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, Master 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.

Built Environment covers a variety 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.

We offer leading-edge programmes in the area of Environmental Technology and Quantity Surveying.
Awards received by
SEGi University & Colleges

- Education – Malaysia World Branding Award
- Outstanding Innovation Award 2014
- Reader’s Digest Trusted Brand 2014 (Services, Private University/College)
- Reader’s Digest Trusted Brand 2013 (Services, Private University/College)
- PUTRA BRAND AWARDS SILVER 2014 (Education & Learning)
- PUTRA BRAND AWARDS SILVER 2013 (Education & Learning)
- PUTRA BRAND AWARDS BRONZE 2012 (Education & Learning)
- 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)
ACCRREDITATION BY MALAYSIAN QUALIFICATION AGENCY (MQA)

WORLD RENOWNED UNIVERSITY PARTNERS

WIDE-RANGING QUALITY PROGRAMMES

BROAD ENTRY LEVEL

ADVANCE CREDIT TRANSFER

CUTTING EDGE FACILITIES

INNOVATIVE FINANCING

HOLISTIC LEARNING

ACCESSIBILITY

ACCESSIBILITY

ADVANCE CREDIT TRANSFER

CUTTING EDGE FACILITIES

HOLISTIC LEARNING

ACCESSIBILITY

10 REASONS TO STUDY AT
SEGi UNIVERSITY & COLLEGES
University of Sunderland, United Kingdom

A provider of higher education in the United Kingdom since 1901, University of Sunderland (UOS) proudly stands out to be an accessible and an inspirational university. Its innovative, forward-thinking with high standards of teaching, research and support of strong links from industry and business, has resulted them working closely with some of the world’s leading companies.

UOS is committed to ensuring that students have the best learning environments and support by listening to, understanding and acting on their needs. As of year-end 2012-2013, UOS raked in 15,152 students and its strength range from widening access and student experience to research, international and industry links.

University of Greenwich, United Kingdom

The University of Greenwich (UOG) has a proud and historic tradition of helping students attain academic excellence in a diverse range of disciplines and fields.

Its Educational Development Unit (EDU) is at the centre of activity to maximise the effectiveness of student learning, teaching and assessment at the university. It promotes and encourages innovation and excellence in curriculum design and delivery and act as a catalyst in the growth of networks and collaborations across the institution and into the Higher Education Sector.

The university works closely with a number of colleges, both in the local region and internationally. Through these partnerships the university helps to meet the rising demand for higher education at a local, regional, national and international level.
The modern and up-to-date high-technology laboratories especially for students to utilise and enhance the learning experience.

**Chemical Engineering Laboratories**
The laboratories are fully geared with instruments for classroom experiment exercises.

**Comprehensive Lab Practice**
There are multi-disciplinary laboratories for students to conduct various experiments for industrial applications.

**PERINTIS Award 2014**
We are proud to announce the good effort of our engineering students for their participation in the Pertandingan Rekacipta dan Inovasi Institusi Penganjuran Tinggi Swasta (PERINTIS), yielding two medals:
- **Manual Casting Machine**
  - Silver medal
- **Polymer Solution Delivery System**
  - Bronze Medal

Congratulations to the winners and to their mentor, Dr Chan Mieow Kee for leading them all the way.

**The Future Engineering Leaders**
We aim to develop future engineers who are well-versed in technical knowledge and possess full understanding of their role in the society’s progress.

The winning team: Manimegalai Letikumar (Dip. Chem. Eng.), Sri Karthikeyan (Degree in Civil Eng.), Preehaath Raa (Degree in Mech. Eng.), Hwang Chin Shern (Degree in Mech. Eng.), Yap Koon Eu (Degree in Mech. Eng.), Satheshkumar (Degree in Mech. Eng.)
SEGian DNA

SEGian graduates are fully equipped with the skills and tools of the trade essential in facing the challenges of today. These skills carved into everyday practice, proves that SEGians are all-rounders, at the top of their game in all aspects.

1. Analytical/Creativity
   Critical Thinking
   Innovative problem-solver who can generate creative solutions.

2. Entrepreneurship
   Results-driven achiever with exemplary planning and organisational skills, along with a high degree of detail orientation.

3. Job Readiness
   Highly analytical thinking with demonstrated talent for identifying, scrutinising, improving, and streamlining complex work processes.

4. Lifelong Learning
   Flexible individual who is self-motivated and thrives to pursue knowledge autonomously for personal or professional reasons.

5. Managing EQ
   (Positive Thinking)
   Goal-driven leader who maintains a productive climate and confidently motivates, mobilises, and coaches employees to meet high performance standards.

6. Communication Skills
   Exceptional listener and communicator who effectively conveys information verbally and in writing.

7. Global Perspective/Citizenship
   Personable professional whose strengths include cultural sensitivity and an ability to build rapport with a diverse workforce in multicultural settings.

8. Leadership & Management
   Resourceful team player who excels at influencing as well as building trusting relationships with customers and colleagues.
Study Route

SPM / O-Level / SM2 or equivalent qualification

STPM / A-Level / Pre-U/ SM3/ SAM/ CPU or equivalent qualification

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

Foundation
- Foundation in Science

3 credits

5 credits

Degree (3+0)

Bachelor of Engineering (Hons)
- Electronics and Electrical Engineering
- Mechanical Engineering
- Automotive Engineering

Bachelor of Environmental Technology (Hons)
- BSc (Hons) Quantity Surveying
- BEng (Hons) Chemical Engineering

Dual Degree

BEng (Hons) Electronic and Electrical Engineering
BEng (Hons) Mechanical Engineering

Master / PhD

PhD (Engineering) by Research
PhD (Environmental Sciences) by Research
MSc Engineering Management
MSc in Telecommunication Engineering
MSc in Engineering by Research
Master of Environmental Management Technology

BEng (Hons) Civil Engineering
<table>
<thead>
<tr>
<th>Programme</th>
<th>Awarding Institution</th>
<th>Entry Requirements</th>
<th>Duration</th>
<th>Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD (Engineering) by Research</td>
<td>SEGi University</td>
<td>• 600 TOEFL score or minimum score of 6 for IELTS; OR • Bachelor’s degree in a relevant field of study with First Class Honours; OR • Completed Master of Science (Engineering) at SEGi University; OR • Master’s degree in a relevant field of study; OR • Any equivalent qualification in a related field of study recognised by the Malaysian government and University’s Senate • Compulsory modules to be taken (total of 7 credit hours, but do not carry credits in PhD. However, the students must pass all before the research work begins) • MSCE1131 Advanced Research Methods and Design (Sem 1 Year 1) • PE1241 Research Proposal and Seminar (Sem 2 Year 1)</td>
<td>3 – 6 years</td>
<td>Kota Damansara</td>
</tr>
<tr>
<td>PhD (Environmental Sciences) by Research</td>
<td>SEGi University</td>
<td>• A Master’s degree or any equivalent qualification recognised by the Malaysian government • Submit proposal for research topic (1,000 words)</td>
<td>3 – 6 years</td>
<td>Kota Damansara</td>
</tr>
<tr>
<td>MSc Engineering Management</td>
<td>University of Sunderland, UK</td>
<td>• Degree in Electrical / Electronic Engineering or Mechanical Engineering with min. CGPA 2.5 or Third Class Honours or equivalent • Pass the Engineering Council Examination part III (EE or ME)</td>
<td>1 – 1½ years</td>
<td>Subang Jaya</td>
</tr>
<tr>
<td>MSc in Telecommunication Engineering</td>
<td>University of Sunderland, UK</td>
<td>• Degree in Science or Engineering, such as: Computer Science, Information Technology, Electrical or Electronic Engineering with minimum (2:2 degree (Second Class Lower) classification or CGPA above 2.5) • International students must demonstrate a good command of the English language and required to undertake an IELTS examination prior to starting the programme • Pass Engineering council examination part III (Electrical / Electronic / Telecommunication Engineering)</td>
<td>1½ years</td>
<td>Subang Jaya</td>
</tr>
<tr>
<td>MSc (Engineering) by Research</td>
<td>SEGi University</td>
<td>• Related Bachelor’s degree with honours (minimum 2nd upper); OR • Any equivalent qualification in a related field of study recognised by the University’s Senate</td>
<td>2 – 4 years</td>
<td>Kota Damansara</td>
</tr>
<tr>
<td>Programme</td>
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<td>Duration</td>
<td>Campus</td>
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</tbody>
</table>
| Master of Environmental Management Technology | SEGi University | • Bachelor’s degree in science or applied science  
• Bachelor’s degree in engineering  
• Bachelor’s degree in environment  
• Bachelor’s degree in management  
• Bachelor’s degree in economy  
• Other equivalent degrees in related subject areas that are recognised by SEGi UC  
• Other equivalent degrees that are recognised by Malaysian government | 1 year  
4 Months (Full time) | Kota Damansara |
| BEng (Hons) Automotive Engineering (3+0) | University of Sunderland, UK | • Pass a recognised Matriculation / Foundation Programme with a score of at least CGPA 2.00 and credit in Mathematics in the SPM; OR  
• Pass STPM with at least CGPA 2.00 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 | 3 years | Subang Jaya |
| BEng (Hons) Electronic & Electrical Engineering (3+0) | University of Sunderland, UK | • STPM / A-Level / SM3 or equivalent  
(2 principal passes in Maths & Physics) | 3 years | Kota Damansara  
Subang Jaya  
Penang |
| Bachelor of Engineering (Hons) Mechanical Engineering (3+0) | University of Sunderland, UK | • Pass Foundation in Science  
• STPM / A-Level – 2 Principal Passes  
(Maths & Physics)  
• UEC 5 Bs (Maths & Physics)  
• SAM / CPU – 60% | 3 years | Kota Damansara  
Subang Jaya  
Penang |
| BEng (Hons) Mechanical Engineering Dual Degree | SEGi University & University of Sunderland, UK | • 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) | 4 years | Kota Damansara |
<table>
<thead>
<tr>
<th>Programme</th>
<th>Awarding Institution</th>
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<th>Duration</th>
<th>Campus</th>
</tr>
</thead>
</table>
| BEng (Hons) Electronics & Electrical Engineering (Dual Degree) | SEGi University & University of Sunderland, UK | • 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 | 4 years | Kota Damansara |
| BEng (Hons) Civil Engineering (Dual Degree) | SEGi University & University of Greenwich, UK | • 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 | 4 years | Kota Damansara |
| Bachelor of Environmental Technology (Hons) | SEGi University | • STPM: 2 Principal passes [Must include Science subjects]  
• Pass Foundation in Science with minimum CGPA of 2.0  
• Pass Diploma in relevant field with minimum CGPA of 2.0  
• Any other equivalent qualification approved by MQA | 3 years | Kota Damansara |
| BSc (Hons) Quantity Surveying | SEGi University | • A-Level (2 principal passes including Maths)  
• STPM (2 principal passes with Grade C / grade point of 2.0 and above [including Maths])  
• UEC SM3 - 5Bs [including Maths]  
• South Australian Certificate of Education (SACE)  
2 Passes with Grade C [including Maths]  
• Canadian Pre-U (CPU) - 60% [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 Malaysian government | 3 years | Kota Damansara |
All diploma and degree programmes require students to take 4 general subjects (Mata Pelajaran Umum), as required by the Ministry of Education, Malaysia.

The following 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.
**PhD (ENGINEERING) BY RESEARCH**  
**SEGi UNIVERSITY**

The Doctor of Philosophy (Engineering) programme provides professionals in-depth knowledge of Engineering, thus shaping the ability to solve research and engineering problems effectively.

This doctorate programme keeps you updated with the latest developments in the field of engineering and cultivates research competitiveness to cater to societal needs. It also serves as a platform for innovation and creation.

With the guidance from our experienced academic team throughout the programme and well thought out curriculum, you will master far more advanced analytical thinking skills and be well prepared to take on new challenges relevant to the industry.

**Programme Modules**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Semester 1</th>
<th>Advanced Research Methods and Design</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Semester 2</td>
<td>Research Proposal and Seminar</td>
</tr>
<tr>
<td></td>
<td>Semester 3</td>
<td>Research and Thesis</td>
</tr>
</tbody>
</table>

| Year 2 | Research and Thesis |

| Year 3 | Research and Thesis |

**Career Opportunities**

A PhD graduate in engineering would have the opportunity to work in the industry as a full-fledged practicing engineer specialising in areas of his expertise from prior intensive and in-depth research conducted, and later on as a manager in supervising younger engineers. Alternatively, he can pursue an academic career in the university as a lecturer and researcher, in passing down knowledge and technology to the younger generation, as well as to extend research into new frontiers of engineering development.

**PhD (ENVIRONMENTAL SCIENCES) BY RESEARCH**  
**SEGi UNIVERSITY**

Our PhD in Management programme focus highly on an original contribution to academic literature or research in a specific discipline of business. It provides a thorough understanding of the theoretical underpinnings and their applications along with an ability to think systematically, while applying quantitative and qualitative techniques to business related problems.

We intend to train you to become highly skilled scholars in conducting research and teaching for careers, where intensive research skills and analytical capabilities are required.

Do you wish to obtain knowledge, skills and abilities at a master’s level with the ability to conduct independent research? Acquiring these traits are possible through formal courses, seminars, independent studies, examinations, written papers, workshops, presentations and the dissertation.

**Programme Modules**

<table>
<thead>
<tr>
<th>Year 1</th>
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<th>Advanced Research Methods and Design</th>
</tr>
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<td></td>
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<td>Research and Thesis</td>
</tr>
</tbody>
</table>

| Year 2 | Research and Thesis |

| Year 3 | Research and Thesis |

**Career Opportunities**

A PhD graduate in environmental sciences would have the opportunity to work in the industry as a full-fledged practicing environmental scientist specialising in areas of his expertise from prior intensive research conducted, and later on as a manager in supervising younger environmentalists. Alternatively, he can pursue an academic career in the university as a lecturer and researcher, in passing down knowledge and technology to the younger generation, as well as to extend research into new frontiers of environmental development and preservation.
MSc ENGINEERING MANAGEMENT
UNIVERSITY OF SUNDERLAND, UK

This postgraduate level programme equips you to be a leader in a technical team to deliver on time and on budget.

During the course of your studies, you will build on your technical background while adding business and management skills. These skills include project control, supply chain management, risk management and quality optimisation. You will also develop the soft skills of working with others and leading projects.

Your Master’s project will also involve a real-world project. It will include both a research and a practical element, and it is an opportunity to impress not only your academic assessors but also potential employers.

Programme Modules

<table>
<thead>
<tr>
<th>Module Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing People and Project Leadership</td>
</tr>
<tr>
<td>Project Risk and Quality Management</td>
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<tr>
<td>Research Skills and Academic Literacy</td>
</tr>
<tr>
<td>Decision Support for Management</td>
</tr>
<tr>
<td>Engineering Operation Management</td>
</tr>
<tr>
<td>Advanced Maintenance Practice</td>
</tr>
<tr>
<td>Project Management and Control</td>
</tr>
<tr>
<td>Project</td>
</tr>
</tbody>
</table>

Career Opportunities

A Master graduate in engineering management would have the opportunity to gain access to general management positions in the engineering sector. As a manager, he will be tasked in supervising younger engineers and technologists as well as the usage of facilities and resources in carrying out engineering project management works. Alternatively, he can pursue an academic career in the university as a lecturer and researcher, in passing down knowledge and technology to the younger generation, as well as to extend his research studies in pursuit of a higher degree.

MSc (ENGINEERING) BY RESEARCH
SEGI UNIVERSITY

The MSc (Engineering) by research programme prepares you with comprehensive knowledge in the research area of Engineering.

Upon completion of the programme, you are able to establish and conduct surveys or experiments, analyse data and present the results in a professional manner. Through this programme, we will cultivate research competitiveness in you, equipping you with the capacity for continuous learning and analysing contemporary issues.

Programme Modules

<table>
<thead>
<tr>
<th>Year Modules</th>
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</thead>
<tbody>
<tr>
<td>Semester 1</td>
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<tr>
<td>Semester 3</td>
</tr>
<tr>
<td>Research and Thesis</td>
</tr>
</tbody>
</table>

Career Opportunities

A Master graduate in engineering would have the opportunity to work in the industry as a full-fledged practicing engineer specialising in areas of his expertise from prior fundamental research conducted, and later on as a manager in supervising younger engineers. Alternatively, he can pursue an academic career in the university as a lecturer and researcher, in passing down knowledge and technology to the younger generation, as well as to extend his research studies in pursuit of a higher degree.
The programme aims to prepare you for a career in the design and management of converged enterprise networks and telecommunication systems.

The programme will allow you to develop the necessary skills needed to design and build a large multi-site network with a strong focus on the convergence of voice, video and data within the modern enterprise network.

Cisco Certified Networking Associate (CCNA)
Students may attend an additional specialist networking course that will prepare them for Cisco Systems CCNA professional Qualification.

Board of Engineers Malaysia (BEM) Recognition
Students with Degree in Electronic & Electrical Engineering who completed the Msc in Telecommunication would be able to register as a graduate member with Board of Engineers Malaysia.

Programme Modules

<table>
<thead>
<tr>
<th>Module Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadcasting System</td>
</tr>
<tr>
<td>Local and Wide Area Network</td>
</tr>
<tr>
<td>Research Skills and Academic Literacy</td>
</tr>
<tr>
<td>Digital Telephony</td>
</tr>
<tr>
<td>Wireless Telecommunication</td>
</tr>
<tr>
<td>Network Simulation</td>
</tr>
<tr>
<td>Advanced Network Security System</td>
</tr>
<tr>
<td>Project</td>
</tr>
</tbody>
</table>

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

HWANG CHIN SHERN

Career Opportunities

Plenty of job opportunities are available for graduates in the telephone industry. They could be employed as engineers / test engineers, software / application engineers, product managers, customer support staff, installers / repairers, power reactor operators, power distributors / dispatchers and many more. Cable and satellite networks, information and broadcasting sectors, railways or police wireless organisations, aerospace industry, telecommunication service providers, mobile phone service providers are some other areas that one could get a job. They can also find employment in this field as design development, production, quality assurance, sales, servicing.
Programme Modules

MASTER OF ENVIRONMENTAL MANAGEMENT TECHNOLOGY
SEGI UNIVERSITY

As technology advances, our mother earth is being depleted of its precious resources. Preserving the earth for the well-being of human kinds and other living organisms in the environment is crucial and mandatory. Environmental knowledge is undoubtedly an essential component in any kinds of development. This programme focuses on the ever growing demand for highly specialized and effectively trained managers and scientists to tackle significant environmental issues in today's natural environment, agro-environmental issues and land use functions. Graduates, professionals and specialists majoring in a compatible discipline and with background knowledge on environmental issues have the opportunity to expose themselves to various environmental assessment methods, environmental management and environmental technology in this programme.

The graduates will have to apply their critical thinking skills in this programme. Be it problem-solving, situational learning, classroom learning or hands-on training, all of the teaching-and-learning approaches in this programme aim at producing managers and scientists who will be able to tackle environmental problems and propose creative yet effective solution in their respective workplaces then.

Programme Modules

<table>
<thead>
<tr>
<th>Year 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Water Supply and Wastewater Treatment</td>
</tr>
<tr>
<td>- Principles of GIS and Applications</td>
</tr>
<tr>
<td>- Environmental Sampling and Data Analysis</td>
</tr>
<tr>
<td>- Environmental Economics</td>
</tr>
<tr>
<td>- Ecology and the Environment</td>
</tr>
<tr>
<td>- Solid Waste Management and Disposal</td>
</tr>
<tr>
<td>- Environmental Impact Assessment and Risk Analysis</td>
</tr>
<tr>
<td>- Environmental Policy, Planning and Management</td>
</tr>
<tr>
<td>- Environmental Project Management</td>
</tr>
<tr>
<td>- Environmental Pollution and Control</td>
</tr>
<tr>
<td>- Advanced Remote Sensing and Image Processing</td>
</tr>
<tr>
<td>- Research Methodology</td>
</tr>
<tr>
<td>- Environmental Ethics</td>
</tr>
<tr>
<td>- Environmental Protection, Laws and Regulations</td>
</tr>
<tr>
<td>- Advanced GIS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Research Project</td>
</tr>
</tbody>
</table>

Career Opportunities

This programme are vast and they vary depending on their area of interest. They can be employed by environmental consulting firms or any other industries which need expertise in environmental quality control and management. They can also be self-employed, providing consultation and environmental solutions to industries, research institutions as well as all levels of governmental agencies that need advice on environmental issues. This programme is also suitable for management staff who aims at leading their companies through the greening path. The graduates of this programme are well poised into employment.
**BEng (HONS) AUTOMOTIVE ENGINEERING (3+0)**

**UNIVERSITY OF SUNDERLAND, UK**

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, Chassis 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

### 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
- Thermofluid and Engine
- Steering and Suspension System
- Theory of Machines

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

"Although engineering is a tough programme and requires a lot of hard work, SEGi has made it bearable with well equipped laboratories, library and dedicated lecturers."

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**Career Opportunities**

This programme provides 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. The market for engineers in the field of automotive in Malaysia has grown rapidly due to the growth in the automotive sector. In order to support the development in the automotive industry, many automotive components companies have been set up. High performance vehicle sector has also found its way in Malaysia and is expected to grow tremendously.

UOS graduates in the field of Automotive Engineering have a wide career opportunity to take up positions as engineers and managers in the automotive industry either in Malaysia or overseas.
Get the skills and knowledge that enables you to influence the direction of electronic and electrical engineering, and make the world a better and more interesting place for future generations.

The University of Sunderland BEng (Hons) Electronic & Electrical (3+0) programme is designed to provide you with a wide range of engineering and management skills. This is achieved by working individually or as part of a team to solve technical problems and implement appropriate solutions. You will start by learning fundamental skills required to understand basic engineering principles. Then, the emphasis will be on a number of electronic & electrical subject areas.

Programme Modules

**Year 1**
- Electronic Principles
- Electrical Principles
- Design, Drawing and Practical Skills
- Applied Mechanics
- Manufacturing and Materials
- Engineering Applications of Information Technology
- Engineering Mathematics

**Year 2**
- Electronics
- Electrical Power Systems and Machines
- Measurement and Instrumentation
- Control
- Simulation
- Microprocessor Systems
- Industrial Studies
- Manufacturing Processes
- Engineering Mathematics and Statistics

**Year 3**
- Electrical Power
- Electronic Systems Design
- Manufacturing Systems Design
- Project Management Planning and Control
- SCADA and PLCs
- Final Year Project

“...The internship placement helped me to apply my practical and theoretical knowledge before I graduated. This exposure helped me to know what was needed in industry also quickly learning current systems and technical technologies being applied in the built environment and network with the corporate world.”

MANIMEGALAI LETCHUMANAN
BEng (HONS) MECHANICAL ENGINEERING (3+0)
UNIVERSITY OF SUNDERLAND, UK

The BEng (Hons) Mechanical Engineering is an ideal programme if you are interested in technology and its use in creative design. This provides you with the skills and knowledge to become a modern mechanical engineer.

Throughout the programme, you will encounter problems that need to be solved individually or as a group. You will need to design and construct new equipment for novel and challenging applications and tackle problems using the tools and computer systems available to today’s engineers.

As the programme progresses, you will also learn about management and the business context of engineering projects, thus gaining the confidence to tackle the varied and demanding work of an engineer.

Programme Modules

**Year 1**
- Electrical Principle
- Design, Drawing and Practical Skills
- Applied Mechanics
- Manufacturing and Materials
- Thermodynamics
- Engineering Applications of Information Technology
- Engineering Mathematics
- Programming Methodology

**Year 2**
- Engineering Mechanics
- Thermofluids & Engines
- Measurement and Instrumentation Simulation
- Computer Aided Engineering
- Design Methods & Application
- Industrial Studies
- Manufacturing Processes
- Numerical Analysis
- Engineers & Society

**Year 3**
- Engineering Dynamics & Strength of Materials
- Materials Selection
- Design
- Thermodynamics & Fluid Mechanics
- Project Management Planning and Control
- Manufacturing Systems Design
- Final Year Project

“...My internship at a Korean Construction Company in Kuala Lumpur has taught me discipline and attention to the little details in engineering. The experience has helped me get a better idea of what my future holds and I can’t wait to start working!...”

SITI SANIRA BINTI ANUA

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.
We developed the programme to produce graduates who are able to address both technological and societal challenges in the field of mechanical engineering.

In Year 1, the programme aims to consolidate mathematical and scientific knowledge and introducing the fundamentals of mechanical engineering. During their first year, you build a base-line of knowledge and skills, irrespective of academic backgrounds. Thus, examination results from this year do not contribute to their final grades.

Year 2 provides the fundamentals of mechanical engineering with an emphasis on application to real engineering components. The two mathematics modules during this year build the development of your essential skills, concentrated on modelling and computational aspects.

In Year 3, you get to undertake integrated project in design and research in the area of your interest while studying more advanced mechanical subjects.

In year 4, you undertake a final year project and choose from electives of your interest and non-mechanical subject areas like management and environmental issues, essential for a professional engineer in the modern world.
Programme Modules

Programme Modules

Year 1

- Engineering Mathematics I
- Circuits and Signals
- Electronic Devices
- Field Theory
- Instrumentation and Measurement Techniques
- Laboratory Investigations I
- Analogue Electronics I
- Digital Electronics I
- Electromagnetics
- Programming in C
- System Engineering
- Laboratory Investigations I

Year 2

- Engineering Mathematics II
- Engineering Statistics
- Analogue Electronics II
- Digital Electronics II
- Communication System I
- Laboratory Investigations III
- Numerical Analysis
- Control Systems
- Electrical Power
- Business Skills for Engineers
- Microprocessor
- Laboratory Investigations IV

Year 3

- Engineers and Society
- Computer Architecture
- Communication System II
- Environmental Management and Technology
- Research Methodology
- Electrical Machines
- Project Management, Planning and Control
- Business Ethics
- Real-Time Application Engineering
- Research Project
  (major in Electronic or Electrical Engineering)

Year 4

- Elective Subject in Power Electronics and Drives
  OR Advanced Electrical Power
- Quality Operation and Reliability Engineering
- PLC and SCADA
- Final Year Project I
- Elective Subject in Electronics System and VLSI Design
- Final Year Project II
- Industrial Training

Career Opportunities

As graduates of the BEng (Hons) Electronic & Electrical Engineering programme, you will have a wide choice of career in sectors including Automotive Industry, Aerospace, Power Generation and Communications. Within these various industries, students can contribute to design, project management, and even sales and marketing.
Programme Modules

BACHELOR OF ENGINEERING (HONS) CIVIL ENGINEERING
SEGI UNIVERSITY & UNIVERSITY OF GREENWICH, UK

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) 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 Modules

Year 1
- Engineering Mathematics I
- Statics and Dynamics
- Construction Materials
- Engineering Drawing
- Soil Mechanics I
- Engineering Mathematics II
- Programming Methodology & Problem Solving
- Fluid Mechanics
- Mechanics of Materials
- Engineering Survey

Year 2
- Construction Technology
- Engineering Statistics
- Structural Analysis I
- Hydraulics & Hydrology I
- Soil Mechanics II
- Construction Project Management
- Numerical Analysis
- Hydraulics & Hydrology II
- Conceptual Design
- Geotechnics

Year 3
- Design of Reinforced Concrete Structures I
- Highway Engineering
- Structural Analysis II
- Water Resources & Supply Engineering
- Design of Steel and Timber Structures
- Design of Reinforced Concrete Structures II
- Engineering Application and Analysis
- Engineers & Society
- Foundation Design
- Integrated Project
- Industrial Training

Year 4
- Environmental Management & Technology
- Entrepreneurship Development
- Traffic Engineering
- Project & Research Methodology
- Elective I
- Elective II
- Project

“The BEng (Hons) Civil Engineering programme has given me great opportunity to pursue my career as a professional in the built environment industry. With well-balanced program modules between the theory and technical aspect required by civil engineers I am well equipped to make my mark on the world.”

ALAN LAI POH HENG
Environment is about everything that surrounds you and me, and thus environmental knowledge is an essential component in any kind of developments. This programme is developed to produce graduates who are literate, competent in all environmental aspects while being able to develop creative solutions for environmental problems.

Students will be introduced to a wide range of environmental issues and threats the world is facing now. With the expanding needs of relevant expertise in rectifying the deteriorating environmental conditions today, this program exposes students to the latest environmental technologies on wastewater treatment, air pollution control and solid waste treatment, which will enable the students to contribute and work towards a greener environment.

Environmental sciences and management are also incorporated in this program, equipping the students with necessary scientific knowledge and managerial skill to execute environmental policies and plans in their future working places.

**Programme Modules**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
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</thead>
<tbody>
<tr>
<td>Introduction to Environment</td>
<td>Environmental Sampling Instrumentation and Analysis II</td>
<td>Environmental System Modeling</td>
</tr>
<tr>
<td>Numerical Methods and Statistics for</td>
<td>Environmental Management and Technology</td>
<td>Solid Waste Management Technology</td>
</tr>
<tr>
<td>Environmental Scientists and Technologists</td>
<td>Ecotoxicology</td>
<td>Wastewater Treatment Technology</td>
</tr>
<tr>
<td>Principles of Environmental Biology</td>
<td>Environmental Geographical Information</td>
<td>Final Year Project I</td>
</tr>
<tr>
<td>Principles of Environmental Physics</td>
<td>System</td>
<td>Business Ethics and Corporate Responsibility</td>
</tr>
<tr>
<td>Population and Community Health</td>
<td>Hydrology</td>
<td>Environmental Law and Policy</td>
</tr>
<tr>
<td>Social Studies and Ethics</td>
<td>Industrial Training</td>
<td>Hazardous Waste Management Technology</td>
</tr>
<tr>
<td>Bahasa Kebangsaan</td>
<td>Project Management and Planning</td>
<td>Environmental Remote Sensing</td>
</tr>
<tr>
<td>Malaysian Studies</td>
<td>Environmental Impact Assessment</td>
<td>Elective I</td>
</tr>
<tr>
<td>Islamic Studies/ Moral Studies</td>
<td>Water Quality Management Technology</td>
<td>Elective II</td>
</tr>
<tr>
<td>Principles of Environmental Chemistry</td>
<td>Air Pollution Control Technology</td>
<td>Final Year Project</td>
</tr>
<tr>
<td>Ecology and Ecosystem</td>
<td>Hydrogeology</td>
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<tr>
<td>Environmental Sampling Instrumentation and Analysis I</td>
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<tr>
<td>Introduction to Marine Sciences</td>
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<tr>
<td>Energy and Environment</td>
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<tr>
<td>Air Quality and Pollution</td>
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</tbody>
</table>

Career Opportunities

This programme is vast and they vary depending on their area of interest. They can be employed by environmental consulting firms or any other industries which need expertise in environmental quality control and management. They can also be self-employed, providing consultation and environmental solutions to industries, research institutions as well as all levels of governmental agencies that need advice on environmental issues.

Graduates of BET (Honours) are well poised to transition directly into employment, contributing to the industries and society.
**BSc (HONS) QUANTITY SURVEYING**

**SEGi UNIVERSITY**

With the BSc (Hons) Quantity Surveying programme, we aim 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.

Understanding the roles of a Quantity Surveyor requires a combination of technical, economic, legal and managerial skills in every stage of the construction and development process. This stretches from the project brief issued to the lead consultant through all the design and planning stages to the construction, completion, occupation and maintenance of the facilities.

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.

**Programme Modules**

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

**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 Contract Administration
- Building Economics
- 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
- Dissertation I
- Academic Research
- Integrated Project
- Development Economics
- Value Engineering and Management
- Dissertation II
- Project Financial Management
- Industrial Training (6 months)

“The dedicated lecturers at SEGi have provided me guidance all throughout my journey from Diploma to Degree. The qualification I obtained has served as a key to open doors of career opportunities and I can fully apply the skills I learned in classrooms to the real world. Thanks to SEGi, I am excited to unleash my full potentials in the engineering world.”

**SATHESHKUMAR**

**Career Opportunities**
Quantity Surveyor, Contract and Cost Administrator, Property and Commercial Executive, Procurement Advisor, Contract Executive / Project Executive.

[PT/BFY/UN/126/6/2021(3/1/18) KLD CAMPUS]
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 & beverage, materials & design.
Programme Modules

DIPLOMA IN ELECTRONIC & ELECTRICAL ENGINEERING

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

Communication
- Electromagnetic Field
- Communication Systems

Soft Skills
- English
- Engineering Communication and Case Studies

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

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

Control
- Instrumentation and Measurement
- Control Systems
- Industrial Electronics

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. You can also consider upgrading your knowledge and skills by articulating into a range of degree programmes and, depending on units/electives completed during your studies, you may be eligible to apply for advanced standing.
# Diploma in Mechanical Engineering

The mechanical engineering industry comprises 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/or fieldwork skills.

## Programme Modules

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

### Thermofluid and Heat
- Fluid Mechanics
- Thermodynamics
- Heat Transfer

### Manufacturing
- Manufacturing Processes
- Industrial Management

### Soft Skills
- Engineering Communication and Case Studies

### Basics of Mechanical Engineering
- Programming Methodology and Problem Solving
- Engineering Mathematics
- Principles of Electrical and Electronic Engineering
- Engineering Mechanics
- Dynamics
- Mechanical Engineering Practice

### Design
- Engineering Drawing
- Design of Machine Element

### Materials
- Material Science
- Mechanics of Materials

## Career Opportunities

As graduates of the Diploma in Mechanical Engineering, you will obtain a solid foundation in mechanical engineering and possess excellent prospects for employment in a wide range of job roles. Possible job titles relevant to this qualification include: CAD Application Engineer, Trainee Engineer, Trainee Design Engineer, Mechanical, Design Engineer, Draughts Person and Structural Engineer. You can consider upgrading your knowledge and skills by articulating into a range of degree programmes and, depending on units/electives completed during your studies, you may be eligible to apply for advanced standing.
## Foundation in Science

**SEGi University & SEGi College**

The Foundation in Science programme is designed to equip students with the knowledge and skills needed to meet the demands of undergraduate study and bridge the transition from secondary studies to a university degree in a variety of science and technology related fields. Upon completion of this one-year science-oriented foundation programme, students are guaranteed entry into science and technology degree programmes from top-notch universities in UK offered in partnership with SEGi.

### Programme Modules

<table>
<thead>
<tr>
<th>Semester 1</th>
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</tr>
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<tr>
<td>Mathematics 1</td>
<td>Mathematics 2</td>
<td>Information Technology 1</td>
</tr>
<tr>
<td>Physics 1</td>
<td>Physics 2</td>
<td>Information Technology 2</td>
</tr>
<tr>
<td>Chemistry 1</td>
<td>Chemistry 2</td>
<td></td>
</tr>
</tbody>
</table>

“Studying in SEGi is the best choice I’ve ever made. There are many financial assistance options to choose from and I am worry-free while studying!”

CHEW SHO YIN

### Career Opportunities

This qualification is specially designed for students with SPM, O-Level or equivalent qualifications and who have decided to pursue a career in science or technology. Upon successful completion of the SEGi Foundation in Science programme, students can venture into a range of science degree programmes and, 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 2012/2013
(SEGi College Kuala Lumpur 6 Star Rating: Social Sciences, Business and Law; Arts and Humanities; Science, Mathematics and Computing; Services)

MyQUEST 2012/2013
(SEGi College Subang Jaya 6 Star Rating: International Students Readiness Rating; Services)

SEGi University
Kota Damansara
(DU031-B)
TOLL FREE
1800 88 7344

SEGi College
Kuala Lumpur
(W4P0115)
TOLL FREE
1800 88 8028

SEGi College
Subang Jaya
(B4P0031)
TOLL FREE
1800 88 8622

SEGi College
Kota Damansara
(DK250-01W)
TELEPHONE
603 6145 5888

SEGi College
Penang
(187620-W)
TELEPHONE
604 263 3888

SEGi College
Sarawak
(IPTS/SV.1031/42/98)
TOLL FREE
1300 88 7344

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