



**Course Syllabus
SEMESTER
School of Nursing and Health Professions**

Course Name:	Medical Informatics
Course & Section Number:	MIT 104 – XXX
Meeting Day(s) & Time(s):	
Credits:	1 Credit Hour
Contact Hours:	1 Lecture
Text:	
Instructor's Name:*	
Office Hours & Location:	
OCC Phone:	
OCC Email:**	
Additional Contact Information:	

*Please call me (name) it is my preferred name. If you have a preferred name, please let me know so I can use it.

**Please use only Owens email for course communications.

Catalog description:

Introduces the use of digital electronics and computer technology in medical imaging. Topics include computer functionality and relation within radiology, digital image acquisition, quality assurance with post-processing, electronic workflow, computer networking, healthcare specific applications HIS, RIS, PACS, EMR/HER, and industry standards DICOM, HL7.

Prerequisite/Corequisites:

None/None

Course Materials:

Suggested Text-Not required: 2018, PACS-Based Multimedia Imaging Informatics: Basic Principles and Applications, Third Edition, Author(s): H.K. Huang D.Sc., FRCR (Hon), FAIMBE,. Print ISBN:9781118795736

OER and Owens Community College Library Resources (*Open Educational Resources are free online materials for instructor and student use. Some OER material may be available in print in the Owens Community College Library.*)

Course Objectives:

Course will...

1. Examine the computer technology utilized in the health care setting.
2. Present factors used in digital image acquisition.
3. Discuss the application of post-acquisition image quality assurance to enhance the quality of the imaging study.
4. Understand standardization in an electronic environment and its implications in patient care.
5. Discuss workflow and its impact on data integrity.
6. Understand the need for processed images from third party healthcare applications.
- 7.

Student Learning Outcomes:

Students will:

1. Describe computer components and their function.
2. Understand computer operations and their applications in medical imaging.
3. Describe the use of image and patient information systems and the responsibilities of imaging professionals.
4. Identify the purpose for post processing and quality assurance, understanding when this practice is applied to a medical imaging procedure.
5. Understand proper workflow for data integrity within all information systems.
6. Understand online resources for career growth and continuing education.

Outcome The student will:	Where assessed (List assignments, exams, discussions, items to be graded)
1. Describe computer components and their function.	Test 1, Test 2, Mid-Term and Final Exam.
2. Understand computer operations and their applications in medical imaging.	Mid-Term and Final Exam.
3. Describe the use of image and patient information systems and the responsibilities of imaging professionals.	Test 2, and Final Exam.
4. Identify the purpose for post processing and quality assurance, understanding when this practice is applied to a medical imaging procedure.	Final Exam.
5. Understand proper workflow for data integrity within all information systems.	Final Exam.
6. Understand online resources for career growth and continuing education.	Assignment and Final Exam.

Program Outcomes

Goal 1: Students will be clinically competent.

Goal 2: Students will utilize critical thinking skills.

Goal 3: Students will be able to communicate effectively.

Institution General Education Outcomes

As a student at Owens Community College, you will take General Education Courses as part of your degree program. While specific to the General Education Courses, will be reinforced in many of your degree program major courses and may be measured in your capstone course or others identified.

1. Communicate effectively.
2. Act with professional responsibility.
3. Demonstrate sensitivity to other's beliefs and values.
4. Think analytically, critically, and creatively.

Institution General Education Competency	Where Assessed (List assignments, exams, discussions; items must be graded.)
Communicate effectively.	MIT-104 Online assignment
Act with professional responsibility.	MIT-104 Online assignment
Demonstrate sensitivity to others' beliefs and values.	MIT-104 Test 1, Test 2, Mid-Term and Final Exam.
Think analytically, critically, and creatively.	MIT-104 Test 1, Test 2, Mid-Term and Final Exam.

Academic Support

Disability Services Resource Center: If you have a disability or acquire one, you may be entitled to receive reasonable accommodations intended to assure you an equal opportunity to participate in and benefit from the program. To receive more information or to register for accommodations, please contact the Disability Resource Center at 567-661-7007, email disability@owens.edu, visit <https://www.owens.edu/disability/>, or stop by College Hall 124.

Tutoring Services: Owens Community College offers academic tutoring and assistance in a variety of subjects including: accounting, computing, economics, mathematics, science, and writing. For more information go to: <https://www.owens.edu/successcenters/>.

Counseling Services: Counseling Services provides assistance to students experiencing personal, educational, interpersonal/relationship, family, social, or psychological difficulties. If you feel you may benefit from this service, please contact them at counselingservices@owens.edu. More information is at <https://www.owens.edu/counseling/>.

Campus and Community Connections: The Center for Campus and Community Connections (College Hall 123) is a walk-in office created to provide retention support through resource stability initiatives and community connections. Go here for more information: <https://www.owens.edu/connection/> or contact connections@owens.edu

Owens Library: The Owens Library offers two locations (Toledo and Findlay) as well as online resources. For more information visit <https://www.owens.edu/library/>.

Students can find more information on campus resources, student support, student life, and security at this [link](#).

General Information

Student Code of Conduct: All students are expected to follow Owens Community College's Student Code of Conduct, which includes academic honesty, encompassing plagiarism. See the Board Policy for more information.

Anti-Discrimination and Harassment & Title IX/Sexual Misconduct: All students, faculty, and staff are expected to follow Owens Community College's Anti-Discrimination and Harassment Policy and the College's Title IX Policy/Sexual Misconduct Procedures and Guidelines. The College strictly prohibits and will not tolerate harassment, discrimination, intimidation, or hostile/offensive working or learning environments.

Religious Accommodations: A student seeking an accommodation for an absence permitted under Ohio's Testing Your Faith Act must provide the instructor with a written email notice with the specific dates for an absence, and must do so not later than fourteen (14) days after the first day of instruction. Alternative accommodations are not retroactive, and no academic penalty will be imposed for an absence under the policy*. The request for an alternative accommodation will be kept confidential. Students with questions about a religious accommodation under Ohio's Testing your Faith Act may contact the College's Office of Academic Affairs: provost@owens.edu

The policy may be found on the Owens website: 3358:11-2-63 Accommodation for a Student Absence for the Observance of Religious Beliefs and Practices Policy

Document Collection: Throughout the semester, your instructors may ask for a variety of assignments including tests and/or quizzes for student learning of institutional general education competencies or program assessment. Please save all your class materials until the end of the semester.

Classroom Admittance: OCC classes shall only be attended by the officially registered OCC students or perspective students, instructor of record, guest lecturer, or substitute. Visitors are not permitted to be in the classroom and should not be invited to attend or participate in the class. See [FERPA](#) regulations for more information.

Use of AI Tools: This course requires you to complete various assignments that assess your understanding and application of the course content. You are expected to do your own work and cite any sources you use properly. You are not allowed to use any artificial intelligence (AI) tools, such as chatbots, text generators, paraphraser, summarizers, or solvers, to complete any part of your assignments. Any attempt to use these tools will be considered academic misconduct and will be dealt with according to the Owens Community College academic integrity policy. Students are expected to complete all work independently and without the assistance of AI-generated content. If you have any questions about what constitutes acceptable use of AI tools, please consult with the instructor *before* submitting your work.

Responsibilities:

Attendance/Class Time:

We will be respectful of your time and begin and end class on time. If class needs to be canceled for any reason, I will notify students as soon as possible by email announcement.

Online lectures will cover the appropriate weeks course content PowerPoint presentation. I will expound upon the slide content with relevant, up to date information. All testing will only cover the information contained with-in the PowerPoint presentations. Lectures will be recorded and available for review at any time.

Instructor Expectations:

Class discussions, activities and participation are an integral component of learning and understanding the course material and therefore, attendance is expected in this class to comprehend current imaging systems. If you are going to be absent, please notify the appropriate instructor prior to missing the class, if possible. Please look at the assignment calendar to see what was missed (topic, assignments, etc.), review the power points and recorded lecture, contact the instructor if you have any questions. Class will begin on time, so please plan accordingly.

Answering Emails:

I will do my best to respond to your emails within 24 hours on weekdays and within 72 hours on weekends. Please use your Owens email account to contact me.

Announcements:

I will post any updates and/or reminders on the Blackboard Announcement page, as well as send it out to your Owens email account.

The final course grade is to be computed using the following weights.

Evaluation Measure	Value
Two Tests	30%
Comprehensive Midterm Exam	30%
Comprehensive Final Exam	30%
Internet Assignment	10%

Grading Procedure: Grades will be calculated on the following scale.

93 and above	A
85 - 92%	B
76 - 84%	C
60 - 75%	D
Less than 60%	F

Lecture Class Assignments:

All assignments and testing will be submitted online in the MIT 104 - XXX course shell.

Test Schedule SEMESTER

Test 1 - DATE

Mid-Term - DATE

Test 2 - DATE

Final Exam - DATE

Lecture Schedule SEMESTER

Time Label

DATE, TIME Lecture 01

DATE, TIME Lecture 02

DATE, TIME Lecture 03

DATE, TIME Lecture 04

DATE, TIME Lecture 05

DATE, TIME Lecture 06

DATE, TIME Lecture 07

Calendar

Week	Topic
1	Course Introduction / Internet Assignment Review / Introduction to Computer Basics / Major Functions of Hardware and Software Related to Radiology
2	Imaging Modalities / Introduction to HIS, RIS and PACS
3	EMR /EHR / Standardization / Electronic Workflow / HIPAA in the Electronic Age Test One - covers lecture weeks 1 & 2 - Online
4	Midterm Exam covers lecture weeks 1, 2 & 3 - Online
5	HL7 and DICOM standards / System Downtime and Procedures / Data Integrity
6	Quality Assurance / Healthcare Applications and Obstacles to Implementation Test Two - covers lecture weeks 3 & 5 - Online
7	Tele-radiology / Electronic Workflow Overview/ AI - Future Technology / Medical Informatics Field Discussion / Review for Final Exam; <i>Internet Assignment Due - End of Day</i>
8	Comprehensive Final Exam – Online

Disclaimer: The instructor reserves the right to amend this syllabus as deemed necessary and will communicate such amendment to the students in the course. Please note that while unlikely, there is a possibility courses might need to change the delivery method due to external issues like public health concerns, weather issues, etc. If this happens, the college will communicate any changes via email and/or other communication methods.