STUDY PROGRAM

COMPUTER SCIENCE

COURSE OUTLINE

The term "informatique" is commonly used by the French to express Computer Science (CS). It is a little different to Information Technology (IT). Even though IT and CS degrees can be used in similar jobs, IT graduates are typically interested in constructing computer systems using software, networks and databases, while CS graduates tend to enjoy mathematics and software design.

CS is usually described as the science of computation. Our curriculum will not be absolutely based on that definition. In IULI, the students will learn mostly CS with a little IT. CS students should enjoy creating efficient software using innovative algorithms, while understanding how the computer hardware works. Besides that specific subject, they will learn how humans interact with computers and how the software takes human input and creates the output. The curriculum also helps the students to learn about and work with other disciplines. It gives the opportunity for students to learn project management and how to work in a team.

The process of maturity starts when the students enter their first year in IULI. They will learn basic science and mathematics. The second year is the time when they touch the concept of computers, such as computer architecture, interfacing, networking and operating systems. In this year they are tasked with the application of mathematics, for example, logic and digital design, computability and algorithms. In the third year, the student will learn how to integrate concepts into a system. This will be conducted in Computer Science System Design classes. In the fourth year, the student will do research, which enables them to produce their own computer. This activity has to offer possible advances in human life, for example, in health, education, transportation, financial, energy, entertainment and social interest.

The progress in computer technology has become part of human civilization. The size, mobility and connectivity are evidence that modern human beings cannot live without computer technology. Therefore, IULI is very much concerned with the current technology, which will be part of the curriculum and student activities.

FIELDS OF ACTIVITIES

- Image processing and pattern recognition for health, transportation and automation
- Distributed architecture to achieve higher performance such as in weather forecasting
- Intelligent systems which imitate human thinking to support automatic mail response
- Cryptographic algorithms to secure information exchange
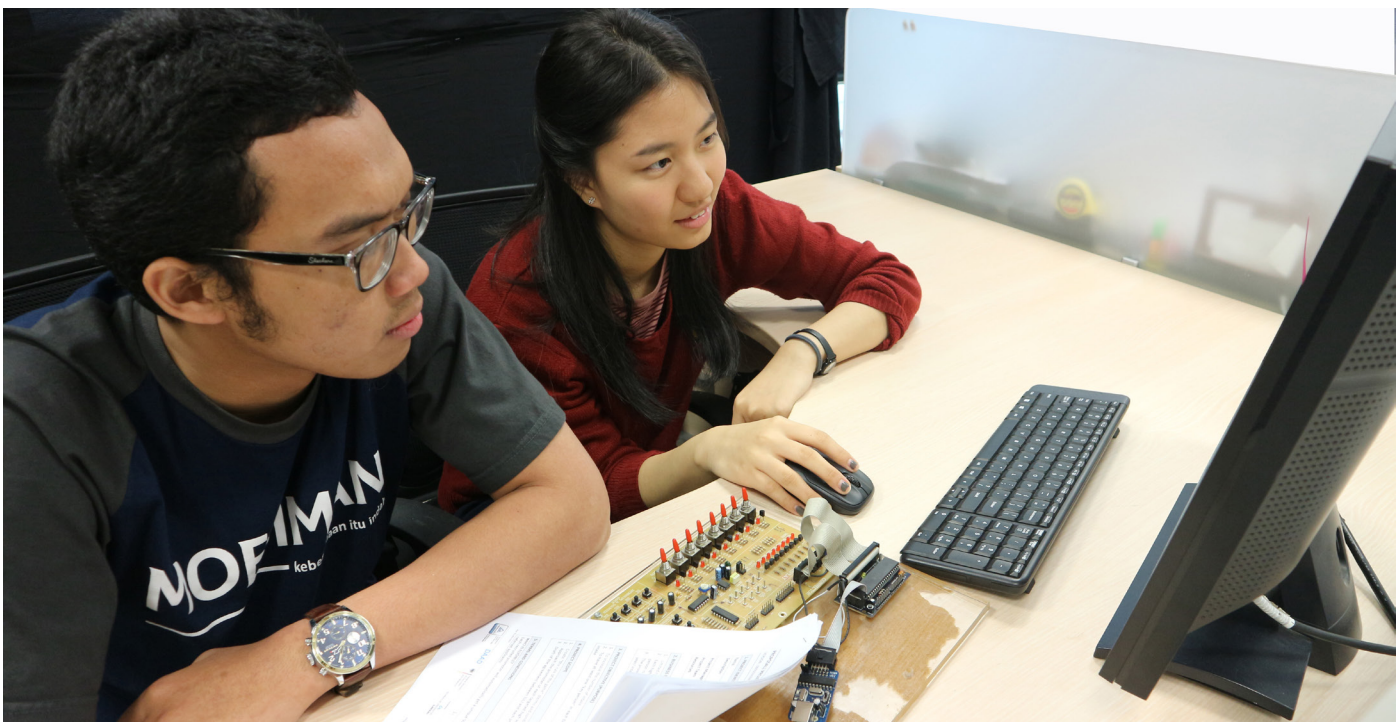- Advanced robotics to help medical surgery and other areas

Photo: International University Liaison Indonesia

CURRICULUM 2017-2018

Date/ Rev : 08 AUGUST 2017/ Rev. 08
Program : Bachelor
Valid : Batch 2017-2018

STUDY PROGRAM : COMPUTER SCIENCE

SUBJECT									
University Compulsory Subjects	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
English	2	2	2	2	1	1			10
Computer Network & IT Security	2								2
Applied Statistics		2							2
Research Methodology		2							2
Environment Sciences			2						2
Civics				2					2
Ethics and Religious Philosophy					2				2
Innovation & Product Development					2				2
E-Commerce						2			2
Indonesian Language & Culture						2			2
Pancasila						2			2
Oral Final Study Examination (OFSE)						0			0
Research Semester							6		6
Internship / Project								3	3
Thesis / Thesis Defense								6	6
Total	**4**	**6**	**4**	**4**	**5**	**7**	**6**	**9**	**45**

Engineering Faculty Compulsory Subjects	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Introduction to Engineering	1								1
Chemistry *	0								0
Material Science	2								2
Mathematics 1, 2	3	3							6
Physics & Laboratory 1, 2	3	3							6
Algorithm, Programming 1, 2	3	3							6
Electrical Engineering & Laboratory 1, 2	3	3							6
Engineering Drawing / CAD 1 *	0								0
Statics and Mechanics of Materials *		0							0
Manufacturing Process *			0						0
Applied Mathematics			3						3
Metrology and Quality Control *			0						0
Computer Aided Design - CAD 2 **			0						0
Engineering Economy ***					2				2
System Design 1, 2 ***					3	3			6
Engineering Management ***						2			2
Total (Exclude: */ COS, ** ELE, *** INE)**	**15**	**12**	**3**	**0**	**5**	**5**	**0**	**0**	**40**

Computer Science Compulsory Subjects	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Introduction to Computer Science	1								1
Logistics	3								3
Advance Data Structure		3							3
Discrete Mathematics		2							2
Collaboration & Communication			2						2
Digital Logic & Digital Systems			2						2
Operating Systems			3						3
Computer Architecture			4						4
Interfacing & Data Communication 1,2			2	2					4
Human-Computer Interaction				2					2
Cost & Management Accountancy				3					3
Distributed Database Systems				3					3
Networking 1,2				2	2				4
Operational Research					2				2
Software Engineering 1,2				2	2				4
Computer Science Systems Design 1,2					2	2			4
IT Security 1,2,3				2	4	4			10
System Modeling & Simulation						3			3
Elective Subjects				4	4	4			12
Total	**4**	**5**	**13**	**20**	**16**	**13**	**0**	**0**	**71**
Total 1, 2, 3	**24**	**24**	**22**	**24**	**23**	**22**	**6**	**9**	**154**

Extra Curricular	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
German Language	2	2	2	2	2	2			12
Total	**2**	**2**	**2**	**2**	**2**	**2**	**0**	**0**	**12**

Subject to change
The actual implementation follows the internal arrangements & policy of the Department & Faculty