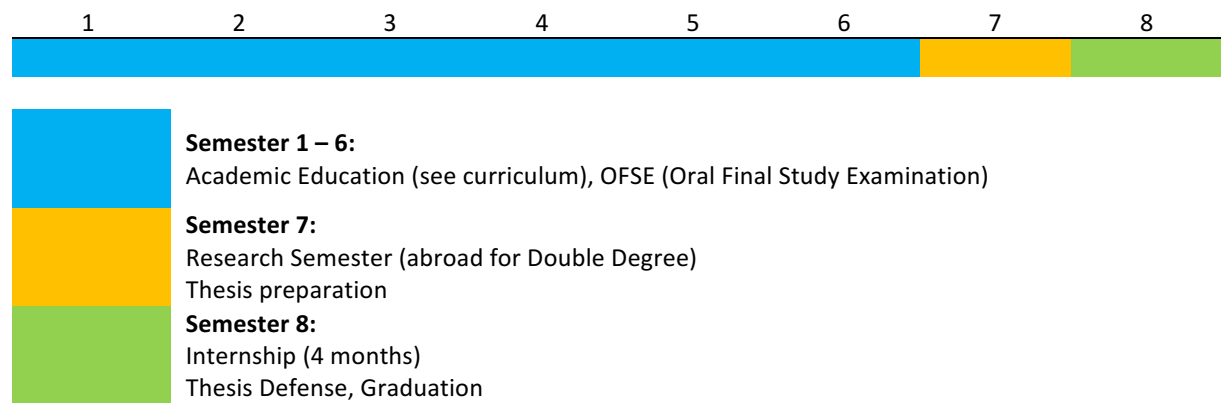


4 Curriculum: Electrical Engineering - ELE (Industrial Electronics)

4.1 General Data

- 1 Duration of Study (S-1) : 4 years
- 2 Academic Year : 2 Semesters
Odd Semester: 1 July to 31 December
Even Semester: 1 January to 30 June
- 3 Academic weeks / Semester : 16 (14 academics and 2 for examinations)
Semester Credit Units (SKS) : 1 SKS (preparation, lecture, exercises)
- 4 Numbers of SKS per Semester : max 24 (academics)
Total SKS for S-1 study : 144 – 160 SKS
- 5 Duration of one lecture : 50 Minutes
- 6 Number of Students per Subject : min. 12 Students
- 7 File Name : 04-Cur-ELE-08-06.docx
- 8 Modification : Subject to Changes / 2017/07-15/PP

4.2 Structure of Study



4.3 Scores

| Grade Letter | Grade Wording | IULI | Indonesian Grade Points (GP) | Germany Grade Point | Grade Description | 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% |

4.4 Curriculum (in SKS)

| |
|--|
| U: University Compulsory Subjects |
| F: Faculty Compulsory Subjects |
| D: Department Compulsory Subjects |
| E: Elective Subjects |

04 - Electrical Engineering - ELE

| 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 | Elective : 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 | | | | | | | | Σ |
|---|--|------|-----------|-----------|----------|----------|----------|----------|----------|----------|-----------|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| 1 | Introduction to Engineering | IENG | 1 | | | | | | | | 1 |
| 2 | Chemistry | CHEM | 2 | | | | | | | | 2 |
| 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 |
| 8 | Engineering Drawing / CAD 1* | ENDR | 0 | | | | | | | | 0 |
| 9 | Statics and Mechanics of Materials* | MECH | | 0 | | | | | | | 0 |
| 10 | Manufacturing Process* | MFPR | | | 0 | | | | | | 0 |
| 11 | Applied Mathematics | MATH | | | 3 | | | | | | 3 |
| 12 | Metrology and Quality Control | MEQC | | | 2 | | | | | | 2 |
| 13 | Computer Aided Design – CAD 2 ** | CADD | | | 0 | | | | | | 0 |
| 14 | Engineering Economy*** | EECO | | | | | 2 | | | | 2 |
| 15 | System Design 1, 2*** | SYSD | | | | | 3 | 3 | | | 6 |
| 16 | Engineering Management *** | EMGT | | | | | | 2 | | | 2 |
| Total | | | 17 | 12 | 5 | 0 | 5 | 5 | 0 | 0 | 44 |

Exclude: */**COS, **ELE, ***INE

| D-Department Compulsory Subjects | | | Semester | | | | | | | | Σ |
|----------------------------------|---|------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|------------|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| 1 | Electronic Devices and Circuits | ECED | | | 2 | 2 | | | | | 4 |
| 2 | Telecommunication | TCOM | | | | | 2 | | | | 2 |
| 3 | Electric and Magnetic Fields | EAMF | | | 3 | | | | | | 3 |
| 4 | Electrical Safety & Protection | ESAP | | | 2 | | | | | | 2 |
| 5 | Sensor and Instrumentation Technique | SENS | | | | 3 | | | | | 3 |
| 6 | Microcontroller Systems | ECEC | | | | 3 | | | | | 3 |
| 7 | Control Techniques | CTRL | | | | 3 | | | | | 3 |
| 8 | Electric Power Systems & Transmission. | EPST | | | | 3 | | | | | 3 |
| 9 | Electrical Energy Conversion & Utilization. | EECU | | | | 2 | | | | | 2 |
| 10 | Signals and Systems | SSYS | | | | 2 | 2 | | | | 4 |
| 11 | Power Electronics | ECEP | | | | | 3 | | | | 3 |
| 12 | Radio Frequency Circuit & Antennas | RFCA | | | | | 2 | | | | 2 |
| 13 | Digital Signal Processing | DSPR | | | | | | 3 | | | 3 |
| 14 | Electric Machines & Drives | ELEC | | | | | | 3 | | | 3 |
| 15 | Elective Subjects | ELEC | | 4 | 4 | 2 | 4 | 4 | | | 18 |
| Department | | | 0 | 4 | 11 | 20 | 13 | 10 | 0 | 0 | 58 |
| Faculty | | | 17 | 12 | 5 | 0 | 5 | 5 | 0 | 0 | 44 |
| University | | | 4 | 6 | 4 | 4 | 5 | 7 | 6 | 9 | 45 |
| Total | | | 21 | 22 | 20 | 24 | 23 | 22 | 6 | 9 | 147 |

| | Elective Subjects | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|-----------------------|------|---|---|---|---|---|---|---|---|----|
| 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 | | 2 | | 12 |
| 4 | Business Arabic | ARAB | 2 | 2 | 2 | 2 | 2 | | 2 | | 12 |
| 5 | Electrical Subjects | EMTE | 0 | 4 | 4 | 2 | 4 | 4 | 0 | | 18 |