# **Bachelor of Engineering Technology (Hons) in Precision Engineering**

## Semester 1

- Tamadun Islam & Tamadun Asia (TITAS)
- Bahasa Melayu Komunikasi 2
- Isu-isu Kontemporari Muslim di Malaysia / Culture and Lifestyle in Malaysia
- Engineering Mathematics 1
- Fundamental English
- Professional English 1

## Semester 2

- Engineering Sciences
- Engineering Mathematics 2
- Engineering Drawing
- Solid Modeling
- Metrology And Workshop Practice
- Information Technology

## Semester 3

- Electrical And Electronics Fundamentals
- Manufacturing Technology
- Production And Operations Managemen
- Materials Engineering
- Mechanics Of Materials
- Mould Design
- Foreign Language 1

#### Semester 4

- Hubungan Etnik / Pengajian Malaysia 3
- Engineering Economic
- Applied Statistics
- Thermofluids
- Non-Traditional Machining
- Tool And Die Design
- Foreign Language 2

- Technopreneurship
- Quality Engineering
- Jigs And Fixtures Design
- Engineering Mechanics: Dynamics

- Professional English 2
- Co-Curriculum
- Elective 1

- CADCAM And CNC
- Product Design
- Inspection And Measurement Technology
- Project Management
- Final Year Project 1
- Elective 2
- Project Management/li>

## Semester 7

- Innovation Management
- CAE For Mould And Sheetmetal Forming
- Technologist In Society
- Final Year Project 2
- Elective 3

#### Semester 8

• Industrial Training

- Design for Manufacture and Assembly
- Six Sigma Methodology
- Lean and Agile Manufacturing
- Computer Programming
- Geometrical Dimensional and Tolerance
- Electrocoating and Deposition Processes

# Bachelor of Engineering Technology (Hons.) in Business Management

## Semester 1

- Tamadun Islam & Tamadun Asia (TITAS) / Bahasa Melayu Komunikasi 2
- Isu-isu Kontemporari Muslim di Malaysia / Culture and Lifestyle in Malaysia
- Engineering Mathematics 1
- Fundamental English
- Professional English 1

## Semester 2

- Principles Of Economics
- Business Management
- Engineering Sciences
- Engineering Drawing
- Metrology and Workshop Practice
- Information Technology

## Semester 3

- Business Law
- Manufacturing Technology
- Production and Operations Management
- Organizational Behavior
- Materials Engineering
- Supply Chain Management
- Foreign Language 1

#### Semester 4

- Hubungan Etnik / Pengajian Malaysia 3
- Industrial Engineering
- Marketing
- Computer Programming
- Financial and Cost Accounting
- Applied Statistics
- Foreign Language 2

- Technopreneurship
- Quality Engineering
- Managerial Finance
- Management Science
- Professional English 2

- Co-Curriculum
- Elective 1

- Six Sigma Methodology
- Principle of Islamic Finance
- Enterprise Resource Planning
- Final Year Project 1 (FYP1)
- Elective 2
- Project Management

#### Semester 7

- Innovation Management
- Artificial Intelligence in Business
- Strategic Management
- Technologist in Society
- Final Year Project 2 (FYP2)
- Elective 3

## Semester 8

• Elective

- Electrical and Electronics Fundamentals
- Management Information System
- Lean and Agile Manufacturing
- Product Design
- Safety, Health and Environment
- Database Management

# Bachelor of Engineering Technology (Manufacturing Systems) with Honours

## Semester 1

- Tamadun Islam & Tamadun Asia (TITAS) / Bahasa Melayu Komunikasi 2
- Isu-isu Kontemporari Muslim di Malaysia / Culture and Lifestyle in Malaysia
- Engineering Mathematics 1
- Fundamental English
- Professional English 1

## Semester 2

- Engineering Sciences
- Engineering Mathematics 2
- Engineering Drawing
- Product Design
- Metrology and Workshop Practice
- Information Technology

#### Semester 3

- Electrical And Electronics Fundamentals
- Industrial Automation and Robotics
- Manufacturing Technology
- Production and Operations Management
- Materials Engineering
- Mechanics Of Materials
- Foreign Language 1

#### Semester 4

- Hubungan Etnik / Pengajian Malaysia 3
- Engineering Economic
- CADCAM and CNC
- Design For Manufacture and Assembly
- Applied Statistics
- Thermofluids
- Foreign Language 2

- Technopreneurship
- Quality Engineering
- Manufacturing Optimization
- Professional English 2
- Engineering Mechanics: Dynamics

- Co-Curriculum
- Elective 1

- Production System and Simulation
- Six Sigma Methodology
- Inspection and Measurement Technology
- Final Year Project 1 (FYP1)
- Elective 2
- Project Management

#### Semester 7

- Innovation Management
- Lean and Agile Manufacturing
- Maintenance and Reliability Systems
- Technologist In Society
- Final Year Project 2 (FYP2)
- Elective 3

## Semester 8

• Industrial Training

- Computer Programming
- Solid Modeling
- Surface Modeling
- Advanced Product Design
- Non-Traditional Machining
- Geometrical Dimensional and Tolerance
- Electrocoating and Deposition Processes

# Bachelor of Engineering Technology (Product Design) with Honours

## Semester 1

- Tamadun Islam & Tamadun Asia (TITAS) / Bahasa Melayu Komunikasi 2
- Isu-isu Kontemporari Muslim di Malaysia / Culture and Lifestyle in Malaysia
- Engineering Mathematics 1
- Fundamental English
- Professional English 1

## Semester 2

- Engineering Sciences
- Engineering Mathematics 2
- Engineering Drawing
- Product Design
- Metrology and Workshop Practice
- Information Technology

## Semester 3

- 2D Visual Design Development
- Electrical and Electronics Fundamentals
- Ergonomics In Design
- Materials Engineering
- Solid Modeling
- Mechanics Of Materials
- Foreign Language 1

#### Semester 4

- Hubungan Etnik / Pengajian Malaysia 3
- Industrial Design Studio 1
- Mechatronics
- Engineering Economic
- Applied Statistics
- Thermofluids
- Surface Modeling
- Foreign Language 2

- Technopreneurship
- Product Design Studio
- Finite Element Analysis
- Professional English 2

- Engineering Mechanics: Dynamics
- Co-Curriculum
- Elective 1

- Manufacturing Technology
- Advanced Product Design
- Machine Design
- Final Year Project 1 (FYP1)
- Elective 2
- Project Management

#### Semester 7

- Innovation Management
- 3D Physical Modeling
- Quality Engineering
- Technologist in Society
- Final Year Project 2 (FYP2)
- Elective 3

#### Semester 8

• Industrial Training

- Computer Aided Industrial Design
- Six Sigma Methodology
- Lean and Agile Manufacturing
- Production and Operations Management
- Computer Programming
- Geometrical Dimensional and Tolerance

# Bachelor of Engineering Technology (Railway System) with Honours

## Semester 1

- Tamadun Islam & Tamadun Asia (TITAS) / Bahasa Melayu Komunikasi 2
- Isu-isu Kontemporari Muslim di Malaysia / Culture and Lifestyle in Malaysia
- Engineering Mathematics 1
- Fundamental English
- Professional English 1

## Semester 2

- Engineering Sciences
- Engineering Mathematics 2
- Computer Programming
- 3D Physical Modelling
- Mechanical Design and Modelling
- Engineering Drawing

## Semester 3

- Applied Statistics
- Materials Engineering
- Mechanics of Materials
- Electrical and Electronics Railway Fundamentals
- Co-Curriculum
- Foreign Language 1
- Hubungan Etnik / Pengajian Malaysia 3

#### Semester 4

- Railway Automations
- Engineering Mechanics: Dynamics
- Foreign Language 2
- Ergonomics in Railways
- Railway Infrastructure
- Railway Machines and Process System
- Railway Track Engineering

- Technopreneurship
- Professional English 2
- Rolling Stock Technology
- Railway Signaling
- Railway Communication

- Railway Operation Management
- Elective 1

- Advanced Rail Electrification
- Railway Transportation System
- Railway Maintenance and Inspection Technology
- Railway Safety and Discipline Practices
- Elective 2
- Final Year Project 1 (FYP1)

#### Semester 7

- Final Year Project 2 (FYP2)
- Railway Welding
- Railway Engineering Assurance
- Technologist in Society
- Elective 3
- Innovation Management

## Semester 8

• Industrial Training

- Quality Engineering
- Sustainable Energy
- High Voltage Engineering and Application
- Geometrical Dimensioning and Tolerances
- Design for Manufacturing and Assembly

# **Bachelor of Technology Management (Honours)**

## Semester 1

- Tamadun Islam & Tamadun Asia (TITAS) / Bahasa Melayu Komunikasi 2
- Isu-isu Kontemporari Muslim di Malaysia / Culture and Lifestyle in Malaysia
- Business Mathematics
- Fundamental English
- Professional English 1

## Semester 2

- Principles of Economics
- Business Management
- Metrology and Workshop Practice
- Information Technology
- Safety, Health and Environment
- Technology Management

#### Semester 3

- Manufacturing Technology
- Production and Operations Management
- Organizational Behavior
- Supply Chain Management
- Management Science
- Database Management
- Foreign Language 1

#### Semester 4

- Hubungan Etnik / Pengajian Malaysia 3
- Business Law
- Marketing
- Financial and Cost Accounting
- Visual Management System
- Foreign Language 2
- Elective 1

- Technopreneurship
- Quality Engineering
- Project Management
- Professional English 2
- Final Year Project 1 (FYP1)

- Co-Curriculum
- Elective 2

- Innovation Management
- Six Sigma Methodology
- Enterprise Resource Planning
- Final Year Project 2 (FYP2)
- Elective 3

#### Semester 7

• Industrial Training

## **Electives: Industrial Design**

- Rail Safety and Discipline Practices
- 3d Physical Modeling
- Design Media and Communication
- Industrial Design Studio 1

#### **Electives: Product Design**

- Engineering Drawing
- Product Design Studio
- Solid Modeling
- 2d Visual Design Development

#### **Electives: Manufacturing Systems**

- Applied Statistics
- Manufacturing Optimization
- Lean and Agile Manufacturing
- Design for Manufacture and Assembly
- Engineering Economic

#### **Electives: Engineering Business**

- Industrial Engineering
- Computer Programming
- Managerial Finance
- Management Information System
- Principle of Islamic Finance
- Artificial Intelligence in Business
- Strategic Management

# **Electives: Railway System**

- Rail Safety and Discipline Practices
  Railway Transportation System
  Railway Engineering Assurance
  Railway Maintenance and Inspection Technology

# Diploma of Engineering Technology (Railway System)

## Semester 1

- Amalan Islam di Malaysia / Religious Practice in Malaysia
- Interpersonal Skills
- Technical Mathematics 1
- Competency English
- Computer Science and Programming
- Basic Electrical Railway
- Foreign Language 1

#### Semester 2

- Basic Electronics Railway
- Technical Mathematics 2
- Integrated Railway Automations Technology
- Communication English 1
- Railway Machines and Processes Technology
- Mechanical Design and 3D Modelling
- Co-Curriculum 1

## Semester 3

- Rolling Stock
- Railway Safety
- Statistics and Strength of Materials
- Materials Science
- Engineering Physics
- Foreign Language 2 (Mandarin 2)

#### Semester 4

- Railway Track Engineering
- Railway Signaling and Communication Technology
- Engineering Dynamics
- Introduction to Entrepreneurship
- Communication English 2
- Pengajian Malaysia 2 / Bahasa Malaysia Komunikasi 1

- Rolling Stock and Maintenance
- Signaling and Communication
- Final Year Project

• Industrial Training

## **Doctor of Philosophy (Manufacturing)**

# **Areas of Research**

- Product Design CAD/CAM/CAE/CAO Rapid Prototyping, Value Analysis / Value Engineering (VA/VE)
- Process and Manufacturing System Artificial Intelligent
- Production and Operation Management Logistics and Supply Chain RFID, MRP, MRP II, JIT

#### **Compulsory Module**

- Research Methodology
- Innovation Technology and Entrepreneurship

#### **Full-time (4 Semesters)**

#### Semester 1 – 4

• Thesis

\* Thesis preparation needs minimum 6 months to graduate

#### Part-time (8 Semesters)

#### Semester 1 – 8

• Thesis

\* Thesis preparation needs minimum 8 months to graduate

# Foundation in Creative Art and Design

## Semester 1

- English 1
- Islamic Studies/Moral Studies
- Co-curriculum 1
- History of Art and Design
- Fundamentals of Drawing
- Element and Principles of Design
- Basic Visualization Techniques
- \*Elective 1

## Semester 2

- English 2
- Study and Critical Thinking Skills
- Co-curriculum 2
- Introduction to Computer Technology
- Visual Communication Design
- Presentation Techniques
- Design Project
- \*Elective 2

- Introduction to Graphic Design
- Introduction to Multimedia Design
- Introduction to Furniture Design
- Introduction to Consumer Product

# Foundation in Science and Technology

## Semester 1

- Mathematics 1
- Chemistry 1
- Physic 1
- English 1
- Introduction to Computer Technology 1
- Islamic Studies / Moral Studies
- Co Curriculum 1

- Mathematics 2
- Chemistry 2 •
- Physic 2
- English 2
- Introduction to Computer Technology 2
  Study and Critical Thinking Skills 2
  Co Curriculum 2

## Master in Manufacturing Management

#### Semester 1

- Competitive Manufacturing
- Manufacturing information system
- Design for manufacture and assembly
- Innovation Management and Technopreneurship
- Elective 1\*

#### Semester 2

- Manufacturing Operation Management
- Total Quality Management
- Accounting for Decision Making
- Research Methodology
- Elective 2\*

## **Research Project**

• Industry Project

- Supply Chain Management
- Strategic Technology Management
- Safety, Health and Environment
- Railway Operations Planning and Management
- Railway Transport Technology

## Master of Engineering Technology (Manufacturing)

# **Areas of Research**

- Product Design CAD/CAM/CAE/CAO Rapid Prototyping, Value Analysis / Value Engineering (VA/VE)
- Process and Manufacturing System Artificial Intelligent
- Production and Operation Management Logistics and Supply Chain RFID, MRP, MRP 11, JIT

#### **Compulsory Module**

- Research Methodology
- Innovation Technology and Entrepreneurship

#### **Full-time (3 Semesters)**

## Semester 1 – 3

• Thesis

\* Thesis preparation needs minimum 6 months to graduate

#### **Part-time (6 Semesters)**

#### Semester 1 – 6

• Thesis

\* Thesis preparation needs minimum 8 months to graduate