### Curriculum Structure

#### YEAR 1 SEMESTER 1
- **MH1810** MATHEMATICS I (C) 3
- **FE1008** COMPUTING (C) 3
- **PH1011** PHYSICS* (C) 3
- **DA1000** THINKING AND COMMUNICATING VISUALLY I (ADM) (C) 3
- **AD1101** FINANCE ACCOUNTING (UE) 4
- **AB1201** FINANCIAL MANAGEMENT (UE) 3
- **GC0001** INTRODUCTION TO SUSTAINABILITY: MULTIDISCIPLINARY APPROACHES AND SOLUTIONS (GC) 1

**TOTAL 20** AU

#### YEAR 1 SEMESTER 2
- **MH1811** MATHEMATICS II (C) 3
- **IM0040** ENGINEERS & SOCIETY (G) 3
- **IM1002** ANALOG ELECTRONICS (C) 3
- **IM1003** OBJECT-ORIENTED PROGRAMMING (C) 3
- **CS0204** BASIC MEDIA WRITING (SCI) (G) 3
- **AB1501** MARKETING (UE) 3
- **BUSINESS FOUNDATION CORE** (UE) 4
- **ML0001** ABSOLUTE BASICS IN CAREER (GC) 1

**TOTAL 23** AU

**Note:** Choose one from the list below:
- **BE1401** - Business Operations and Processes or
- **AB1401** - Information Technology + **AB1402** - Foundational Excel

#### YEAR 2 SEMESTER 1
- **IM2001** DATA STRUCTURES & ALGORITHMS (C) 4
- **IM2004** DIGITAL ELECTRONICS (C) 4
- **IM2005** SOFTWARE ENGINEERING (C) 3
- **IM2006** SIGNALS AND SYSTEMS (C) 4
- **IM2007** ENGINEERING MATHEMATICS I (C) 4
- **HY0001** ETHICS AND MORAL REASONING (GC) 1

**TOTAL 20** AU

#### YEAR 2 SEMESTER 2
- **IM2008** MICROPROCESSORS (C) 4
- **IM2003** COMPUTER COMMUNICATIONS (C) 3
- **IM2007** ENGINEERING MATHEMATICS II (C) 4
- **IM2073** INTRODUCTION TO DESIGN & PROJECT (C) 2
- **IM3001** DIGITAL SIGNAL PROCESSING (C) 3
- **AB0901** PRINCIPLES OF ECONOMICS: A SINGAPORE PERSPECTIVE (UE) 3
- **DA2002** THINKING AND COMMUNICATING VISUALLY II (ADM) (C) 3

**TOTAL 22** AU

#### YEAR 3 SEMESTER 1
- **IM3002** COMMUNICATION PRINCIPLES (C) 3
- **IM3003** INFORMATION SECURITY (C) 3
- **IM3080** DESIGN & INNOVATION PROJECT (C) 2
- **CS2006** THEORIES OF VISUAL COMMUNICATION AND THEIR APPLICATIONS (SCI) (GC) 3
- **DA3000** THINKING AND COMMUNICATING VISUALLY III (ADM) (C) 3
- **AB1301** BUSINESS LAW (UE) 3
- **AB1601** ORGANISATIONAL BEHAVIOUR & DESIGN (UE) 3
- **ET0001** ENTERPRISE AND INNOVATION (GC) 1

**TOTAL 21** AU

#### YEAR 3 SEMESTER 2
- **IM3279** PROFESSIONAL INTERNSHIP + (C) 10
- **ML0002** CAREER POWER UP (GC) 1

**TOTAL 11** AU

#### YEAR 4 SEMESTER 1
- **IM4080** FINAL YEAR PROJECT (C) 4
- **IM4XXX** DESIGN ELECTIVE 1 (P) 2
- **IM4XXX** TECHNICAL ELECTIVE 1 (P) 3
- **HW0288** ENGINEERING COMMUNICATIONS II (GC) 2
- **BUSINESS TRACK COURSE 1 (UE) 4
- **BUSINESS TRACK COURSE 2 (UE) 4

**TOTAL 19** AU

#### YEAR 4 SEMESTER 2
- **IM4080** FINAL YEAR PROJECT (C) 4
- **IM4XXX** DESIGN ELECTIVE 2/TECHNICAL ELECTIVE 4 (P) 2
- **IM4XXX** TECHNICAL ELECTIVE 2 (P) 3
- **IM4XXX** TECHNICAL ELECTIVE 3 (P) 3
- **BUSINESS TRACK COURSE 3 (UE) 4

**TOTAL 16** AU

**Note:**
- * Students without A-level Physics will read PH1012 Physic A (4 AUs).
- # IEM students are waived of its pre-requisite (HW0188), on condition that they pass CS0204.

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**DEGREE IN BACHELOR OF ENGINEERING (INFORMATION ENGINEERING & MEDIA) PROGRAMME WITH A SECOND MAJOR IN BUSINESS (AY2017 Cohort)**

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<th>STUDY YEAR</th>
<th>EE Major Requirements</th>
<th>Major Prescribed Elective (P)</th>
<th>GER-Core (GC)</th>
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**Last Updated:** May 29, 2019
## Curriculum Structure

### AU Requirement Table (Professional Attachment)

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<th>STUDY YEAR</th>
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<th>GER-CORE</th>
<th>UNRESTRICTED ELECTIVE</th>
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### Courses

#### Year 1 Semester 1
- **MH1810** Mathematics I
- **FE1008** Computing
- **PH1011** Physics*
- **DA1000** Thinking and Communicating Visually I
- **AD1101** Finance Accounting
- **AB1201** Financial Management
- **GC0001** Introduction to Sustainability: Multidisciplinary Approaches and Solutions

**Total: 20 AU**

#### Year 1 Semester 2
- **MH1811** Mathematics II
- **IM1002** Analog Electronics
- **IM1003** Object-oriented Programming
- **CS0204** Basic Media Writing (SCI)
- **AB1501** Marketing
- **ML0001** Absolute Basics in Career

**Total: 20 AU**

**Note:** Choose one from the list below:
- **BE1401** - Business Operations and Processes or
- **AB1401** - Information Technology + AB1402 - Foundational Excel

#### Year 2 Semester 1
- **IM1001** Data Structures & Algorithms
- **IM1004** Digital Electronics
- **IM2001** Software Engineering
- **IM2006** Engineering Mathematics I
- **CS2006** Theories of Visual Communication and Their Applications (SCI)
- **HY0001** Ethics and Moral Reasoning

**Total: 19 AU**

#### Year 2 Semester 2
- **IM0040** Engineers & Society
- **IM2003** Computer Communications
- **IM2007** Engineering Mathematics II
- **IM2073** Introduction to Design & Project
- **DA2002** Thinking and Communicating Visually II
- **AB0901** Principles of Economics: A Singapore Perspective
- **GER-UE 1**

**Total: 20 AU**

#### Year 3 Semester 1
- **IM2002** Microprocessors
- **IM2004** Signals and Systems
- **IM3003** Information Security
- **IM3080** Design & Innovation Project
- **AB1301** Business Law
- **ML0002** Career Power Up!

**Total: 18 AU**

#### Year 3 Semester 2
- **IM3001** Digital Signal Processing
- **IM3002** Communication Principles
- **DA3000** Thinking and Communicating Visually III
- **AB1601** Organisational Behaviour & Design
- **HW0288** Engineering Communication II
- **GER-UE 2**

**Total: 17 AU**

#### Year 3 Special Term (May - July)
- **IM3276** Professional Attachment

**Total: 5 AU**

#### Year 4 Semester 1
- **IM4080** Final Year Project
- **IM4XXX** Design Elective 1
- **IM4XXX** Technical Elective 1
- **BUSINESS TRACK COURSE 1**
- **BUSINESS TRACK COURSE 2**

**Total: 17 AU**

#### Year 4 Semester 2
- **IM4080** Final Year Project
- **IM4XXX** Design Elective 2 / Technical Elective 4
- **IM4XXX** Technical Elective 2
- **IM4XXX** Technical Elective 3
- **BUSINESS TRACK COURSE 3**

**Total: 16 AU**

**Note:**
- * Students without A-level Physics will read PH1012 Physics A (4 AUs).
- # IEM students are waived of its pre-requisite (HW0188), on condition that they pass CS0204.
# FINAL YEAR DESIGN/TECHNICAL ELECTIVES (IEM MAJOR-PE)

Students are required to choose 1 Design Elective and 4 Technical Electives, or 2 Design Electives and 3 Technical Electives.

<table>
<thead>
<tr>
<th>Design Electives</th>
<th>Technical Electives</th>
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<td>IM4105 Cellular Communication System Design</td>
<td>IM4413 DSP System Design</td>
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<tr>
<td>IM4717 Web Application Design</td>
<td>EE4414 Machine Learning Design and Application (TBC)</td>
</tr>
<tr>
<td>IM4718 Enterprise Network Design</td>
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</tr>
</tbody>
</table>

### Design Electives

- IM4105 Cellular Communication System Design
- IM4717 Web Application Design
- IM4718 Enterprise Network Design

### Technical Electives

- EE4491 Probability Theory and Applications (TBC)
- EE4497 Pattern Recognition and Machine Learning (TBC)
- IM4756 Computer Architecture
- IM4761 Computer Networking
- IM4791 Database Systems
- IM4152 Digital Communications
- IM4153 Telecommunication Systems
- IM4188 Wireless Communications
- IM4455 Embedded Systems
- IM4475 Audio Signal Processing

Students should not take more than 2 courses from the following group of Technical Electives:

- CS2024 Web Design and Technologies (SCI) ^
- CS2025 Image and Sound Production (SCI) ^
- CS2030 Audio in Media (SCI) ^
- DV2008 Interface Design (ADM) ^
- DM2000 Interactive I (ADM) ^
- DM2007 Interactive II (ADM) ^

^ Vacancy is subject to availability

http://www.eee.ntu.edu.sg/programmes/CurrentStudents/undergraduate/undergraduatefull-time/Pages/Home.aspx

Note: Certain Major-PEs may be offered as GER-PE / GER-UE. Re-classification of course type from GER-UE / GER-PE to Major-PE (and vice versa) after course registration are not allowed.