



Syllabus

1. Course name: Healthcare Information Systems Lab

2. Course code: BSPR320265

3. Credits: 1 credits (0:1:2) (5-hour lab session and 10 hours of self-study per week)

4. Instructors

- a. Chief lecturer: Ba-Viet Ngo, MEng
- b. Fellow lecturers: Dr. Thanh-Tai Duong
- c. Fellow lecturers: Dr. Thanh-Nghia Nguyen

5. Course Requirements:

Prerequisite course(s): Healthcare Information Systems

Previous course(s): Biomedical Embedded Systems; Digital system, Microprocessor

6. Course Description

This course provides students with the knowledge and skills to use software and hardware to practice computer-based health information systems (HIS). Students are taught to design electronic medical record systems; collect, store and manage all kinds of medical information.

7. Learning Outcomes (CLOs)

CLOs	Descriptions	ELO(s) /PI(s)	Compe- tency
	<i>On successful completion of this course students will be able to:</i>		
CLO1	Demonstrate fundamental knowledge of health information systems.	ELO1/PI1.2	R
CLO2	To create a computer-based electronic medical record that connects to a web server using engineering software.	ELO1/PI1.3	R
CLO3	Read and understand English documents in the field of healthcare informatics.	ELO6/PI6.4	R
CLO4	Calculate and design systems to collect data from medical devices, storing and managing medical data remotely.	ELO7/PI7.2	R

8. Content outline

- *Learn the system of electronic medical records (EMR - Electronic Medical Record).*
- *Build electronic medical records using OpenEMR software.*
- *Read the HL7 (Health Level Seven) bulletin.*
- *Digital photography and communication in HEALTH - DICOM.*
- *Can use software to read and send image data DICOM*
- *Collect and manage data remotely.*
- *Upload data to the server*
- *Design and assemble a system for collecting and managing medical information.*

9. Teaching Methods

- *Presentation*
- *Teamwork*

- Problem solving.

10. Assessment(s)

- Grading scale: **10**
- Assessment plan:

No.	Content	CLOs	Competency	Assessment methods	Assessment tools	Weighting %
Formative assessment						60
1.	Read English documents about OpenEMR, HL7, DICOM software and report how to use the software.	CLO1/PI1.2 CLO3/PI6.4	R	Questions	Score sheet	20
2.	Use specialized software to create electronic medical records and connect to the server.	CLO2/PI1.3	R	Questions	Score sheet	40
Summative assessment						40
3.	Design of a remote data collection and management system	CLO4/PI7.2	R	Project	Rubric	40

11. Learning Materials:

- Textbook(s):
[1] Nanette B Sayles, " Health Information Management Technology: An Applied Approach ", American Health Information Management Association, 2016.
- References:
[2] Jose Jurel Nuevo, Bernard Ebuon, " Health Information System for Medical Laboratory Science ", C&E Publishing Inc, 2019.

12. General Information:

Academic Integrity

All students in this class are subject to HCMUTE's Academic Integrity Policy (<http://sao.hcmute.edu.vn/>) and should acquaint themselves with its content and requirements, including a strict prohibition against plagiarism. Any violations will be reported to the Faculty of Electrical and Electronic Engineering Dean's office.

Flexibility Notice

Any information in this syllabus (other than grading and absence policies) may be subject to change with reasonable advanced notice. Students need to regularly update the information of their registered class.

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13. Approval Date: <01/08/2021>

14. Endorsement:

Dean	Head of Department	Chief Lecturer
Assoc. Prof. Dr. Nguyen Minh Tam	Assoc. Prof. Dr. Nguyen Thanh Hai	<i><Full Name></i>

15. Revision History:

1st Revision: <dd/mm/yyyy>	Lecturer: Head of Department: Assoc. Prof. Dr. Nguyen Thanh Hai
2nd Revision: <dd/mm/yyyy>	Lecturer: Head of Department: