and 15.

(Students can study the material from the power point presentations).

**Assignment structure:**

The exam constitutes of three different sections. Section 1 will comprise of 40 Multiple Choice Questions (40 % of total grade). Section 2 constitutes of 20 True or False (20 % of total grade). Section 3 consists of 12 Short-Answer Questions (40 % of total grade).

**Marking scheme:**

A detailed rubric/key will be presented with every exam.

# Assessment Criteria

The following is an indication of the academic characteristics that the assignment will be required to have satisfied in order to be awarded the grade indicated:

**A (90% +)** Excellent performance relative to designated learning outcomes. Demonstrates excellent understanding of the subject matter covered in the assessment. Demonstrates a high degree of analytical ability, originality and critical insight using a wide range of sources and literature. Demonstrates a very high level of comprehension of relevant academic content and shows clear evidence of appreciating its professional application. Work is well written, well presented, and fully referenced. Marks in the higher end of the marking band are awarded for exceptional pieces of work that demonstrate a deep understanding of the subject matter covered in the assessment. The work demonstrates an exceptional grasp of relevant theory and a rigorous application.

**B (80-89%)** Very good performance relative to designated learning outcomes. Demonstrates broad understanding of the subject matter covered in the assessment. Demonstrates solid analytical ability and a good grasp of the relevant academic content and its application. Demonstrates good powers of critical thought. The discussion is well organized and structured logically. Arguments are justified sufficiently. Work displays evidence of reading of the literature and other sources. Work is clearly written, clearly presented, and referenced appropriately

**C (70-79%)** Good performance relative to designated learning outcomes. Demonstrates understanding of the subject matter covered in the assessment. Demonstrates knowledge of the material provided in the basic readings but without much evidence of wider reading. There may be some isolated deficiencies in knowledge and understanding. The discussion reflects some ability to argue logically and organize an answer. Work is presented appropriately and is referenced adequately.

**D (60-69%)** Satisfactory performance in designed learning outcomes. Demonstrates a basic understanding of the subject matter covered in the assessment. Demonstrates some ability to identify key issues and construct an argument. Shows comprehension of the basic facts and principles but may present some notable deficiencies in knowledge and understanding. There may be some deficiencies in the presentation and the referencing of the work.

**F (59% & below)**

There is an attempt to address the question but no real evidence of any specific structure. There is evidence of a lack of reading around the subject matter, leading to inconsistencies. Some attempt at descriptive argument but no real evidence of a coherent structure leading to a conclusion. There is confusion in the argument, leading to a less than satisfactory answer/ discussion. Referencing is either not in existence or inconsistent throughout.