STUDY PROGRAM

AUTOMOTIVE ENGINEERING

International University Liaison Indonesia

IULI

COURSE OUTLINE

Automotive engineers are involved in the design, manufacture, assembly, testing, and, most of all, in the operation of vehicles; namely, motorcycles, automobiles, trucks, buses and any similar ground-based vehicles, including their system components.

Automotive engineers are involved in production upstream until downstream, from the early concept to the delivery of the vehicle. The main working areas are design, production, assembly, maintenance, research and development. To become an automotive engineer, one needs to have a blend of engineering and managerial skills in delivering products within a financial budget. Automotive systems consist of many components, such as exhaust system, combustion engine, chassis and frame, and body Usually, automotive engineers will specialize in a particular area.

FIELDS OF ACTIVITIES

- Designing and producing visual models of automobiles and their components using pencil and paper, clay model, wood-model, and/or computer aided design software
- Designing, selecting, optimizing appropriate materials for automotive components, applying mechanical, thermodynamic, and mechatronics principles to resolve problems and find appropriate solutions
- Designing, investigating, testing maintenance activities of automotive systems
- Quality control and management of vehicles from designing and manufacturing, to assembly

Photo: International University Liaison Indonesia

CURRICULUM 2017-2018

Date/ Rev : 05 JANUARY 2017/ Rev. 07
Program : Bachelor
Valid : Batch 2017-2018

STUDY PROGRAM : MECHANICAL ENGINEERING (AUTOMOTIVE)

SUBJECT	1	2	3	4	5	6	7	8	Total
University Compulsory Subjects									
English	2	2	2	2	1	1			10
Computer Network & IT Security	2								2
E-Commerce						2			2
Environment Sciences			2						2
Innovation & Product Development					2				2
Applied Statistics		2							2
Research Methodology		2							2
Research Semester							6		6
Ethics and Religious Philosophy					2				2
Civics				2					2
Indonesian Language & Culture						2			2
Pancasila						2			2
Oral Final Study Examination (OFSE)						0			0
Elective : Internship / Project								3	3
Thesis / Thesis Defense								6	6
Total	**4**	**6**	**4**	**4**	**5**	**7**	**6**	**9**	**45**
Faculty Compulsory Subjects									
Applied Chemistry & Material Science	3								3
Engineering Mathematics 1, 2	3	3							6
Physics & Laboratory 1, 2	4	4							8
Algorithm, Programming 1, 2	3	3							6
Engineering Drawing	3								3
Manufacturing Process			2						2
Applied Mathematics			3						3
Engineering Economy					2				2
Engineering Management						2			2
Electrical Engineering & Laboratory 1, 2	3	3							6
Statics and Mechanics of Materials		4							4
Metrology and Quality Control			2						2
Total	**19**	**17**	**7**	**0**	**2**	**2**	**0**	**0**	**47**
Department Compulsory Subjects									
Introduction to Mechanical Engin.	1								1
Computer Aided Design – CAD			3						3
Machine Elements			3						3
Manufacturing Process Laboratory			2						2
Thermo -Fluid Science			2	2					4
Material- and Metal Forming				3					3
Automotive Power Train Tech						3			3
Heat Transfer				3					3
Computer Aided Manufacturing-CAM				3					3
Kinematics and Dynamics of Machines				3					3
Control Techniques				3					3
Assembly and Manufacturing Support					2				2
Mechanical Vibrations					3				3
Introduction in Mechatronics			2						2
Internal Combustion Engine					3				3
Automotive Engineering System Design					3	3			6
Pneumatics and Hydraulics						3			3
Elective Subjects					4	4			8
Total	**1**	**0**	**12**	**17**	**15**	**13**	**58**	**0**	**73**
Total 1, 2, 3	**24**	**23**	**23**	**23**	**22**	**22**	**6**	**9**	**152**
Extra Curricular									
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

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