School of Electrical & Electronic Engineering

EEE Third Year Pre-Specialized Elective Selection (AY2018/2019)
Third Year Curriculum

Students are taught the basic principles which underpin a broad spectrum of technologies covered by the area of Electrical and Electronic Engineering.

These include:

- **Core Courses** - Engineering Electromagnetics; Microprocessors; Design & Innovation Project

- **Major Prescribed Electives**
  - To select two electives from a list of specialized courses in preparation for more in-depth specialization in their final year.
  - The two electives are prerequisites to some final-year design and technical elective courses. Their choice should be guided by their intended option group or specialization in their final year.
  - Students may read more elective courses as Unrestricted Electives only after registering the first two required Prescribed Elective courses. Once registered, they will NOT be allowed to reclassify the Prescribed Electives into Unrestricted Electives, or vice-versa.
Third Year Curriculum for Students Admitted to Year 1
(Based on curriculum recommended for first year entry students)

Core Courses (12 AUs)
- EE3001 - Engineering Electromagnetic
- EE3002 - Microprocessor
- EE3080 - Design & Innovation Project
- ET0001 - Enterprise & Innovation
- ML0002 - Career Power-Up

Major Prescribed (6 AUs)
- EE3xxx - Prescribed Elective 1
- EE3xxx - Prescribed Elective 2

GER Elective (3 AUs)
- Unrestricted
Third Year Curriculum for Students Admitted to Year 2

(Based on curriculum recommended for poly direct-entry students)

Core Courses (17 AUs)
- EE2003 – Semiconductor Fundamentals
- EE2007 – Engineering Mathematics II
- EE3001 - Engineering Electromagnetic
- EE3080 - Design & Innovation Project
- EE0040 – Engineers & Society

Major Prescribed (6 AUs)
- EE3xxx - Prescribed Elective 1
- EE3xxx - Prescribed Elective 2
# Third Year Prescribed Electives

Students are required to select 2 Major Prescribed Elective courses from this list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite(s)</th>
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</thead>
<tbody>
<tr>
<td>EE3010</td>
<td>ELECTRICAL DEVICES AND MACHINES</td>
<td>EE2001</td>
</tr>
<tr>
<td>EE3011</td>
<td>MODELLING &amp; CONTROL</td>
<td>EE2006</td>
</tr>
<tr>
<td>EE3012</td>
<td>COMMUNICATION PRINCIPLES</td>
<td>EE2010</td>
</tr>
<tr>
<td>EE3013</td>
<td>SEMICONDUCTOR DEVICES AND PROCESSING</td>
<td>EE2003</td>
</tr>
<tr>
<td>EE3014</td>
<td>DIGITAL SIGNAL PROCESSING</td>
<td>EE2010</td>
</tr>
<tr>
<td>EE3015</td>
<td>POWER SYSTEMS AND PROTECTION</td>
<td>EE2001</td>
</tr>
<tr>
<td>EE3017</td>
<td>COMPUTER COMMUNICATIONS</td>
<td>Nil</td>
</tr>
<tr>
<td>EE3018</td>
<td>INTRODUCTION TO PHOTONICS</td>
<td>Nil</td>
</tr>
<tr>
<td>EE3019</td>
<td>INTEGRATED ELECTRONICS</td>
<td>EE2002</td>
</tr>
</tbody>
</table>
Electrical & Systems Engineering (ECAL)

- Biomedical Electronics
  - Modelling & Control
  - + 1 Prescribed Elective

- Electrical Power & Energy
  - Electrical Devices & Machines
  - Power Systems & Protection

- Intelligent Systems & Control Engineering
  - Modelling & Control
  - + 1 Prescribed Elective
Electronic Engineering (ENIC)

INTEGRATED CIRCUIT (IC) DESIGN

Semiconductor Devices & Processing

Integrated Electronics

MICROELECTRONICS

Semiconductor Devices & Processing

Introduction to Photonics
Infocommunication Engineering (INON)

Communication Engineering → Communication Principles

Computer Engineering → Computer Communication

Digital Media Processing → Digital Signal Processing

Digital Signal Processing → Communication Principles
Internship (can be taken either in Semester 1 or 2)

Do I have to do it?

Internship is a mandatory programme during the third year studies; Students must pass for the award of the degree.

Why do I have to?

Enriches students’ learning experience and gives them early exposure to the engineering industry.

What options do I have?

Professional Internship (10 AUs; 20-week)
Extended Professional Internship (13 AUs; 30-week)

How do I register for it?

You may select the company from a list provided by CAO under Studentlink. For self-source internship, companies must be approved by CAO & EEE.