

INFORMATION ABOUT PRE-MASTER COURSES AT FACULTY OF ENGINEERING

Candidates with Bachelor Degrees in Engineering, Science and Technology who cannot be admitted directly to any Master programmes due to different academic disciplines, could now gain entry through Pre-Master courses.

The Pre-Master courses are designed to bridge the gap between your current Bachelor Degree to your intended Master Degree of your choice.

Having passed all the Pre-Master courses, students can continue and complete the remaining Master courses.

Apply the Master Degree now, online at <https://admission.utm.my/apply-now/>
Successful candidates who are required to undertake Pre-Master Courses will be notified in the Master Programme offer letter.

LIST OF PRE-MASTER COURSES AND CORRESPONDING MASTER PROGRAMMES

The following are the pre-master courses need to be taken by students who cannot be admitted directly and the corresponding intended Master Degree programmes.

SCHOOL OF CHEMICAL AND ENERGY ENGINEERING (SKT)

Pre-Master Course (Undergraduate Core Course)	Master by Taught Course
1. SKTB 3213 - Biochemistry 2. SKTB 3113 - Bioseparation Technology 3. SKTB 3133 – Bioreactor Design & Analysis	Master of Science (Herbal Technology)
1. SKTB 3133 – Bioreactor Design & Analysis 2. SKTB 3173 – Engineering Economics and Project Management 3. SKTB 4133 – Quality Management in BioManufacturing	Master of Science (Process Plant Management)
Pre-Master Course (Undergraduate Core Course)	Master by Mixed Mode
1. SKTB 3213 – Biochemistry 2. SKTB 3113 – Bioseparation Technology 3. SKTB 3133 - Bioreactor Design & Analysis 4. SKTB 3223 - Chemical Reaction Engineering	Master of Engineering in Bioprocess
1. SKTK 3413 - Pollution Control Engineering 2. SKTK 4423 - Waste Management 3. SKTK 4433 - Environmental Sustainability	Master of Engineering in Environment

<ol style="list-style-type: none"> 1. SKTK 4613 - Fundamental of polymer 2. SKTK 4623 - Polymer physics and properties 3. SKTK 4633 - Polymer rheology and processing 	Master of Science in Polymer Technology
Pre-Master Course (Undergraduate Core Course) (at least 3 courses)	Master by Research
<ol style="list-style-type: none"> 1. SKTK 1123 - Mass Balance 2. SKTK 2313 - Transport Processes 3. SKTK 2253 - Chemical Eng. Thermodynamic 4. SKTK 3263 - Chemical Reaction Engineering 	Master of Philosophy in Chemical Engineering
<ol style="list-style-type: none"> 1. SKTB 3213 – Biochemistry 2. SKTB 3113 - Bioreparation Technology 3. SKTB 3133 - Bioreactor Design & Analysis 	Master of Philosophy in Bioprocess Engineering
<ol style="list-style-type: none"> 1. SKTK 4613 - Fundamental of polymer 2. SKTK 4623 - Polymer physics and properties 3. SKTK 4633 - Polymer Rheology and Processing 	Master of Philosophy in Polymer Engineering
<ol style="list-style-type: none"> 1. SKTP 2213 - Basic Geosciences 2. SKTP 2313 - Reservoir Rock and Fluids Properties 3. SKTP 3413 - Drilling Engineering 4. SKTP 3513 - Petroleum Production Engineering 	Master of Philosophy in Petroleum Engineering
<ol style="list-style-type: none"> 1. SKTG 1333 – Thermodynamics 2. SKTG 2343 - Fluid Mechanics 3. SKTG 3213 - Gas Transmission and Distribution 4. SKTG 4223 - Gas Storage and Reticulation System 	Master of Philosophy in Gas Engineering
<ol style="list-style-type: none"> 1. SKTK 3413 - Pollution Control Engineering 2. SKTK 4423 - Waste Management 3. SKTK 4433 - Environmental Sustainability 	Master of Philosophy in Environmental Engineering

SCHOOL OF COMPUTING (SC)

Pre-Master Course (Undergraduate Core Course)	Master by Taught Course
1. SCSR3443 - Introduction to Cryptography 2. SCSR3413 - Computer Security 3. SCSR1213 - Network Communication	Master of Science (Information Security)
Pre-Master Course (Undergraduate Core Course)	Master by Mixed Mode
1. SCSJ3203 - Theory of Computer Science 2. SCSJ2013 - Data Structure & algorithm 3. SCSR2033 - Computer Organization and Architecture	Master of Computer Science
Pre-Master Course (Undergraduate Core Course) (at least 3 courses)	Master by Research
1. SCSJ3323 - Software Engineering 2. SCSJ3343 - Software Testing 3. SCSJ2203 - Software Design & Architecture	Master of Philosophy in Software Engineering
1. SCSJ3203 – Theory of Computer Science 2. SCSJ2013 - Data Structure & algorithm 3. SCSR2033 - Computer Organization and Architecture	Master of Philosophy in Computer Science

SCHOOL OF BIOMEDICAL ENGINEERING AND HEALTH SCIENCE (SKBSK)

Pre-Master Course (Undergraduate Core Course)	Master by Taught Course
1. SMBE 1015 - Basic Anatomy & Physiology 2. SMBE 3043 - Instrumentation & Measurement for Biomedical	Master of Science (Biomedical Engineering) OR
Pre-Master Course (Undergraduate Core Course) (at least 3 courses)	Master by Research
1. SMBE 1015 - Basic Anatomy & Physiology 2. SMBE 3043 - Instrumentation & Measurement for Biomedical	Master of Philosophy in Biomedical Engineering OR
1. SMBE 1015 - Basic Anatomy & Physiology 2. SMBE 3043 - Instrumentation & Measurement for Biomedical	Master of Philosophy in Rehabilitation Technology

SCHOOL OF ELECTRICAL ENGINEERING

Pre-Master Course (Undergraduate Core Course)	Master by Taught Course
<ol style="list-style-type: none"> 1. SKEE 2263 - Digital Systems 2. SKEE 3223 - Microprocessor 3. SKEL 4743 - Basic Digital VLSI Design 	Master of Engineering (Computer & Microelectronic Systems)
<ol style="list-style-type: none"> 1. SKEE 2263 - Digital Systems 2. SKEE 3223 - Microprocessor 3. SKEE 2073 - Signals and System 4. SKEE 3533 - Communication Principles 	Master of Engineering (Electronic & Telecommunication)
<ol style="list-style-type: none"> 1. SKEE 1013 - Electrical Circuit Analysis 2. SKEE 3133 - System Modeling & Analysis 3. SKEE 3143 - Control System Design 	Master of Engineering (Mechatronic & Automatic Control)
<ol style="list-style-type: none"> 1. SKEE 4423 - Power System Engineering 2. SKEE 4433 - Power Electronics and Drives 3. SKEE 4463 - High Voltage Technology 	Master of Engineering (Electrical Power)
<ol style="list-style-type: none"> 1. SKEE 2523 - Electromagnetic Field Theory 2. SKEE 2073 - Signals and System 3. SKEE 3533 - Communication Principles 4. Programming Language 	Master of Engineering (Wireless Communication and Network)

SCHOOL OF MECHANICAL ENGINEERING

Pre-Master Course (Undergraduate Core Course)	Master by Taught Course
<ol style="list-style-type: none"> 1. SEMM 1113 - Mechanics of Solids I 2. SEMM 2313 - Mechanics of Fluids I 3. SSCE 1793 - Differential Equations 	Master of Science (Mechanical Engineering)
<ol style="list-style-type: none"> 1. SEMM 3813 - Industrial Engineering 2. SSCE 2193 - Engineering Statistics 3. SEMI 4823 - Operations Research 	Master of Science (Industrial Engineering)
<ol style="list-style-type: none"> 1. SEMM 1513 - Introduction to Design 2. SEMM 2613 - Materials Science 3. SEMM 2713 - Manufacturing Process 	Master of Science (Advanced Manufacturing Technology)
<ol style="list-style-type: none"> 1. SEMM 2613 - Materials Science 2. SEMM 2713 - Manufacturing Process 3. SEMM 3623 - Materials Engineering 	Master of Science (Materials Engineering)
<ol style="list-style-type: none"> 1. SEMM 2313 - Mechanics of Fluids I 2. SSCE 1793 - Differential Equations 3. SEMT 3212 - Flight Mechanics 	Master of Science (Aeronautical Engineering)
<ol style="list-style-type: none"> 1. SEMM 1113 - Mechanics of Solids I 2. SEMM 2313 - Mechanics of Fluids I 3. SEMM 1213 - Dynamics 	Master of Science (Ship and Offshore Engineering)
<ol style="list-style-type: none"> 1. SEMV 3413 - Internal Combustion Engine 2. SEMV 4213 - Vehicle Dynamic 3. SEMV 4792 - Automotive Production Technology 	Master of Science (Automotive Engineering)

SCHOOL OF CIVIL ENGINEERING

Pre-Master Course (Undergraduate Core Course)	Master by Taught Course
<ol style="list-style-type: none"> 1. SKAB3712 – Geotechnics II 2. SKAB2223 – Mechanics of Materials & Structure 3. SKAB2513 – Hydraulics 4. SKAB3123 – Construction Technology, Estimating & Contract 	Master of Engineering (Civil)
<ol style="list-style-type: none"> 1. SKAA4223 – Structural Analysis 2. SKAA4333 – Reinforced Concrete Design I 3. SKAA3352 – Reinforced Concrete Design II 4. SKAA3233 – Steel Design & Timber 5. SKAB211 – Civil Engineering Materials 	Master of Engineering (Structure)
<ol style="list-style-type: none"> 1. SKAB4113 – Construction & Project Management 2. SKAB3123 – Construction Technology, Estimating & Contract 3. SKAB4143 – Construction Plants & Equipment 4. SKAB4133 – Construction Law & Contract 	Master of Engineering (Construction Management)
<ol style="list-style-type: none"> 1. SKAB1713 – Soil Mechanics 2. SKAB2722 – Geotechnics I 3. SKAB3712 – Geotechnics II 4. SKAB2712 – Eng. Geology & Rock Mechanics 	Master of Engineering (Geotechnics)
<ol style="list-style-type: none"> 1. SKAB2832 – Highway Engineering 2. SKAB3842 – Traffic Engineering 3. SKAB1713 – Soil Mechanics 	Master of Engineering (Transportation)
<ol style="list-style-type: none"> 1. SKAB1513 – Fluid Mechanics 2. SKAB2513 – Hydraulics 3. SKAB3613 – Hydrology & Water Resources 	Master of Engineering (Hydraulics & Hydrology)
<ol style="list-style-type: none"> 1. SKAB2912 – Water Treatment 2. SKAB2922 – Wastewater Engineering 3. SKAB3913 – Environmental Management 	Master of Engineering (Environment)