Study Program: Computer Science

Description: Computer Science (CS) is different with Computer Engineering (CE), but in some cases CS graduate work in similar jobs with CE. Computer Scientist is typically interested in developing computer software, networks and databases, and mostly enjoy mathematics and software design. CS sometimes is described as the science of computation. Our curriculum will not be absolutely based on that definition. In IULI, the students will study mostly CS subjects with a little touch of CE. 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.

Field of Studies: System design • software engineering • embedded system • distributed architecture • Image processing • pattern recognition • Intelligent systems • security and cryptography • internet of things and automation

General Information:

Legal Base / Accreditation:	SK DIKTI No. 425/E/O/2014
Duration of Study:	4 years (8 semester)
Academic Year:	2 semesters (even + odd)
	Even Semester: February - July
	Odd Semester: August - January
Academic weeks/semester:	16 (14 academics + 2 exams)
SKS[1] per semester:	Max. 24
SKS per study:	144-160
Duration of a lecture:	50 minutes
Number of students per subject:	16-32
Language of Instruction:	English
Academic Degree:	Indonesia: Sarjana Teknik – S.T. (S1)
	International: Bachelor of Science (B.Sc)
Tuition Fee/semester:	Rp. 29.900.000
Online Application:	https://pmb.iuli.ac.id

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[1] SKS: 1 SKS (preparation, lecture, exercises)
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DAAD | Federal Ministry of Education and Research | Coordinator TECHNISCHE UNIVERSITÄT ILMENAU

Structure of a study:

1	2	3	4	5	6	7	8

	Semester 1-6: Academic Education (see curriculum), OFSE (Oral Final Study Examination)
	Semester 7: Research Semester (abroad for Double Degree)
	Semester 8: Thesis Defense, Graduation

Score System:

Grade Letter	Grade Wording	IULI	Indonesian Grade	Germany Grade	Grade Descriptions	Student Representation
A	Excellent	86-100	4	1	Outstanding Performance	10%
B	Good	71-85	3.0-3.9	2	Performance is considerably higher than the average requirements	25%
C	Satisfactory	56-70	2.0-2.9	3	Performance meets the average requirements	30%
D	Poor	46-55	1.0-1.9	4	Performance is poor and likely to lead to failure	25%
F	Fail	<45	0	5	Performance does not meet the minimum criteria. Considerable further work is required	10%

Contacts:

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Curriculum: in SKS

University Compulsory Subjects			Semester								
			1	2	3	4	5	6	7	8	Total
1	English	ENGL	2	2	2	2	1	1			10
2	Computer Network & IT Security	CNIS	2								2
3	Applied Statistics	MATH		2							2
4	Research Methodology	RESM		2							2
5	Environment Sciences	ENVI			2						2
6	Civics	CIVI				2					2
7	Ethics and Religious Philosophy	ETRP					2				2
8	Innovation & Product Development	PROD					2				2
9	E-Commerce	ECOM						2			2
10	Indonesian Language & Culture	IDLC						2			2
11	Pancasila	PANC						2			2
12	Oral Final Study Examination (OFSE)	OFSE						0			0
13	Research Semester	RESS							6		6
14	Internship / Project	INSP								3	3
15	Thesis / Thesis Defence	THES								6	6
	Total		**4**	**6**	**4**	**4**	**5**	**7**	**6**	**9**	**45**

Engineering Faculty Compulsory Subjects			Semester								
			1	2	3	4	5	6	7	8	∑
1	Introduction to Engineering	IENG	1								1
2	Chemistry*	CHEM	0								0
3	Material Science	MATS	2								2
4	Engineering Mathematics 1,2	MATH	3	3							6
5	Physics & Laboratory 1,2	PHYS	3	3							6
6	Algorithm, Programming 1, 2	PROG	3	3							6
7	Electrical Engineering & Laboratory 1, 2	ELEE	3	3							6

Department Compulsory Subjects			Semester								
			1	2	3	4	5	6	7	8	Σ
1	Logics	LOGI	3								3
2	Advanced Data Structure	ADDS		3							3
3	Discrete Mathematics	MATH		2							2
4	Collaboration and Com.	COCO			2						2
5	Digital Logic & Digital Systems	DLDS			2						2
6	Operating Systems	OPSY			3						3
7	Computer Architecture	COAR			4						4
8	Interfacing and Data Comm. 1,2	IFDC			2	2					4
9	Human Computer Interaction	HUCI				2					2
10	Cost & Mgt Accountancy	CMAC				3					3
11	Distribut. Database Systems	DDBS				3					3
12	Networking 1,2	NEWO				2	2				4
13	Operation Research	OPRE					3				3
14	Software Engineering	SWEN				2	2				4
15	Comp. Science & System Des.	CSSD					2	2			4
16	IT Security	OTSE				2	2	2			6
17	System Modeling & Simulation	SMSI						3			3
18	Elective Subjects (*)	ELEC					2	4			6
	Department		3	5	13	16	13	11	0	0	61
	Faculty		15	12	3	0	5	5	0	0	40
	University		4	6	4	4	5	7	6	9	45
	Total		22	23	20	20	23	23	6	9	146

Electives

	Subjects	Abr.	1	2	3	4	5	6	7	8	Total
1	German Language 1 *)	GERM	2	2	2	2	2	2			12
2	German Language 2 **)	GERM	2	2							4
3	Mandarin	MAND	2	2	2	2	2				10
4	Business Arabic	ARAB	2	2	2	2	2				10
5	Computer Science Subjects	COSS					2	2			4