ENGINEERING & THE BUILT ENVIRONMENT
The Faculty of Engineering & The Built Environment focuses on a student-centered environment, allowing student-teacher interaction from Malaysia and our partner universities worldwide. You have access to work in advanced laboratories and workshops with essential tools in the development of engineering skills. The programmes are delivered using applied methodologies and state-of-the-art engineering facilities.

We offer an impressive range of engineering disciplines from Foundation and Diploma through to Bachelor’s, Master’s degrees and PhD in disciplines including civil engineering, chemical engineering, electronic & electrical engineering, automotive engineering and mechanical engineering. Our engineering students have gone on to write many success stories and the Faculty is proud to host students who obtained First Class Honours from top-notch universities worldwide.

The Built Environment covers a variety of disciplines such as architecture, construction management, quantity surveying, environmental design and planning. You get to address professional, industrial and consultancy activities while exploring relationship between the buildings/cities and individuals, communities and organisations that inhabit them, ensuring they develop a prosperous future in the growing job market.

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**WIDEST RANGE OF QUALITY COURSES**
Tailored to your Passion
Programmes offered at SEGi University and Colleges are meticulously planned and are of equivalent to that of prestigious international universities, with its well-rounded curriculum in multi disciplines from foundation to doctorate level.

**TRUSTED & RECOGNIZED**
Malaysia’s longest established higher education provider
Established in 1977 as Systematic College in the heart of Kuala Lumpur, after four decades, SEGi has undergone significant growth, making it one of the most trusted and recognized higher education institutions in Malaysia.

**REAL-WORLD EXPERIENCE**
Education today, Workforce tomorrow
Get a head start while pursuing your studies at SEGi. Before you graduate, SEGi encourages you to apply your knowledge and develop skills through work placements and internships. Work experiences help you better understand the world and fit into workplace upon graduation.

**GLOBALLY RECOGNIZED, DISTINCTIVELY SEGi.**

**OUR 6 COMPETITIVE ADVANTAGES**

**REAL-WORLD EXPERIENCE**
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**SKILL ENHANCEMENT & SUPPORT**
Shine & stand out from the crowd
The SEGi Enrichment Programme provides opportunities to enhance students’ learning experience. Explore from more than 100 workshops and seminars to prepare you beyond the classroom including communication and grooming skills, among others.

**WORLD-CLASS ACADEMIC LEADERS**
Dedicated academicians, Great mentors
Our world-class faculty members are connected to industry, imparting knowledge and sharing experiences to ensure students reap full benefit at SEGi. They will guide and help you excel. They will unlock your potential and talent by pushing you out of your comfort zone.

**CAREER READY FIRST CLASS GRADUATES**
Top of the class
SEGi produces more than 300 first class graduates every year. They excel not only academically but are also socially competent, skilled and ready for the workforce.
OUR ACCOMPLISHMENTS AND ACCOLADES

SEGi University & Colleges is at the forefront of educational excellence to help our students realize their career aspirations. We are honoured to have received a string of prestigious awards. These recognitions reflect SEGi’s continued commitment to highest-caliber educational experience for our students.

QS 5 STARS

In teaching, facilities, inclusiveness and social responsibility. Achieved a stunning 3 Stars overall. The First Malaysian University that earned 5 Stars for Prioritizing Society’s Needs in Malaysia.

PUTRA BRAND AWARDS

Putra Brand Awards is a brand valuation award measured by consumer preferences. There are various categories ranging from automotive to property development and education and learning, among others.

AWARDS

Students Choice Awards 2015
(Top 10 Universities)

The Edge Billion Ringgit Club 2013
(Best Performing Stock Award - Trading & Services)

3rd Global Leadership Award 2013
(Leadership in Educational & Training Excellence)

Asia Pacific Entrepreneurship Awards 2012
(Most Promising Entrepreneur)

10th Asia Pacific International Honesty Enterprise Keris Award 2011

The BrandLaureate Best Brand Award 2010 - 2011
(Education Tertiary Private)
UNIVERSITY OF SUNDERLAND

University of Sunderland (UOS) has been providing higher education since 1901 and is proud to be an innovative, forward-thinking university with high standards of teaching, research and support. As a research active university, UOS aims to enhance the learning experience of its students as well as its academic standing of the institution as a seat of higher learning and scholarship.

Academic programmes are at the core of the University’s commitment to producing well-rounded graduates. The Guardian ranks its Hospitality, Event Management & Tourism as 4th best in the country, while Nursing is ranked 5th best. Other highly-ranked majors in the Guardian league tables are Business, Management & Marketing, Accounting & Finance, Mechanical Engineering and Fashion & Textiles.

ABERTAY UNIVERSITY

Abertay University (AU) has a long history in Scotland education. In The Guardian University Guide 2018, Abertay has been ranked 66th in the respected table after leaping impressively 19 spots from 85th place the year before. The university offers ample opportunities for students to learn from world leaders every day since the courses are taught and developed by world-leading research teams, whose discoveries are hailed internationally. They are the top rated university in Scotland across multiple disciplines, particularly in accounting and finance, civil engineering, as well as food and drink courses.
LEARNING & TEACHING

TOP-NOTCH RESOURCES FOR A QUALITY LEARNING EXPERIENCE

MODERN CHEMICAL ENGINEERING LABS
The chemical engineering laboratories are fully equipped with instruments to aid in classroom experiment exercises.

WELL-STOCKED LIBRARIES
Each SEGi campus is equipped with a well-stocked library that includes books, web databases and other electronic resources for students’ use.

STUDENT-CENTERED LEARNING APPROACH
We place a strong emphasis on students’ interest to foster the development of skills for problem solving, critical thinking and communication as we try to shape students to become lifelong learners.

GLOBAL PARTNERSHIPS WITH WORLD-WIDE UNIVERSITIES
We work with some of the most prestigious universities from the United Kingdom to develop a knowledge-rich curriculum for our dual award and double degree programmes.

PARTNERSHIPS WITH INDUSTRY
We continue to engage with companies on many fronts to accelerate innovation and help shape future engineering leaders for industry.

EXPERIENCED ACADEMICIAN
We pride ourselves on having strong academicians who are also industry leaders, to impart knowledge and share experiences to ensure students reap full benefits at SEGi.

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STUDY ROUTE

SPM / O-Level / UEC or equivalent qualification

3 credits

Diploma
- Diploma in Electronic and Electrical Engineering
- Diploma in Mechanical Engineering

Foundation
- Foundation in Science
- Foundation in Art

5 credits

Degree
- BSc (Hons) Architecture
- BSc (Hons) Quantity Surveying
- BEng (Hons) in Chemical Engineering
- BEng (Hons) in Mechanical Engineering
- BEng (Hons) in Civil Engineering
- BEng (Hons) in Electronic and Electrical Engineering

Dual Award
- BEng (Hons) in Mechanical Engineering
- BEng (Hons) in Electronic and Electrical Engineering
- BEng (Hons) Engineering:
  - Mechanical
  - Electronic & Electrical

Master / PhD
- PhD (Engineering) by Research
- MSc in Engineering Management
- MSc in Telecommunication Engineering

DID YOU KNOW?

Most of our students undergo their industrial training programme at MULTINATIONAL ORGANISATIONS such as Gamuda MMC, Sunway Construction, WCT Construction and Petronas.
<table>
<thead>
<tr>
<th>Programme</th>
<th>Awarding Institution</th>
<th>Entry Requirements</th>
<th>Campus</th>
</tr>
</thead>
</table>
| BEng (Hons) Automotive Engineering (3+0) | University of Sunderland, UK       | • Pass a recognised Matriculation / Foundation Programme with a CGPA of at least 2.0 and credit in Mathematics in the SPM; OR  
• Pass STPM with a CGPA of at least 2.0 with full passes in 2 subjects; OR  
• Pass a Diploma in any related field with at least CGPA 2.50. Candidates with a score of below CGPA 2.50 but more than 2.00 may be accepted subject to evaluation. | Subang Jaya     |
| BEng (Hons) in Mechanical Engineering | SEGi University | • A-Level (2 principal Passes in Maths & Physics)  
• STPM (2 principal Passes in Maths & Physics)  
• UEC / SM3 (including Maths & Physics)  
• SAM (65% including a Pass in Maths & Physics)  
• CPU (65% overall including Maths & Physics)  
• Foundation in Science / Engineering (CGPA 2.00 or pass overall including Maths & Physics)  
• Related certificate from IPT with approval from Sektor Pengurusan IPTS and MOHE (CGPA 2.00 or pass)  
• Other equivalent qualification recognised by the Malaysian government (CGPA 2.00 or pass)  
• Other equivalent foreign qualification (pre-university, Year 12) recognised by the Malaysian government (CGPA 2.00 or pass) | Kota Damansara  |
| BEng (Hons) in Mechanical Engineering | SEGi University & University of Sunderland, UK | Dual Award  
• A-Level - 3 Passes with UCAS point of 240 (include Maths & Physics)  
• STPM - 3 Principal passes with Grade C / grade point of 2.0 and above (include Maths & Physics)  
• UEC - 5 Bs (include Maths & Physics)  
• SAM - 60% (include Maths & Physics)  
• CPU - 60% (include Advanced Functions, Calculus & Vectors and Physics)  
• Foundation in Science / Engineering - CGPA 2.00; OR  
• Pass (include Maths and Physics)  
• Other equivalent qualification recognised by the Malaysian government (CGPA 2.0 or Pass)  
• Other equivalent foreign qualification (Pre-U/ Year 12) recognised by the Malaysian government | Kota Damansara  |
| BEng (Hons) in Civil Engineering | SEGi University | • STPM/ A-Level with (2 principal passes including Maths and one analytical science subject); OR  
• UEC with 5 Bs (must include Maths and one analytical science subject); OR  
• Pass in relevant Pre-U / Foundation or other equivalent qualification | Kota Damansara  |
| BEng (Hons) in Civil Engineering | SEGi University & Abertay University, UK | Double Degree  
• STPM/ A-Level with (2 principal passes including Maths and one analytical science subject); OR  
• UEC with 5 Bs (must include Maths and one analytical science subject); OR  
• Pass in relevant Pre-U / Foundation or other equivalent qualification | Kota Damansara  |
<table>
<thead>
<tr>
<th>Programme</th>
<th>Awarding Institution</th>
<th>Entry Requirements</th>
</tr>
</thead>
</table>
| BEng [Hons] in Chemical Engineering | SEGi University | • A-Level - 3 passes with UCAS point of 240 (include Maths & Physics / Chemistry / Biology)  
• STPM - 3 principal passes with Grade C grade point of 2.0 and above (include Maths & Physics / Chemistry / Biology)  
• UEU - 5 Bs (include Maths & Physics / Chemistry / Biology)  
• SAM - 60% (include Maths & Physics / Chemistry / Biology)  
• CPU - 60% (include Advanced Functions, Calculus & Vectors and Physics / Chemistry / Biology)  
• Foundation in Science / Engineering CGPA 2.00 or Pass (include Maths & Physics / Chemistry / Biology)  
• Any other equivalent qualification approved by MQA |
| BSc (Hons) in Quantity Surveying | SEGi University | • SPM - with a minimum of 3 credits including mathematics AND  
• STPM - with a minimum of 3 principle passes  
• Matriculation/ Pre-University - to be completed with a minimum CGPA of 2.50  
• Diploma from other institutions recognised by Malaysian government, with a minimum CGPA of 2.00 (Year 1 entry)  
• Diploma in Quantity Surveying from other institutions recognised by Malaysian government, with a minimum CGPA of 2.67 (Year 2 entry)  
• Foundation (Foundation in Arts or Foundation In Science) - with a minimum CGPA of 2.67  
• A-Level - with a minimum of 3 principle passes  
• Other equivalent foreign qualification (Pre-U / Year 12) recognised by Malaysian government |
| BSc [Hons] Architecture | SEGi University | • A-Level (2 principal passes including English, Maths, Science or Art)  
• STPM (2 principal passes with Grade C / grade point of 2.0 and above (including Maths)  
• UEC SM3 - 5Bs (including Maths & English)  
• South Australian Certificate of Education (SACE) 2 passes with Grade C (including Maths)  
• Canadian Pre-U (CPU) - (including Maths)  
• International Baccalaureate (IB) - 24 points (including Maths)  
• Foundation in relevant field - CGPA 2.00 or pass  
• Other equivalent qualification recognised by Malaysian Government - CGPA 2.00 or pass  
• Other equivalent foreign qualification (Pre-U, Year 12) recognised by Malaysia Government |
| Diploma in Electronic & Electrical Engineering | SEGi College | • SPM / SPMV / UEC with a minimum of 3 credits (including Maths and one Science subject) or other equivalent qualification |
| Diploma in Mechanical Engineering | SEGi College |  |
| Foundation in Science | SEGi University & SEGi College | • SPM/ O-Level / SM2 or equivalent (5 credits) |
| Foundation in Arts | SEGi University & SEGi College |  |

All diploma and degree programmes require students to take general subjects (Mata Pelajaran Umum), as required by the Ministry of Education, Malaysia. Beside, the programme duration may vary with different intake per year.

The above is an indication of current programme content. However, the rapidly changing nature of the subject area means that the courses offered and individual course content are continuously updated to meet industry needs. Also, please note that certain combinations of options may not be available.
BEng (HONS) AUTOMOTIVE ENGINEERING (3+0)

We provide you with a thorough understanding of advanced technologies and processes related to automotive systems, analysis techniques and design methodologies.

Develop skills for clear communication and responsible teamwork to inspire professional attitudes and ethics along the way. This prepares you for modern work environments and lifelong learning.

The multi-disciplinary nature of automotive systems ranging from manufacturing and power trains to electrical power / control systems and others, provides opportunities for you to gain exposure to disciplines at an advanced graduate level.

Programmes such as Automotive System Design, Automotive Electronic & Electrical System, Chasis Technology and Automotive Technology prepare you for employment within the automotive industry or many other related automotive fields.

Programme Modules

**Year 1**
- Applied Mechanics
- Manufacturing and Materials
- Engineering Mathematics
- Introduction to Automotive Engineering
- Design, Drawing and Practical Skills
- Electrical Principles
- Engineering Applications and
- Information Technology
- Thermodynamics
- Hubungan Etnik
- Tamadun Islam & Asia Tenggara

**Year 2**
- Design Methods and Application
- Computer Aided Engineering Application
- Industrial Studies
- Measurement and Instrumentation
- Automotive Electronic & Electrical System
- Vehicle Drive Train and Chassis System
- Engineering Mechanics
- Thermafluid and Engine
- Steering and Suspension System
- Theory of Machines
- Public Speaking
- Entrepreneurship

**Year 3**
- Automotive Technology
- Material Selection
- Project
- Automotive Design
- Project Management, Planning and Control
- Manufacturing System Design
- Community Service

Career Opportunities
This programme prepares you for a career in research, design, development, advanced engineering and production of various types of heavy or light vehicles. As graduates of this programme, you can create the latest design for vehicles, utilising knowledge in engine and transmission, vehicle dynamics, analysis of vehicle structure and electronics.

DID YOU KNOW?
Engineering is one of the best paying entry-level jobs, **UP TO RM5,533 monthly.**
### BEng (HONS) IN MECHANICAL ENGINEERING

The BEng (Hons) in Mechanical Engineering at SEGi University is a broad industrial-driven degree programme, which equips you with the fundamentals of engineering and the technical skills required. The programme is designed to produce graduates who are able to address both technological and societal challenges in the field of mechanical engineering.

The integration of mathematic and engineering learning will allow you to develop advanced knowledge of physics and materials science to mechanical design and manufacturing processes.

The Programme Educational Objectives (PEO) are to produce graduates who:
- are employable in the global industry related to Mechanical Engineering discipline
- are in management / leadership role in the area of engineering
- pursue life-long learning via post-graduate qualification and / or professional licensure

### Programme Modules

#### Year 1
- Fundamental Engineering Mechanics
- Design I - Basic Skills
- Engineering Materials
- Engineering Mathematics I
- Fundamental Thermo-Fluids
- Laboratory Investigations I
- Materials under Stress
- Thermo-Fluids
- Laboratory Investigations II
- Design II - Advanced Drawing Techniques
- Engineering Mathematics II
- Engineering Mechanics
- Programming in C++

(only for SEGi homegrown degree)

#### Year 2
- Engineering Statistics
- Fluids Engineering
- Manufacturing Processing & Technology
- Mechanics of Deformable Solids
- Electrical and Electronic Circuits and Applications
- Laboratory Investigations III
- Computational and Numerical Analysis
- Thermodynamics & Heat Transfer
- Dynamics of Machine and Structures
- Design of Machine Elements
- Measurement and Instrumentation
- Laboratory Investigations IV

#### Year 3
- Advanced Dynamics
- Manufacturing Systems Design
- Advanced Fluid Mechanics
- Research Methodology
- Integrated Design Project I
- Entrepreneurship Development
- Advanced Thermodynamics
- Integrated Design Project II
- Electrical Machines and Motors
- Advanced Engineering Materials
- Engineers and Society

#### Year 4
- Industrial Training
- Final Year Project
- Finite Element Analysis
- Environmental Management and Technology
- Project Management, Planning and Control
- Advanced Manufacturing Technology**
- Computational Fluid Dynamics**
- Control and System Engineering**
- Thermal Management in Product Design**

** Elective courses

### Career Opportunities

As graduates of the BEng (Hons) Mechanical Engineering, you will have the necessary skills and knowledge to play a major role in design, management and manufacturing in a wide range of industries.
**Elective courses**

As graduates of the BEng (Hons) Electronic & Electrical Engineering programme, you will have a wide choice of career in sectors including: Robotics & Automation, Control & instrumentation, Power Generation and Communications.

**Programme Modules**

**Year 1**

- Engineering Mathematics I
- Circuits and Signals I
- Electronic Devices
- Electromagnetic I
- Engineering Drawing
- Laboratory Investigations I
- Engineering Mathematics II
- Circuits and Signals II
- Analogue Electronics I
- Communication System I
- Digital Electronics I
- Laboratory Investigations II

**Year 2**

- Engineering Statistics
- Programming in C ++
- Analogue Electronics II
- Electromagnetic II
- Digital Electronics II
- Measurement and Instrumentation
- Laboratory Investigations III
- Computational and Numerical Analysis
- Control Systems
- Electrical Machines
- Microprocessor
- Laboratory Investigations IV

**Year 3**

- Electrical Power System
- Computer Architecture
- Environmental Management & Technology
- Research Methodology
- Communication System II
- Integrated Design Project I
- Embedded System
- Engineers and Society
- Integrated Design Project II
- Project Management, Planning and Control
- Digital Signal Processing
- Industrial Training

**Year 4**

- Final Year Project
- Power Electronics and Drives
- PLC and SCADA
- Advanced Microprocessor (Electronic) **
- Advanced Electrical Power (Electrical) **
- Energy Conversion
- Electronics Systems and VLSI Design (Electronic) **
- Design of Electrical and Protection Systems (Electrical) **

**Career Opportunities**

As graduates of the BEng (Hons) Electronic & Electrical Engineering programme, you will have a wide choice of career in sectors including: Robotics & Automation, Control & Instrumentation, Power Generation and Communications.
BEng (HONS) IN CIVIL ENGINEERING

Discover Civil Engineering at SEGi and be involved in all stages of development of the physically and naturally built infrastructure in our modern world.

The expertise in planning, design, construction and maintenance of civil engineering projects are highly demanded of civil engineers. This sets us to design intensive civil engineering classes and shape graduates to be highly skilled professionals that possess technical, managerial, organisational, financial, communication, research and critical analysis skills.

The BEng (Hons) in Civil Engineering is a broad industrial-driven degree programme, which equips you with the fundamentals of engineering and science with the technical skills and knowledge required – shaping you to be literate, highly numerate and competent in all aspects of civil engineering.

Programme Educational Objectives (PEO): We aim to produce graduates who:
- Are employable in the global construction industry and other related fields of the Built Environment
- Pursues post-graduate qualifications to satisfy a passion for research and life-long learning
- Participates in continuous professional improvement leading to professional licensure

BEng (HONS) IN CIVIL ENGINEERING

The Double degree in collaboration with Abertay University offers identical modules with the SEGi homegrown Bachelor of Engineering (Honours) in Civil Engineering degree programme. The 4 - 4½ years duration programme will be delivered at SEGi University, with joint involvement in the assessment by Abertay University.

Programme Modules

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
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</thead>
<tbody>
<tr>
<td>Engineering Mathematics I</td>
<td>Construction Technology</td>
</tr>
<tr>
<td>Statics and Dynamics</td>
<td>Engineering Statistics</td>
</tr>
<tr>
<td>Construction Materials</td>
<td>Structural Analysis I</td>
</tr>
<tr>
<td>Engineering Drawing</td>
<td>Hydraulics</td>
</tr>
<tr>
<td>Soil Mechanics I</td>
<td>Soil Mechanics II</td>
</tr>
<tr>
<td>Programming Methodology &amp; Problem Solving</td>
<td>Numerical Analysis</td>
</tr>
<tr>
<td>Fluid Mechanics</td>
<td>Construction Project Management</td>
</tr>
<tr>
<td>Mechanics of Materials</td>
<td>Hydrology</td>
</tr>
<tr>
<td>Engineering Survey</td>
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<tr>
<td>Engineering Mathematics II</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design of Reinforced Concrete Structures I</td>
<td>Environmental Management &amp; Technology</td>
</tr>
<tr>
<td>Highway Engineering</td>
<td>Entrepreneurship Development</td>
</tr>
<tr>
<td>Structural Analysis II</td>
<td>Foundation Design</td>
</tr>
<tr>
<td>Water Resources &amp; Supply Engineering</td>
<td>Integrated Project</td>
</tr>
<tr>
<td>Design of Steel and Timber Structures</td>
<td>Project &amp; Research Methods</td>
</tr>
<tr>
<td>Estimating &amp; Costing of Buildings</td>
<td>Traffic &amp; Transportation Engineering</td>
</tr>
<tr>
<td>Design of Reinforced Concrete Structures II</td>
<td>Elective I &amp; Elective II:</td>
</tr>
<tr>
<td>Engineering Application and Analysis</td>
<td>• Water and Environmental Management OR</td>
</tr>
<tr>
<td>Engineers &amp; Society</td>
<td>• Design of Earth Retaining Structures OR</td>
</tr>
<tr>
<td>Geotechnics</td>
<td>• Advanced Reinforced Concrete Design OR</td>
</tr>
<tr>
<td>Conceptual Design</td>
<td>• Concrete Technology OR</td>
</tr>
<tr>
<td>Industrial Training</td>
<td>• Design of Steel Structures II</td>
</tr>
</tbody>
</table>

Career Opportunities

As civil engineers, your career opportunities are vast and varied, depending on your area of specialisation and interest. Your potential employers include local and international consulting firms, construction companies and research institutions, as well as all levels in government.
Chemical engineering works principally in the chemical industry to convert basic raw materials into a variety of products, and deals with the design and operation of chemical plant and equipment.

The principle knowledge in chemical engineering includes design, manufacture and operation of industrial chemicals and related, development of new chemicals or adapted substances and processes for products ranging from foods and beverages to cosmetics, cleaners and pharmaceutical ingredients, also development of new technologies such as fuel cells, hydrogen power and nanotechnology.

The working in fields derived from chemical engineering includes material science, polymer engineering, and biomedical engineering, membrane technology, water and wastewater treatment industry.

The programmes objectives are to produce graduates who are able to:
1. Practice as engineer in industries related to chemical engineering
2. Pursue postgraduate studies
3. Register with the Board of Engineers Malaysia and subsequently become a professional chemical engineer

Programme Modules

**Year 1**
- Mass and Energy Balances
- Physical and Organic Chemistry
- Engineering Mathematics I
- Engineering Drawing
- Material Science
- Chemical Engineering Laboratory I
- Fluid Mechanics
- Thermodynamics
- Strength of Materials
- Engineering Mathematics II
- Project Year I
- Chemical Engineering Laboratory II

**Year 2**
- Heat and Mass Transfer
- Separation Processes I
- Engineering Statistics
- Computer Aided Chemical Engineering
- Electrical Technology
- Chemical Engineering Laboratory III
- Chemical Engineering Thermodynamics
- Particle Technology
- Separation Processes II
- Engineers and Society
- Chemical Engineering Laboratory IV
- Project Year II

**Year 3**
- Process Control and Instrumentation
- Separation Processes III
- Chemical Reaction Engineering
- Environmental Management and Technology
- Chemical Engineering Laboratory V
- Biochemical Engineering Principle
- Chemical Process Safety
- Project Management and Economics
- Numerical Analysis
- Industrial Training
- Project Year III

**Year 4**
- Process and Plant Design
- Transport Phenomena
- Entrepreneurship Development
- Design Project I
- Research Methodology
- Fuel and Energy Utilisation
- Research Project
- Design Project II
- Bio-Separation: Recovery Processes
  - [Biochemical Engineering]** OR
  - Water and Wastewater Engineering
  - [Environmental Engineering]**
- Bioreactor Engineering Design
  - [Biochemical Engineering]** OR
  - Solid Waste Engineering
  - [Environmental Engineering]**

**Career Opportunities**

As Chemical Engineers, you’ll have exciting career opportunities in areas including: Chemical and allied products, environmental engineering, contracting, oil and gas, consultancy, pharmaceutical, energy, water, food and beverage, materials and design.

**Elective courses**
The BSc (Hons) Architecture emphasises on design spaces where they are known as more than just well-built structures with architectural design elements. They encompass not only the involvement of space, but also the strong influence of innovation and technology. Students will explore inventions and designs through industrial revolution that consists of all areas in design, construction, practise and awareness of the built environment towards sustainability.

The Bachelor in Architecture intends to discover the best approach that suits the future architectural graduates, where problems are to be solved the unconventional way. This programme will encourage students to enthusiastically discuss ideas and express them in different styles of design, hence equip them with solid design and technical skills for their future career in the local and global architectural industry.

Programme Modules

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural Comm Graphics</td>
<td>Architecture Theory Philosophy</td>
</tr>
<tr>
<td>Architecture History 1</td>
<td>Building Construction 2</td>
</tr>
<tr>
<td>Building Materials</td>
<td>Building Services 1</td>
</tr>
<tr>
<td>Design Studio 1</td>
<td>Design Studio 3</td>
</tr>
<tr>
<td>Environmental Science 1</td>
<td>Environmental Science 2</td>
</tr>
<tr>
<td>Hubungan Etlik</td>
<td>Business ethic</td>
</tr>
<tr>
<td>Malaysian Studies</td>
<td>Effective Listening</td>
</tr>
<tr>
<td>Titas</td>
<td>Environmental Management Technology</td>
</tr>
<tr>
<td>Architecture History 2</td>
<td>Advanced CAD</td>
</tr>
<tr>
<td>Basic CAD</td>
<td>Asian Architecture</td>
</tr>
<tr>
<td>Building Construction 1</td>
<td>Design Studio 4</td>
</tr>
<tr>
<td>Design Studio 2</td>
<td>Measured Drawing</td>
</tr>
<tr>
<td>Structure 1</td>
<td>Structure 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Services 2</td>
</tr>
<tr>
<td>Design Studio 5</td>
</tr>
<tr>
<td>Sustainable Building Design</td>
</tr>
<tr>
<td>Working Drawing</td>
</tr>
<tr>
<td>Industrial Training</td>
</tr>
<tr>
<td>Construction Project Management</td>
</tr>
<tr>
<td>Design Studio 6</td>
</tr>
<tr>
<td>Ko-kurikulum</td>
</tr>
<tr>
<td>Professional Studies</td>
</tr>
</tbody>
</table>

Career Opportunities
Assistant Architect, CAD Designer, Site Supervisor, Academic Researcher, 3D Visual Artist, Interior Designer, Landscape Designer, Creative Designer.
The BSc (Hons) Quantity Surveying programme aims to empower you with academic and practical knowledge with relevant soft skills in Quantity Surveying, grooming you to respond to high demands of qualified and competent quantity surveyors by the local as well as international construction industry.

As graduates of this programme, you’ll be empowered to:
• Demonstrate accurate techniques and skills of measurement, quantification and cost estimation in construction projects.
• Apply knowledge of economics, building constructions, maintenance and services related to quantity surveying areas.
• Understand and apply the relevant laws, procedures, procurements and dispute resolutions when handling projects.
• Demonstrate good knowledge and analytical skills, problem-solving and communication with relevant soft skills.
• Participate in project management, financial management, entrepreneurship and current construction issues in the area of quantity surveying.
• Practice professional and ethical responsibilities in quantity surveying; as well as conduct further research and development activities to retain a professional membership status in quantity surveying (Sr.) or related disciplines.

The Programme Educational Objectives (PEO) are to produce graduates:
• To respond to the high demands of qualified and competent Quantity Surveyor in the global construction industry
• To assist students to mature into dynamic individuals who strive to become professional Registered Quantity Surveyors
• To develop research and critical thinking skill of students in pursuing life-long learning

Programme Modules

**Year 1**
- Building Construction I
- Construction Materials
- Management of Built Environment
- Basic Architectural and Engineering Design
- Building Services I
- Basic Drawing and AutoCAD
- Building Services II
- Introduction to Measurement of Building Works
- Construction Law
- Geomatic Engineering
- Principle of Economics
- Building Construction II

**Year 2**
- Quantity Surveying Practice I
- Measurement of Building Works I
- Construction Contract Law
- Construction and Project Management
- Tendering and Estimating
- Measurement of Building Works II
- Quantity Surveying Practice II
- Construction Economics I
- Civil and Infrastructures Construction Works
- Business and Professional Ethics
- Entrepreneurship
- Environmental Management & Technology

**Year 3**
- Measurement of Civil Engineering Works
- Information Computer Technology (ICT)
- Data Analysis and Statistic
- Quantity Surveying Practice III
- Dissertation I
- Academic Research
- Integrated Project
- Construction Economics II
- Value Engineering and Management
- Dissertation II
- Project Financial Management
- Industrial Training

Career Opportunities
Quantity Surveyor, Contract and Cost Administrator, Property and Commercial Executive, Procurement Advisor & Contract Executive / Project Executive are just some of the possible employment prospects for QS graduates.
The engineering programme has been an eye opening experience. With the priority placed on practical based knowledge and design, coupled with the fundamental engineering principles, I am happy to say my future is bright.

Hwang Chin Shern

The mechanical engineering industry comprises of a range of occupations involving the design, production and service of machinery, equipment, tools and mechanical systems.

The Diploma in Mechanical Engineering provides you with a solid foundation in mechanical engineering. As graduates of this diploma, you possess a broad understanding of engineering fundamentals, preparing for studies at Degree level as well as working in industry. You will have the skills and knowledge to apply analytical, design, industrial, laboratory, and fieldwork skills.

Programme Modules

<table>
<thead>
<tr>
<th>Foundation</th>
<th>Thermofluid and Heat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation Mathematics</td>
<td>Fluid Mechanics</td>
</tr>
<tr>
<td>Foundation Physics</td>
<td>Thermodynamics</td>
</tr>
<tr>
<td>Foundation Chemistry</td>
<td>Heat Transfer</td>
</tr>
<tr>
<td>Computer Application</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Soft Skills</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Communication and Case Studies</td>
<td>Material Science</td>
</tr>
<tr>
<td>Industrial Training</td>
<td>Mechanics of Materials</td>
</tr>
<tr>
<td>Malaysian Studies</td>
<td></td>
</tr>
<tr>
<td>Decision Making Skills</td>
<td></td>
</tr>
<tr>
<td>Moral Studies / Islamic Studies</td>
<td></td>
</tr>
<tr>
<td>Community Service</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Manufacturing</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing Processes</td>
<td>Engineering Drawing</td>
</tr>
<tr>
<td>Industrial Management</td>
<td>Design of Machine Element</td>
</tr>
</tbody>
</table>

Basics of Mechanical Engineering

<table>
<thead>
<tr>
<th>Programming Methodology and Problem Solving</th>
<th>Engineering Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Mathematics</td>
<td>Principles of Electrical and Electronic Engineering</td>
</tr>
<tr>
<td>Principles of Electrical and Electronic Engineering</td>
<td>Engineering Mechanics</td>
</tr>
<tr>
<td>Engineering Mechanics</td>
<td>Dynamics</td>
</tr>
<tr>
<td>Dynamics</td>
<td>Mechanical Engineering Practice</td>
</tr>
</tbody>
</table>

Career Opportunities

Possible job titles relevant to this qualification include: CAD Application Engineer, Trainee Engineer, Trainee Design Engineer, Mechanical, Design Engineer, Draughts Person and Structural Engineer.

The engineering programme has been an eye opening experience. With the priority placed on practical based knowledge and design, coupled with the fundamental engineering principles, I am happy to say my future is bright.

Hwang Chin Shern
The Diploma in Electronic & Electrical Engineering programme covers a broad-based suite of electronic and electrical engineering modules, ensuring you are equipped with the necessary skills, knowledge and expertise to face challenges across a wide range of electrical and electronic industries.

### Programme Modules

#### Foundation
- Foundation Mathematics
- Foundation Physics
- Foundation Chemistry
- Computer Application

#### Power
- Electric Machines
- Power Systems: Malaysian Studies
- Bahasa Malaysia

#### Soft Skills
- English
- Engineering Communication and Case Studies
- Industrial Training
- Malaysian Studies
- Decision Making Skills
- Moral Studies / Islamic Studies
- Community Service

#### Electronic
- Circuit Theory and Signals
- Solid State Devices
- Digital Electronics
- Analogue Electronics
- Microprocessors
- Microelectronics

#### Control
- Instrumentation and Measurement
- Control Systems
- Industrial Electronics

#### Communication
- Electromagnetic Field
- Communication Systems

#### Basics Of Electrical & Electronic Engineering
- Programming Methodology and Problem-Solving
- Engineering Drawing
- Engineering Maths
- Principles of Electrical and Electronic Engineering

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### Interesting Fact

96% of our graduates get employed within a span of 6 months upon graduation.

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### Career Opportunities

As graduates of the Diploma in Electronic & Electrical Engineering, you are able to pursue a variety of job roles. Possible job titles relevant to this qualification include: Electrical Engineering Technical Officer, Technologist, Design Specialist, Assistant Engineer.
**FOUNDATION IN SCIENCE**

The foundation programme is shaped to equip you with the knowledge, skills and practice needed to bridge you from secondary studies to tertiary level.

We cover the subject of applied sciences, providing a strong foundation for those intending to pursue programmes in Health Sciences, Engineering and Computing. The foundation will guarantee your entry into above par degree programmes with SEGi as well as UK universities in collaboration with SEGi. The foundation will also enable you to for direct entry into respective degree programmes.

**Programme Modules**

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 1</td>
<td>Physics 2</td>
</tr>
<tr>
<td>Chemistry 1</td>
<td>Chemistry 2</td>
</tr>
<tr>
<td>Mathematics 1</td>
<td>Mathematics 2</td>
</tr>
<tr>
<td>Public Speaking</td>
<td>Biology 1 / Information Technology</td>
</tr>
<tr>
<td>Malaysian Studies</td>
<td>Moral Studies / Islamic Studies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 3</td>
</tr>
<tr>
<td>Chemistry 3</td>
</tr>
<tr>
<td>Mathematics 3</td>
</tr>
<tr>
<td>Biology 2 / Computer Applications</td>
</tr>
</tbody>
</table>

There might be slight variations in course offerings across centres.

**Career Opportunities**

This qualification is specially designed for students with SPM, O-Level or equivalent qualifications. Upon successful completion of this programme, students may enrol in a range of health science, engineering or computing degree programmes.

**FOUNDTION IN ARTS**

The foundation year is an introductory programme that will equip students with the skills and knowledge to further their studies locally or internationally. Students are exposed to modules which will allow them to become creative thinkers and problem solvers that can be translated into practical ideas. This programme also enables students to develop a range of practical skills and solid knowledge, preparing them for smooth progress to a communication degree of their choice.

**Programme Modules**

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Semester 2</th>
<th>Semester 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Language Training</td>
<td>Academic English</td>
<td>Public Speaking</td>
</tr>
<tr>
<td>Computer Application</td>
<td>Principle of Economics</td>
<td>Critical Thinking Skills</td>
</tr>
<tr>
<td>Introduction to Business</td>
<td>Elective 1*</td>
<td>Elective 3*</td>
</tr>
<tr>
<td>Statistics</td>
<td>Elective 2*</td>
<td>Elective 4*</td>
</tr>
<tr>
<td>Malaysian Studies</td>
<td>Moral Studies / Islamic Studies</td>
<td></td>
</tr>
</tbody>
</table>

* * Elective Subjects

**Quantity Surveyor**

- E1 Introduction to Building Technology
- E2 Introduction to Estimating
- E3 Introduction to Construction Materials
- E4 Mathematics

**Architecture**

- E1 Introduction to Built Environment and Construction
- E2 Introduction to World of Architecture and Design
- E3 Fundamental to Architecture and Design Drawings
- E4 Creative Thinking in Design

* Electives may be subject to change.

There might be slight variations in course offerings across centres.

**Career Opportunities**

This qualification is specially designed for students with SPM, O-Level or equivalent qualifications and who would like to pursue a bachelor degree at the university. Upon successful completion of the Foundation in Arts programme, students may further their studies in a wide range of degree programmes depending on units completed during their studies. Students may be eligible to apply for advanced standing.
SETARA 2013
SEGi University,
Tier 5 Rating: Excellent

MyQUEST 2014/2015
SEGi College Subang Jaya 6 Star Rating:
College Based Large Category;
Social Sciences, Business and Law;
Art & Humanities, Education;
Engineering, Manufacturing and Construction;
Science, Mathematic and Computing; Services

MyQUEST 2014/2015
SEGi College Kuala Lumpur 6 Star Rating:
Social Sciences, Business and Law;
Art & Humanities, Health and Welfare

MyQUEST 2014/2015
SEGi College Penang 5 Star Rating:
College Based Medium Category;
Social Sciences, Business and Law;
Science, Mathematic and Computing; Services

MyQUEST 2014/2015
SEGi College Sarawak 5 Star Rating:
College Based Medium Category;
Arts & Humanities, General Programmes;
Health & Welfare

SEGi University Kota Damansara (DU031-B)
☎ 603 6145 1777  ♦ 011 1210 6389  ♦ 1800 88 7344

SEGi College Kuala Lumpur (W4P01 15)
☎ 603 2070 2078  ♦ 018 211 8653  ♦ 1800 88 8028

SEGi College Subang Jaya (DK250-04(B))
☎ 603 8600 1777  ♦ 016 212 9154  ♦ 1800 88 8622

SEGi College Penang (187520)
☎ 604 263 3888  ♦ 013 629 4880

SEGi College Sarawak (DK250-02(Q))
☎ 6082 252 566  ♦ 017 859 2566  ♦ 1300 88 7344

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