Curriculum Structure

### Year 1 Semester 1
- **MH1810** Mathematics I (C 3)
- **IM1002** Analog Electronics (GC 3)
- **PH1011** Physics (C 3)
- **IM1003** Object-Oriented Programming (C 3)
- **CS0204** Basic Media Writing (SCI) (GC 3)
- **AB1501** Programming From Computational Thinking to Physics (C 3)
- **EA1401** Introduction To Ship Chartering & Trade Practice (UE 4)

**Total AU:** 22

### Year 1 Semester 2
- **MH1811** Mathematics II (C 3, MH1810*)
- **IM1002** Analog Electronics (C 3, [with LAB])
- **IM1003** Object-Oriented Programming (C 3)
- **AB1501** Marketing (C 3, [with LAB])
- **HY1001** Ethics And Moral Reasoning (GC 1)
- **BF3211** Commodities Trading (UE 2)
- **EE0005** Intro To Data Science & AI (GC 3, [with LAB])
- **IM1001** Data Structures & Algorithms (C 4, [with LAB])
- **IM1004** Digital Electronics (C 4, [with LAB])
- **IM2001** Software Engineering (C 3)
- **IM2006** Engineering Mathematics I (C 4, MH1811)
- **IM2007** Engineering Mathematics II (C 4, MH1811)
- **IM2008** Signals and Systems (C 4, MH1810, MH1811)
- **IM2009** Computer Communications (C 3, [with LAB])
- **IM2010** Design Elective 1 (P 2)
- **IM2011** Design Elective 2 (P 2)
- **IM2012** Design Elective 3 (P 3)
- **IM2013** Design Elective 4 (P 2)
- **IM2014** Technical Elective 1 (P 3)
- **IM2015** Technical Elective 2 (P 3)
- **IM2016** Technical Elective 3 (P 3)
- **IM2017** Technical Elective 4 (P 2)
- **IM2018** Engineering Communications II (GC 2, MHW0188#)
- **IM2019** Professional Internship + (GC 2)
- **IM2020** Career Preparatory Course (GC 1)

**Total AU:** 21

### Year 2 Semester 1
- **IM2002** Microprocessors (C 4, [with LAB])
- **IM2003** Computer Communications (C 3, [with LAB])
- **IM2004** Signals and Systems (C 4, MH1810, [with LAB], MH1811)
- **IM2007** Engineering Mathematics II (C 4)
- **IM2073** Introduction To Design & Project (C 2)
- **DA2002** Thinking And Communicating Visually II (ADM) (C 3)
- **BF2301** International Tax And Trading Law (UE 2)

**Total AU:** 22

### Year 2 Semester 2
- **IM2008** Design Elective 2/Technical Elective 4 (P 2)
- **IM2009** Design Elective 3 (P 3)
- **IM2010** Design Elective 1 (P 2)
- **IM2011** Design Elective 2 (P 3)
- **IM2012** Design Elective 3 (P 3)
- **IM2013** Design Elective 4 (P 2)
- **IM2014** Technical Elective 1 (P 3)
- **IM2015** Technical Elective 2 (P 3)
- **IM2016** Technical Elective 3 (P 3)
- **IM2017** Technical Elective 4 (P 2)
- **IM2018** Engineering Communications II (GC 2, MHW0188#)
- **IM2019** Professional Internship + (GC 2)
- **IM2020** Career Preparatory Course (GC 1)

**Total AU:** 21

### Year 3 Semester 1
- **IM3001** Digital Signal Processing (C 3, IM2004 [with LAB])
- **IM3002** Communication Principles (C 3, IM2004 [with LAB])
- **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)
- **ML0003** Career Preparatory Course (GC 1)
- **TBC** Enterprise Risk Management (UE 2)
- **TBC** Commodities Finance (UE 2)

**Total AU:** 22

### Year 3 Semester 2
- **IM3279** Professional Internship + (C 10, ML0003)

**Total AU:** 10

### Year 4 Semester 1
- **IM4080** Final Year Project (C 4)
- **IM4099** Design Elective 1 (P 2)
- **IM4001** Industry Seminar (UE 1)

**Total AU:** 16

### Year 4 Semester 2
- **IM4080** Final Year Project (C 4)
- **IM4001** Industry Seminar (UE 1)

**Total AU:** 16

**Note:**
- Students without A-Level Physics will read PH1012 Physics A (4 AUs).
- Professional Internship (PI) is available in Year 3 Semester 1 or 2.
- IEM students are waived of its pre-requisite (HW0188), on condition that they pass CS0204.

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

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<th>COURSES</th>
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AU Requirement Table (Professional Attachment)

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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.

### Design Electives
- IM4717 Web Application Design
- IM4718 Enterprise Network Design

### Technical Electives
- 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
- IM4476 Image Processing
- IM4105 Cellular Communication System Design
- IM4413 DSP System Design
- IM4478 Digital Video Processing
- IM4483 Artificial Intelligence and Data Mining
- IM4490 Multimedia Systems
- CE4001 Virtual and Augmented Reality (SCE)
- CE4002 Visual Information Processing and Management (SCE)
- CE4003 Computer Vision (SCE)
- CE4004 3D Modelling and Animation (SCE)
- CE4015 Simulation and Modelling (SCE)

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)

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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.