1	Course title	Health Informatics
2	Course number	0701911
3	Credit hours (theory, practical)	3 credit hours (Theory)
	Contact hours (theory, practical)	3 contact hours (Theory)
4	Prerequisites/corequisites	----
5	Program title	Doctor of Philosophy in Nursing
6	Program code	----
7	Awarding institution	The University of Jordan
8	Faculty	School of Nursing
9	Department	Community Health Nursing
10	Level of course	----
11	Year of study and semester (s)	2016/2017
12	Final Qualification	PhD in Nursing
13	Other department (s) involved in teaching the course	----
14	Language of Instruction	English
15	Date of production/revision	Jan, 2017

16. Course Coordinator:

Faculty Member: Ali Saleh, PhD, RN
Office Number: Office 112
Office Hours: by appointment
Office Location and Tel: The University of Jordan, School of Nursing, 1st Floor. 23143
Email and Website: Email: a_saleh@ju.edu.jo
Academic website: http://eacademic.ju.edu.jo/a_saleh
E-Learning website: https://elearning.ju.edu.jo/

17. Other instructors:

Faculty Member: Laila Mahmoud Akhu-Zaheya, PhD, RN
Office Number: N1L0
Office Hours: by appointment
Office Location and Tel: Jordan University of Science and Technology, Faculty of Nursing, (+962)2-7201000 Ext: 23625
Email and Website: Email: lailanurse@just.edu.jo

18. Course Description:

This course will examine the application of health informatics to health care research. The course content is designed to facilitate the acquisition of a set of systems skills that can be applied to clinical informatics, outcomes management, and health-related databases

19. Course aims and outcomes:

A- Aims:

This course examines the utilization and application of informatics and information technology in supporting decision-making in clinical practice, research, education, administration, and healthcare management. Understanding how informatics processes use and apply data, information, and knowledge in healthcare, helps the clinician effectively utilize technology to plan, implement, and achieve optimal health outcomes.

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to …

1. Understand the influence and impact of informatics on practice
2. Apply informatics technology in selected settings
3. Evaluate the effectiveness of informatics technology in selected settings
4. Formulate informatics research needs and opportunities
5. Plan care and document health outcomes using informatics
6. Recognize the impact of ethical standards in the utilization of technology and informatics in healthcare

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Introduction to course requirements and materials	**Week 1** 29/1-2/2	Dr. Ali Saleh Dr. Laila Akhu-Zaheya			
Health/ nursing informatics	**Week 2** 5/2-9/2	Dr. Laila Akhu-Zaheya	ILO 1	• Presentation • Participation • Critique of Informatics Study	Ch. 1 (Saba & McCormick) Ch. 2 (Hannah et.al.)
Theoretical Frameworks used supporting health care environment	**Week 3** 12/2-16/2	Dr. Laila Akhu-Zaheya	ILO 1	• Presentation • Participation • Critique of Informatics Study	Ch. 15 & 16 (Saba & McCormick) Ch. 1 & 2 (Englebardt & Nelson)
Application of Health/Nursing Informatics: **Leadership**	**Week 4** 19/2-23/2	Dr. Ali Saleh	ILO 2	• Presentation • Participation • Critique of Informatics Study	Ch. 17-19, 21 (Saba & McCormick) Ch. 10 (Hannah et.al.)
Application of Health/Nursing Informatics: **Research**	**Week 5** 26/2-2/3	Dr. Laila Akhu-Zaheya	ILO 4	• Presentation • Participation • Critique of Informatics Study	Ch. 47 & 48 (Saba & McCormick) Ch. 13 & 19 (Hannah et.al.)

Application of Health/Nursing Informatics: **Education**	**Week 6** 5/3-9/3	Dr. Laila Akhu-Zaheya	ILO 2	• Presentation • Participation • Critique of Informatics Study	Ch. 42-46 (Saba & McCormick) Ch. 20 & 21 (Hannah et.al.)
Nursing Informatics in Practice Part 1	**Week 7** 12/3-16/3	Dr. Ali Saleh	ILO 2 ILO 5	• Presentation • Participation • Critique of Informatics Study	Ch. 26-28, 30 (Saba & McCormick) Ch. 8 (Hannah et.al.)
Nursing Informatics in Practice Part II	**Week 8** 19/3-23/3	Dr. Ali Saleh	ILO 2	• Presentation • Participation • Critique of Informatics Study	Ch. 29, 25, 32, & 33 (Saba & McCormick)
Hakeem (Guest Speaker)	**Week 9** 26/3-30/3		ILO 2		
Telehealth	**Week 10** 2/4-6/4	Dr. Ali Saleh	ILO 2	• Presentation • Participation • Critique of Informatics Study	Ch. 22 (Saba & McCormick) Ch. 3 & 9 (Hannah et.al.)
Ethics and health informatics	**Week 11** 9/4-13/4	Dr. Laila Akhu-Zaheya	ILO 6	• Presentation • Participation and Assignment • Critique of Informatics Study	Ch. 10 (Saba & McCormick) Ch. 2 (Hannah et.al.)
Standardization	**Week 12** 16/4-20/4	Dr. Ali Saleh	ILO 3	• Presentation • Participation • Critique of Informatics Study	Ch. 7, 8, & 38 (Saba & McCormick) Ch. 7 (Hannah et.al.)
Presentations	**Week 13** 23/4-27/4			• Presentation • Participation • Project	
Presentations	**Week 14** 30/4-4/5			• Presentation • Participation • Project	

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following <u>teaching and learning methods</u>:
• Interactive lectures
• Group discussions
• Seminars and presentations
• Individual projects
• E-learning using Moodle

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following <u>assessment methods and requirements</u>:

    1. Participation and Assignments   20%
    2. Presentation   15%
    3. Critique of Informatics Study   25%
    4. Project   40%

Discussion/Participation (20%)
Discussion builds an academic community and is an integral component of this class as various readings will be addressed with their implications to informatics practice and specific disciplines. In addition, the text readings will serve as an introduction to the class topic content.

All are expected to contribute to the class discussion. Discussion involves course content being explored through dialogue of the presented topic. While the participants express their synthesis of the readings that generate the discussion topic, participation is expected to be meaningful, not only expressing one's opinion. Discussion questions serve to initiate and guide the discussion, but not merely limit it only to what is posed.

Discussion is expected to contribute new ideas, introduce related topics, broaden or focus the discussion, or extend/develop the discussion in some way. Therefore, contributions to the discussion reflect thought, preparation, and intellectual discovery. Responses that consist of "I agree," or "That's what I was thinking," are weak responses and are not reflective of appropriate discussion. Responses that consist of moving the topic forward through challenging the posts (with appropriate rationales), or providing an alternative explanation or synthesis (with appropriate rationales) are examples of stronger responses to the discussion.

In a learning community, the primary goal is to build that community through discussion and participation, where academic imagination flourishes. As a participant in this process, all are expected to treat one another with respect and adhere to standards of academic integrity, honesty and fairness.
This includes:
- Being prepared for active participation in the discussion.
- Respecting the diversity of others' experiences and perspectives, even if it differs from yours. Dissent can be done respectfully.
- Taking credit only for your work and giving credit to other sources from which you draw your ideas.

Presentation (15%)
Each class member will do a presentation on a selected informatics topic. Approval of assigned faculty member regarding the outline of the presentation is required at least one week before the presentation date. The presentation should consist of a powerpoint presentation. Grading will be done using a rubric that addresses the quality of the presentation content and presenter skills.

Informatics Study Critique (25%)
What informatics research has been done to address the utility and application of informatics into practice? Select a database informatics article describing an informatics research study.
Critique the article (research article) using these guidelines:

- Does the title tell you about the research with major informatics ideas included? If a discipline specific article, did the title indicate it?
- Is the study reason clearly identified with significance for informatics?
- Can the study problem be answered with empirical evidence from health informatics practice?
- Is the specific research purpose stated and how it relates to informatics?
- Evaluate the methodologies used: type of study, design, variables, sampling, data analysis
- Do the results support or reject the study question?

- What knowledge for informatics is confirmed or generated by the study and does it relate to existing theory or informatics knowledge?

Submit the critique both in class as well as via email. The critique should be done in APA format.

Application Project (40%)
Consider that you are a Healthcare Informatics Specialist. You have been asked to evaluate the current internal workflow and make a recommendation regarding the workflow, communications, protocol and architecture required in order to select a new healthcare information system for any setting based on your experience. The project will be a paper (approximately 10-15 pages and should be done in APA format) and presentation that will be suitable for presenting to senior management. In addition, you will prepare a 15-minute Slide presentation that presents your findings and includes the following:

1) **Situation Analysis.** Describe the "real" or hypothetical work environment, provider objectives and current information systems configuration, as well as any unmet needs or issues. Indicate pros, cons and unresolved issues for the current system.

2) **Workflow Requirements.** List or otherwise characterize the key workflows, protocols, communications, etc., requirements to be met by the new or upgraded health information system.

3) **System Selection and Implementation.** Describe the steps required for new system selection and implementation.

4) **System Evaluation, Support, and Maintenance.** Propose a plan to evaluate, support, and maintain the implemented system.

23. Course Policies:

Course Expectations
As doctoral students, the expectation is that the learner seeks out the information and learning opportunities beyond the basic readings and requirements listed for each class meeting. The doctoral student is the future leader in nursing. As such, the learner must expand and develop their knowledge base to meet the requirements of leader, researcher, educator and advocate for the population they will serve.

The faculty member facilitates learning on the doctoral level. The learner must then organize information gathered from the readings, professional background, and previous education to synthesize and integrate these to apply this knowledge in the class. Learning is done through interaction with others in the class and applying the information previously gathered. All come to this class with different levels of knowledge, expertise, and skills to share, thereby creating a diversity of input. Everyone thus benefits from what we all have to offer.

It is the hallmark of professional nursing and doctoral education that ethical behavior in academic honesty is demonstrated in all work that is submitted. References are to be scholarly and follow the APA rule for not exceeding 5 years in date (unless a classic source or previously approved by the faculty member). Plagiarism or academic honesty will result in consequences, which could include dismissal from the course or the receipt of a failing grade.

Communication with faculty may be accomplished through email (preferred) or by phone. Please make email your first mode of contact for routine questions. While the faculty will make every attempt to get back to you in a timely manner, please allow 24 to 48 hours for me to reply back to your questions. Please don't hesitate to contact faculty if you have questions about the course or assignments.

A- Attendance policies:
- Students must attend all classes of this course.
- Any student with absence of 15% of the classes of any course, will be illegible to sit for the final exam

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and will be given the university zero (F grade) in this course.

− In the case (b) above, if a student submits an official sick report authenticated by university clinic or an accepted excuse by the Dean of his/her faculty, the student will be considered as withdrawn from the course, and a "W" will be shown in the transcript for this course.

− Students are not allowed to come late to classes. Any student coming late will not be allowed to attend the class and he/she will be marked absent.

B- Absences from exams and handing in assignments on time:

− Assignments and projects should be submitted to the instructor on the due date.

C- Honesty policy regarding cheating, plagiarism, misbehavior:

Cheating, plagiarism, misbehavior are attempts to gain marks dishonestly and includes; but not limited to:

- Copying from another student's work.
- Using materials not authorized by the institute.
- Plagiarism which means presenting another person's work or ideas as one's own, without attribution.

D- Grading policy:

A grade of (C+) is the minimum passing grade for the course.

F- Available university services that support achievement in the course:

- Faculty members website
- E-Learning website

24. Required equipment:

➢ Audio-Visual Aids
➢ Faculty member's Website
➢ E-Learning Website

25. References:

A- Required book (s), assigned reading and audio-visuals:

− Hannah, K., Hussey, P., Kennedy, M., Ball, M. (2015). Introduction to Nursing Informatics 4th ed. Springer: USA

− Saba, V.; McCormick, K. (2015) Essentials of Nursing Informatics. 6th ed. McGraw-Hill Education: USA

B- Recommended books, materials, and media:

− American Psychological Association. (2009). *Publication Manual of the American Psychological Association.* (6th ed.). Washington, DC: American Psychological Association.
− Anderson, J. and Aydin , C. (2005). Evaluating the Organizational Impact of Healthcare Information System. Springer: USA

- Berner, E. (2007). Clinical Decision Support System :Theory and Practice. Springer: USA
- Englebardt, S. & Nelson, R. (2002). *Health Care Informatics: An Interdisciplinary Approach*. Philadelphia, PA: Mosby
- Kumar, S. , Snooks, H. (2011). Telenursing. Springer: London
- Ofei-Dodoo, S., Medvene, L., Nilsen, K.M., Smith, R.A., & DiLollo, A. (2015). Exploring the Potential of Computers to Enrich Home and Community-Based Services Clients' Social Networks. *Educational Gerontology, 41*(3), 216-225.
- Cella, A.,& Rebelo, D., (2015). Sustaining the Human Experience in a High Tech Environment: EMR Implementation. *Medsurg Nursing: Official Journal of The Academy of Medical-Surgical Nurses, 24* (2), 8-9.

26. Additional information:

Name of Course Coordinator: -------------------Signature: ------------------------ Date: ------------------------ Head

of curriculum committee/Department: ------------------------ Signature: ---------------------------------

Head of Department: ------------------------- Signature: ---------------------------------

Head of curriculum committee/Faculty: ------------------------ Signature: ---------------------------------

Dean: -- -Signature: ---------------------------------

Copy to:
Head of Department
Assistant Dean for Quality Assurance
Course File