



**COURSE DESCRIPTIONS**

<b>Faculty</b>	Technical collage				
<b>Department</b>	General Requirements			<b>NQF level</b>	
<b>Course Title</b>	<b>Health informatics</b>	<b>Code</b>	L60400133	<b>Prerequisite</b>	
<b>Credit Hours</b>	2	<b>Theory</b>	1	<b>Practical</b>	1
<b>Course Leader</b>	Eman Rababah	<b>email</b>	<a href="mailto:e.rababa@jadara.edu.jo">e.rababa@jadara.edu.jo</a>		
<b>Lecturers</b>	Eman Rababah	<b>emails</b>	<a href="mailto:e.rababa@jadara.edu.jo">e.rababa@jadara.edu.jo</a>		
<b>Lecture time</b>	8:30 – 9:30	<b>Classroom</b>	D 307	<b>Attendance</b>	Fulltime
<b>Semester</b>	2025/ 2026	<b>Production</b>	12/10/2025	<b>Updated</b>	
<b>Type of Teaching</b>	<input type="checkbox"/> Face to Face <input checked="" type="checkbox"/> Blended <input type="checkbox"/> Online				

**Short Description**

Principles of Health Informatics and its applications in the modern healthcare environment. How information and communication technology is used to collect, store, analyze, and exchange health data. Health information systems, electronic health records, health information security, and the legal and ethical considerations related to the use of health data. The relationship between information technology and healthcare, and the use of modern digital tools that support clinical and administrative decision-making.

**Course Objectives**

1. Identifying the concepts of health informatics and its applications in healthcare.
2. Understanding the role of information and communication technology in collecting, analyzing, and exchanging health data.
3. Recognizing health information systems and electronic health records.
4. Realizing the importance of information security and privacy protection in the health sector.
5. Understanding the legal and ethical aspects related to the use of health data.
6. Identifying the Jordanian computing system “Hakeem” and its use in the healthcare environment.

**Course Intended Learning Outcomes (CILOs)**

**Knowledge & Understanding**

**a1 – Knowledge & Theoretical Understanding**

The student understands the concept of Health Informatics and identifies sources of health data collection and their importance in supporting and improving healthcare delivery.

<p><b>a2 – Knowledge &amp; Theoretical Understanding</b> The student explains the role of Information and Communication Technology (ICT) and its applications in the healthcare sector, such as the Hakeem System, and demonstrates knowledge of health information security concepts, as well as the regulations and legislations governing the use of health data and protecting patients’ rights.</p>
<p><b>Knowledge &amp; Practical Skills</b></p>
<p><b>b1 – Knowledge &amp; Practical Application</b> The student identifies major applications of health informatics and demonstrates the ability to perform basic tasks in the Hakeem System within a simulated learning environment.</p>
<p><b>b2 – Analytical &amp; Technological Skills</b> The student efficiently uses ICT skills to interact with digital health systems (searching, data entry, and organization) and compares electronic medical records with paper-based records, analyzing their advantages and challenges.</p>
<p><b>Problem-Solving &amp; Analytical Skills</b></p>
<p><b>c1 – Problem-Solving &amp; Analytical Skills</b> The student analyzes challenges and risks associated with implementing digital health systems, including risks related to breaches of medical information security.</p> <p><b>c2 – Decision-Making Skills</b> The student proposes practical and realistic solutions to address health information security issues and to support data protection and patient safety when using health systems such as the Hakeem System</p>
<p><b>Teaching and Learning Methods</b></p> <p> <input checked="" type="checkbox"/> Face to Face Lectures    <input type="checkbox"/> Brain Storming    <input type="checkbox"/> Synchronous remote    <input type="checkbox"/> Asynchronous remote  <input type="checkbox"/> Presentation                      <input checked="" type="checkbox"/> Discussions                      <input type="checkbox"/> Research Project                      <input type="checkbox"/> Case Study  <input checked="" type="checkbox"/> Field visit                                      <input checked="" type="checkbox"/> Problem solving </p>
<p><b>Assessment Methods</b></p> <p> <input type="checkbox"/> Formative Assessment                      <input checked="" type="checkbox"/> Quiz                      <input type="checkbox"/> Lab Exam                      <input type="checkbox"/> Homework  <input type="checkbox"/> Project Assessment                      <input checked="" type="checkbox"/> Oral Presentation                      <input checked="" type="checkbox"/> Midterm                      <input checked="" type="checkbox"/> Final Exam </p>

Course Contents					
Week	Hou rs	CILOs	Topics	Teaching & Learning Methods	Assessment Methods
1.	2	a 1,a 2	<ul style="list-style-type: none"> <li>• Definition of health informatics and its importance in modern healthcare</li> <li>• The development and history of health informatics</li> <li>• Basic concepts: data, information, knowledge</li> <li>• Challenges and opportunities in health informatics</li> </ul>	Lecture + discussion	Quiz
2.	2	a 1,a 3	<ul style="list-style-type: none"> <li>• The role of Information and Communication Technology (ICT) in improving healthcare services</li> <li>• Technological tools used in healthcare (devices, software, networks)</li> <li>• Mobile applications and cloud</li> </ul>	Lecture + discussion	quiz

			computing in health		
3.	2	a2 , b1	<ul style="list-style-type: none"> <li>• Components and types of health information systems</li> <li>• Hospital Management Systems and Clinical Decision Support Systems</li> <li>• Analysis of health information systems and their importance in improving care</li> </ul>	Lecture + discussion	Quiz
4.	2	a2 ,C1	<ul style="list-style-type: none"> <li>• Definition of Electronic Health Records (EHRs) and their benefits</li> <li>• Core components of the Electronic Health Record</li> <li>• Challenges in implementing Electronic Health Records</li> </ul>	Lecture + discussion	Quiz
5.	2	a2 ,C2	<ul style="list-style-type: none"> <li>• Information security concepts in healthcare</li> <li>• Data protection methods and encryption</li> <li>• The importance of confidentiality and privacy in health data</li> </ul>	Lecture + discussion	Quiz
6.	2	a 5 ,C2	<ul style="list-style-type: none"> <li>• Laws and regulations related to the protection of health data</li> <li>• Ethical aspects of using health information</li> </ul>	Lecture + discussion	Quiz
7.		a1, a2,a3, a4 , b1, b2	<b>Midterm Exam</b>		
8.	2	a 6 ,b2 C3	<ul style="list-style-type: none"> <li>• Introduction to the “Hakeem” system and its functions</li> <li>• How to use the system in the healthcare environment</li> <li>• Benefits and challenges of the “Hakeem” system</li> </ul>	Lecture + discussion	Quiz
9.	2	b2 ,a 5	<ul style="list-style-type: none"> <li>• Technology tools and applications in health education</li> <li>• Electronic communication between patients and healthcare providers – Telemedicine</li> <li>• Effective strategies for using technology in health education</li> <li>• Challenges associated with using technology in health education</li> <li>• Ethical and legal considerations</li> </ul>	Lecture + discussion	Quiz
10.	2	,b2	<ul style="list-style-type: none"> <li>• E-learning tools and technologies in healthcare</li> <li>• Advantages of using technology in health education</li> <li>• Challenges and solutions</li> <li>• Ethical and legal considerations</li> </ul>	Lecture + discussion	Quiz

11.		a1, a2, b1, b2, C1,c2	Final Exam		

Practical/Applied Content of the Course				
		Topics	Learning/Teaching Methods	Assessment Methods
During semester		Hands-on training or simulation on using the Jordanian computing system "Hakeem" in coordination with relevant authorities	Computer lab	Lab Test
During semester	a 1, a2 b1	practical analysis and explanation of one of the applications of technology in health education or health promotion; analysis of health information systems and their importance in improving care	Lectures	Presentation+ problem solving

Infrastructure	
<b>Textbook</b>	Hebda, T. L., Czar, P., & Hunter, K. (2020). Handbook of Informatics for Nurses and Healthcare Professionals (6th ed.). Pearson Education.
<b>References</b>	.1 Hoyt, Robert E., & Yoshihashi, Ann K. Health Informatics: Practical Guide. 6th Edition. Lulu Publishing, 2014. .2 Gartee, Richard. Health Information Technology and Management. 2nd Edition. McGraw-Hill, 2020. .3 Panesar, Sukhmeet S., Carson-Stevens, Andrew, Salvilla, Sarah A., & Sheikh, Aziz (Eds.). Patient Safety and Healthcare Improvement at a Glance. Wiley-Blackwell, 2014.
<b>Required reading</b>	Guide to Health Informatics – Third Edition
<b>Electronic materials</b>	Guide to Health Informatics – Third Edition
<b>Other</b>	<a href="https://www.ehs.com.jo">https://www.ehs.com.jo</a> – "Hakeem" Jordanian Health Computing Program Ministry of Justice, Jordan: <a href="https://www.moj.gov.jo">https://www.moj.gov.jo</a> Ministry of Labor, Jordan: <a href="https://mol.gov.jo">https://mol.gov.jo</a> World Health Organization. Digital Health & eHealth Guidelines and Tools. Available at: <a href="https://www.who.int">https://www.who.int</a> (Official website of the World Health Organization)

Health Care Accreditation Council (HCAC). Hospital Accreditation Standards Manual. Available at: <https://hcac.jo> (Official website of the Health Care Accreditation Council)  
 Ministry of Health, Jordan: <https://www.moh.gov.jo> – Official health reports and information

Course Assessment Plan								
Assessment Method	Grade	CILOs						
		a 1	a 2	b 1	b 2	C1	C2	
First (Midterm)	30	10	5	7	5	3		
Second (if applicable)								
Final Exam	40	13	5	4	4	7	7	
Coursework								
Coursework assessment methods	Assignments	10	5	5				
	Case study							
	Discussion and interaction	5	2	1	2			
	Group work activities							
	Lab tests and assignments	15	4	4	3	2	3	2
	Presentations							
	Quizzes							
<b>Total</b>	<b>100</b>	<b>34</b>	<b>19</b>	<b>15</b>	<b>11</b>	<b>12</b>	<b>9</b>	

### Plagiarism

Plagiarism is claiming that someone else's work is your own. The department has a strict policy regarding plagiarism and, if plagiarism is indeed discovered, this policy will be applied. Note that punishments apply also to anyone assisting another to commit plagiarism (for example by knowingly allowing someone to copy your code). Plagiarism is different from group work in which a number of individuals share ideas on how to carry out the coursework. You are strongly encouraged to work in small groups, and you will certainly not be penalized for doing so. This means that you may work together on the program. What is important is that you have a full understanding of all aspects of the completed program. In order to allow proper assessment that this is indeed the case, you must adhere strictly to the course work requirements as outlined above and detailed in the coursework problem description. These requirements are in place to encourage individual understanding, facilitate individual assessment, and deter plagiarism.