

ENGINEERING & THE BUILT ENVIRONMENT



1st
Malaysian University
that earned 5★ for Prioritizing
Society's Needs in Malaysia
- by QS Stars



SEGi
University



INTRODUCTION TO SEGi UNIVERSITY

SEGi was established in 1977 as Systematic College in the heart of Kuala Lumpur offering professional qualifications. Since its founding four decades ago, SEGi has undergone significant growth, strengthening the quality of its wide range of programmes from foundation to doctorate level.

It is one of the most established private higher education institutions in Malaysia with its flagship campus located in Kota Damansara and four other campuses are in Subang Jaya, Kuala Lumpur, Penang, and Kuching. Currently, SEGi has a population of 20,000 local and international students across its campuses.

SEGi is recognised as "The first Malaysian University that earned 5 Stars for Prioritizing Society's Needs in Malaysia" by QS Stars, an international evaluation system for universities based on auditing.



DISCOVER THE ENGINEER IN YOU

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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AT A GLANCE

GLOBAL RECOGNITION

- Double Awards from Top 3.3% of Universities Worldwide (The Centre for World University Rankings 2017 (CWUR) University of Central Lancashire (UCLan)
- MQA Fully-Accredited Programmes
- 2017 QS Overall 3-star rating with 5-star rating in teaching, facilities, social responsibility, and inclusiveness

SCHOLARSHIPS

- 1st Malaysian University that earned 5 Stars for Prioritizing Society's Needs in Malaysia (by QS Stars)
- Over RM100 million worth of Group scholarships awarded over the past 41 years
- QS 5 Stars rated for inclusiveness and social responsibility

EXCELLENT TEACHING, LEARNING & RESEARCH

- QS 5 Stars Rated for Excellence in Teaching
- QS 5 Stars Rated for Facilities
- SETARA, 2017 scored above medium of 83 in the category of Teaching and Learning
- Independent students' 2017 evaluation rating: more than 95% of students rated our lecturers as excellence in teaching
- Student to academic staff ratio 21:1, based on SETARA (2017)
- Research-led environment

GLOBALLY RECOGNISED,
DISTINCTIVELY SEGi.

OUR 6 COMPETITIVE ADVANTAGES



SKILLS ENRICHMENT & SUPPORT

- More than 100 SEGi Enrichment Programmes in the areas of leadership, communication, and grooming skills (among others) to enhance students' learning experience
- Academic Skills Unit to assist students in academic writing and effective study, research techniques, time management, academic integrity, and exam preparation
- Mentor-Mentee system to provide guidance to students on academic matters and to foster a close and constructive professional relationship between students and lecturers
- Technology-supported learning using the Blackboard learning management system.

STUDENT SATISFACTION

- 80% of students are willing to recommend their friends and family to study with us

INDUSTRY DRIVEN GRADUATES

- 2017 SETARA Graduate Employability 85%



OUR ACCOMPLISHMENTS AND ACCOLADES

SEGi University & Colleges is at the forefront of educational excellence to help our students realise 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

— THE PEOPLE'S CHOICE —

SILVER

2013 - 2015

(Education & Learning)



PUTRA
BRAND AWARDS

— THE PEOPLE'S CHOICE —

BRONZE

2012, 2016 - 2018

(Education & Learning)

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.



EDUCATION – MALAYSIA
2014 – 2015

**Education – Malaysia
World Branding Award**



**Outstanding
Innovation Award 2014**



**Reader's Digest
Trusted Brand 2013 - 2015**
(Services, Private University/College)

■ **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)

WORLD RENOWNED UNIVERSITY PARTNERS



University of Central Lancashire

The University of Central Lancashire is one of the largest universities in the UK which hosts about 25,000 students. This public university, located in Preston, Lancashire, England was founded as the Institution for the Diffusion of Knowledge in 1828 and became a university in 1992. Imbued with a celestial-sounding motto, 'Ex solo ad solem', which translates 'From the Earth to the Sun', the vastness of the university's portfolio includes over 400 undergraduate programmes and 200 postgraduate courses. Hailed for its high student satisfaction in the recent international Student Barometer survey, its impressive reputation as a regional economy powerhouse testifies to over 1,000 students and graduates who have started a business or embarked on self-employment.



Cardiff University

Cardiff University first opened its door in 1883 and has undergone tremendous growth to become one of Britain's leading research universities. Today, it is the 8th largest university in the UK and is a member of the Russell Group, a group of 24 leading UK research intensive universities.

The University has a leading engineering school, conducting internationally renowned research alongside teaching that places students at the centre of the learning experience. In the latest Research Excellence Framework (REF) 2014, the school of engineering was ranked 1st in the UK for Civil Engineering and 7th in General Engineering including the Mechanical and Electrical and Electronic Engineering disciplines.



Swansea University Prifysgol Abertawe

Swansea University

Founded in 1920, Swansea is a research-led university and was recognised as the 26th research-intensive university in the UK according to the Research Excellence Framework (REF) 2014. The University also ranked 22nd in the UK for impact in REF 2014, outperforming many Russell Group universities.

Its College of Engineering has strong links with the industry and it is fully equipped with outstanding facilities. The Guardian University Guide 2018 ranks its engineering as 9th best in the UK while its civil engineering department has been ranked in the world top 200 by QS World University Rankings and Shanghai Global Rankings.

INTERNATIONAL RECOGNITION BY THE **WASHINGTON ACCORD**

The engineering degree programmes offered by SEGi University are fully accredited by the Board of Engineers Malaysia (BEM) which is a signatory to the Washington Accord. The BEM is the official regulatory body authorised to determine recognition of engineering degree programmes in Malaysia.



The Washington Accord is an international accreditation agreement for professional engineering academic degrees between the bodies responsible for accreditation in its signatory countries. Established in 1989, the full signatories as of 2017 are Australia, Canada, Taiwan, Pakistan, China, Hong Kong, India, Ireland, Japan, Korea, Malaysia, New Zealand, Russia, Singapore, South Africa, Sri Lanka, Turkey, the United Kingdom, the Philippines, and the United States.



As Malaysia is a signatory of the Washington Accord, it makes SEGi engineering graduates more employable as they can expand career opportunities in the countries under the signatories. Graduates can also become a professional or chartered engineer or further studies.

Recognition by the Washington Accord is of utmost importance to the engineering education in Malaysia and SEGi as graduates are considered to have met international academic standards to practice engineering at an international level.



WE PRIORITISE YOUR NEEDS

SEGi CONNECT!

(Located at 1st and 2nd Floor)

We make your exciting experience of stepping into the next chapter of your life as smooth and memorable as possible! From the moment you come in to SEGi for your registration, we will be there to guide you on the whole process. We are with you even before you enter class, and we continue to be with you throughout your studies. We, your first SEGi friends, will be in contact continually throughout your studies, until we know you will be fine on your own in our campus.

ACADEMIC LEARNING SUPPORT

(Located At 2nd Floor)

Our Academic Skills Unit (ASU) was established to provide learning support and academic enhancement services for students, as part of their post-classroom learning experience. Our services include:

- assignment-writing
- thesis-construction
- language proficiency
- research brain-storming studying skills

EMPLOYMENT READINESS PROGRAMME

(By Student Affairs Department)

We provide Pre-Internship and Pre-employment Workshops to instil Employment Values as You Venture From Academic to Work Life.

Our in-house "soft skills" training will prepare you for internship placement and employment upon graduation.

During Your Studies

Before You Graduate

GLOBAL INDUSTRY EXPOSURE

(Your Faculty)

- We enrich your learning experience by exposing you to local and global industry practices.
- We strategically network with industry leaders to foster long-term, multi-dimensional relationships.
- We apply academic expertise to generate socially relevant and high impact research activities with industry and community stakeholders.

STRONG GLOBAL INDUSTRY LINKAGES

(Career Office at 2nd Floor)

- With the opportunity to join more than 1000 companies worldwide
- Career Fair within campus just for you.

MENTOR MENTEE SYSTEM

(Your Lecturers)

The learning culture in higher education is very different whereby intellectual discussions happen between lecturers and students rather than the conventional spoon-feeding of information. Students are guided to be independent in their learning at SEGi University. The Mentor-Mentee programme at SEGi University is to help students fit into this new culture as well as help those who may need more guidance academically.

SEGi ENRICHMENT PROGRAMME

(Every Wednesday Afternoon)

SEGi ENRICHMENT PROGRAMME addresses the major reasons for unemployment by providing opportunities for students to hone their soft skills through more than 100 structured and specially designed Seminars, Workshops, Conferences, Symposiums and training sessions that make our students industry-ready! These are developed based on industry and professional bodies' feedback on the requirements of a fresh graduate.

**MODERN CHEMICAL
ENGINEERING LABS**

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

**ACCREDITED
PROGRAMMES**

Programmes accredited with MOHE, MQA, and related professional board e.g. BEM/EAC, BQSM, LAM, etc.

**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.

**INDUSTRIAL
PARTNERSHIP**

Wide range of collaboration with industrial partnership e.g. Advancecon, Cidb, Daikin, Bauer, Top Glove, Bahru Stainless, etc.

**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.

TOP-NOTCH RESOURCES

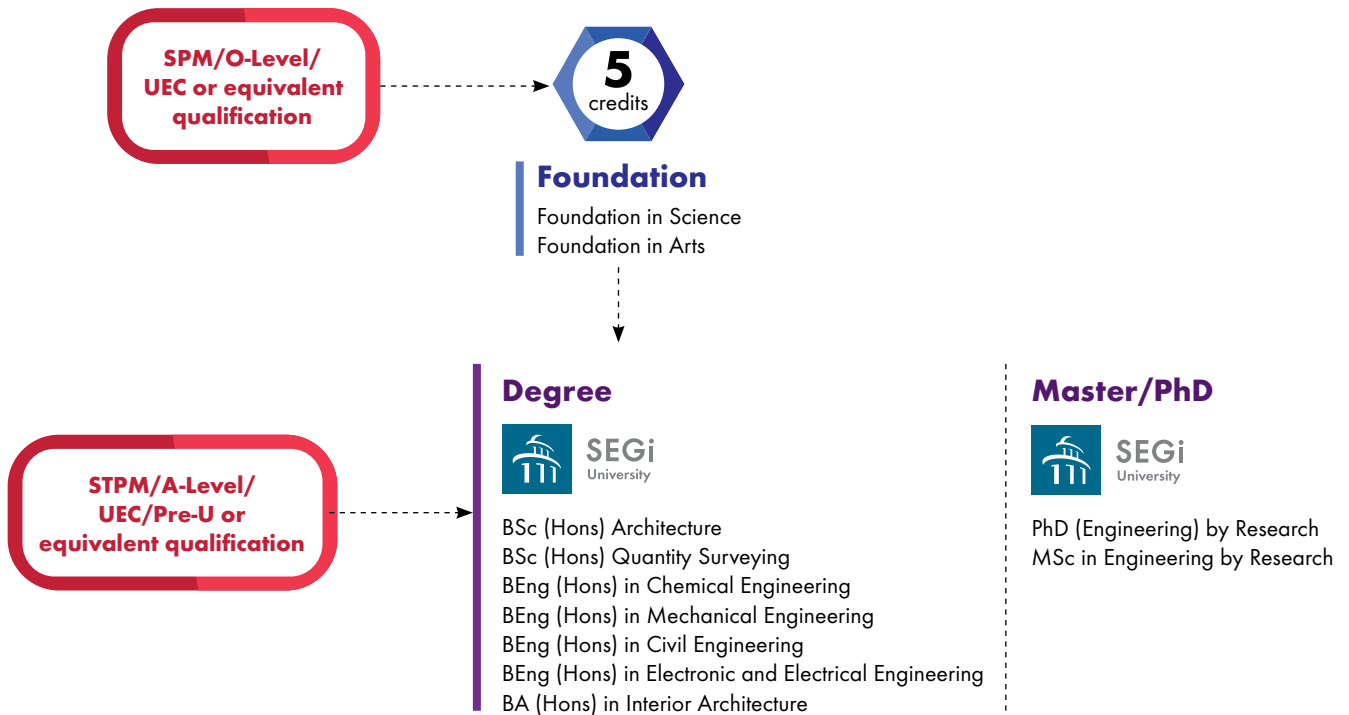
FOR A QUALITY LEARNING EXPERIENCE

**HIGH
EMPLOYABILITY**







Our faculty sees a consistent high rate of employability upon graduation.









STUDY ROUTE






PROGRAMME MATRIX

 Programme	 Awarding Institution	 Entry Requirements
BEng (Hons) in Mechanical Engineering	SEGi University and University of Central Lancashire, UK Single Degree  Double Degree 	<ul style="list-style-type: none"> • Diploma recognised by the Malaysian government • 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)
BEng (Hons) in Civil Engineering		<ul style="list-style-type: none"> • 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

 Programme	 Awarding Institution	 Entry Requirements
BEng (Hons) in Electronic & Electrical Engineering	SEGi University and University of Central Lancashire, UK	<ul style="list-style-type: none"> • A-Level - 2 passes with Grade C and above (Mathematics & Physics). • STPM - 2 passes with Grade C and above (Mathematics & Physics). • UEC - 5Bs (include Mathematics & Physics). • South Australian Matriculation (SAM) - Passes with TER 60%. • Canadian Pre-U (CPU) - Passes with 60% and above (Mathematics & Physics). • Foundation in Science - SEGi; Foundation (in relevant field) from IHL recognised by Malaysian Government - CGPA 2.00 or Pass • Diploma from IHL recognised by Malaysian Government - CGPA 2.00 or Pass • New South Wales Higher School Certificate - 2 passes with Band 3 and above (Mathematics & Physics). • South Australian Certificate of Education - 2 passes with Grade C and above (SACE) (Mathematics & Physics). • Ontario Secondary School Diploma (OSSO) - Passes with 60% and above (Mathematics & Physics). • International Baccalaureate Diploma - Passes with minimum 24 and above • Matriculation-Ministry of Education Malaysia - CGPA 2.00 or Pass • Other equivalent qualification recognised by the Malaysia Government - CGPA 2.00 or Pass • Other equivalent foreign qualification (Pre-U/Year 12) recognised by the Malaysian government
BEng (Hons) in Chemical Engineering	Single Degree  Double Degree  	<ul style="list-style-type: none"> • Passed STPM in 3 subjects including Maths & Physics or Chemistry or Biology • Passed A-Level in 3 subjects with UCAS point of 240 including Maths & Physics or Chemistry or Biology • Passed Diploma in Chemical Engineering or equivalent (Recognised by Malaysia Government) with CGPA 2.0 • Passed Foundation Studies in Sciences or Engineering with CGPA 2.0 and passed Maths & Physics or Chemistry or Biology • Misc Equivalent Centre recognised by Malaysia Government • Passed UEC with 5Bs including Maths & Physics or Chemistry or Biology • Passed South Australian Matriculation (SAM), (60% including Maths & Physics or Chemistry or Biology) • Passed Canadian Pre-University Studies (CPU), 60% over all including Advanced Functions, Calculus & Vector and Physics or Chemistry or Biology • Passed Matriculation in relevant area (Ministry of Education Malaysia), Pass with minimum CGPA of 2.00 • Passed Northern Territory Certificate of Education (SACE) with Grade C including Maths & Physics or Chemistry or Biology • Passed New South Wales Higher Certificate (with ATAR 70) and Grade C including Maths & Physics or Chemistry or Biology • Passed Western Australia Certificate of Education (WACE) and Grade C including Maths & Physics or Chemistry or Biology • Passed Northern Territory Certificate of Education (NTCE) and Grade C including Maths & Physics or Chemistry or Biology • Passed Ontario Secondary School Diploma, 60% over all including Advanced Functions, Calculus & Vector and Physics or Chemistry or Biology • Passed International Baccalaureate Diploma, with score 24/45 including 5/7 in Maths and Physics or Chemistry or Biology • Other equivalent qualification recognised by Malaysia Government, CGPA 2.00 or Pass
BSc (Hons) Quantity Surveying	SEGi University	<ul style="list-style-type: none"> • 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 2.50 • A-Level - with a minimum of 3 principle passes • Other equivalent foreign qualification (Pre-U/Year 12) recognised by Malaysian government

STUDY ROUTE & PROGRAMME MATRIX

 Programme	 Awarding Institution	 Entry Requirements
BSc (Hons) Architecture	SEGi University	<ul style="list-style-type: none"> • A-Level (2 principal passes including English, Maths, Science or Art) • STPM (2 principal passes with Grade C/grade point of 2.0 with credit in Bahasa Malaysia & Mathematic in SPM) • 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
BA (Hons) in Interior Architecture	SEGi University	<ul style="list-style-type: none"> • Passed STPM or equivalent, minimum Grade C (2.00) in 2 subjects; or • Passed A-Level in 2 subjects; or • Passed Unified Examinations Certificate (UEC) at least B in 5 subjects; or • Passed Foundation Studies in related field by Higher Institutions Provider recognised by Malaysia Government (at least CGPA 2.00); or • Passed Diploma in related field by Higher Institutions Provider recognised by Malaysia Government (atleast CGPA 2.00); or • Other Equivalent qualification recognised by Malaysia Government And Passed in Art/Technical Drawing subject in SPM or equivalent; or • Passed portfolio assessment interview for those who failed or did not take Art subject
Foundation in Science	SEGi University & SEGi College	<ul style="list-style-type: none"> • Passed SPM/'O' Level or equivalent (Minimum 5 credits including Mathematics and TWO Science subjects)
Foundation in Arts	SEGi University & SEGi College	<ul style="list-style-type: none"> • Passed SPM/'O' Level or equivalent (Minimum 5 credits)

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.



BENG (HONS) IN MECHANICAL ENGINEERING

SEGi UNIVERSITY & UNIVERSITY OF CENTRAL LANCASHIRE, UK

The BEng (Hons) in Mechanical Engineering at SEGi University is a broad industrial-driven degree programme, which equips students 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 students 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



Year 2 students with CGPA 3.30 can be articulated into Year 3 MEng Mechanical Engineering in Cardiff University.



Year 2 students with CGPA 3.30 can be articulated into Year 3 MEng Mechanical Engineering in University of Central Lancashire.

Double Degree



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++

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

MPU

- TITAS (Local students)/Malaysian Studies 3 (International students)
- Hubungan Etnik (Local students)/B. Melayu Komunikasi 2 (International students)
- Personal Health Management
- Effective Listening/Bahasa Malaysia A (Local students without credit in BM in SPM)
- Pengurusan Ko-kurikulum

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**

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.

BENG (HONS) IN ELECTRONIC & ELECTRICAL ENGINEERING

SEGi UNIVERSITY

The B.Eng. (Hons) in Electronic and Electrical Engineering programme incorporates elements adopted from both academia and professional entities. The industry-driven programme delivers strong engineering fundamentals through technical involvement and soft skills development to empower students to produce contemporary and creative solutions to address complex engineering challenges.

Students will undertake an integrated Design Project before embarking the Final Year Project, a real-world industrial-based design project to enhance engineering design and resolving skills. Also, students is given options to select elective courses in Year 4, based on area of their interest.

Electrical & Electronic Engineering

Concerned mainly with the power generation, transmission, protection, distribution, and the design of electrical systems.

The learning of electronic design system that involves fields of communication, computer, signal processing, and other related electronic areas.

The Programme Educational Objectives (PEO) are:

- graduates are employed to engage in electrical & electronic engineering works
- graduates established a career progression in electrical & electronic or related industries
- graduates engaged in continuous personal development towards Professional qualifications



Year 2 students with a minimum grade of 60% and IELTS 6.0 (minimum of 5.5 in each component) can be articulated into Year 3 MEng Electronic & Electrical Engineering in Swansea University. Successful applicant will be awarded £2,000 fee abatement for the 1st year of study at Swansea University.



Alternatively, Year 2 students with CGPA 3.30 can also be articulated into Year 3 MEng Electronic & Electrical Engineering in Cardiff University.



Year 2 students with CGPA 3.30 can be articulated into Year 3 MEng Electronic & Electrical Engineering in University of Central Lancashire.

Programme Modules

Year 1	Year 2	MPU
<ul style="list-style-type: none"> ■ Engineering Mathematics I ■ Circuits and Signals I ■ Communication System Digital Electronic I ■ Engineering Drawing ■ Laboratory Investigations I ■ Engineering Mathematics II ■ Circuits and Signals II ■ Analogue Electronics I ■ Programming in C++ ■ Laboratory Investigations II 	<ul style="list-style-type: none"> ■ Engineering Statistics ■ Digital Electronics II ■ Analogue Electronics II ■ Electromagnetic Fields & Waves ■ Measurement and Instrumentation ■ Laboratory Investigations III ■ Computational and Numerical Analysis ■ Control Systems ■ Power Electronics ■ Microprocessor ■ Laboratory Investigations IV 	<ul style="list-style-type: none"> ■ TITAS (Local students)/Malaysian Studies (International students) ■ Hubungan Etnik (Local students)/B. Melayu Komunikasi 2 (International students) ■ Effective Listening ■ Pengurusan Ko-kurikulum ■ Entrepreneurship Development ■ Personal Health Management
Year 3	Year 4	
<ul style="list-style-type: none"> ■ Electrical Power Generation ■ Computer Architecture ■ Environmental Management & Technology ■ Electrical Machines & Drives ■ Laboratory Investigations V ■ Integrated Design Project I ■ Embedded System ■ Power System Analysis ■ Integrated Design Project II ■ Project Management, Planning and Control ■ Digital Signal Processing ■ Industrial Training 	<ul style="list-style-type: none"> ■ Final Year Project I & II ■ Electrical Energy Utilisation ■ Engineers & Society ■ Electronics Drives & Application ■ Elective I ■ High Voltage Engineering ■ Electronics Systems and VLSI Design ■ Elective II 	

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, and Renewable Energy.

BENG (HONS) IN CIVIL ENGINEERING

SEGi UNIVERSITY & UNIVERSITY OF CENTRAL LANCASHIRE, 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) 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.

Our Programme Educational Objectives (PEO) 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

Double Degree



Year 2 students with CGPA 3.30 can be articulated into
Year 3 MEng Civil Engineering in Cardiff University.



Year 2 students with CGPA 3.30 can be articulated into
Year 3 MEng Civil Engineering in University of Central Lancashire.

Programme Modules

Year 1

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

Year 2

- Construction Technology
- Engineering Statistics
- Structural Analysis I
- Hydraulics
- Soil Mechanics II
- Numerical Analysis
- Construction Project Management
- Hydrology

MPU

- TITAS (Local students)/Malaysian Studies (International students)
- Hubungan Etnik (Local students)/B. Melayu Komunikasi 2 (International students)
- Effective Listening
- Pengurusan Ko-kurikulum
- Personal Health Management

Year 3

- Design of Reinforced Concrete Structures I
- Highway Engineering
- Structural Analysis II
- Water Resources & Supply Engineering
- Design of Steel and Timber Structures
- Estimating & Costing of Buildings
- Design of Reinforced Concrete Structures II
- Engineering Application and Analysis
- Engineers & Society
- Geotechnics
- Conceptual Design
- Industrial Training

Year 4

- Environmental Management & Technology
- Entrepreneurship Development
- Foundation Design
- Integrated Project
- Project & Research Methods
- Traffic & Transportation Engineering
- Elective I & Elective II:
 - Water and Environmental Management OR
 - Design of Earth Retaining Structures OR
 - Advanced Reinforced Concrete Design OR
 - Concrete Technology OR
 - Design of Steel Structures II

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.

BENG (HONS) IN CHEMICAL ENGINEERING

SEG: UNIVERSITY & UNIVERSITY OF CENTRAL LANCASHIRE, UK

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, 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 fields derived from chemical engineering include material science, polymer engineering, biomedical engineering, membrane technology, and water and wastewater treatment industry.

The programmes objectives are to produce graduates who are able to:

- practise as engineer in industries related to chemical engineering globally
- pursue postgraduate studies
- register with the Board of Engineers Malaysia and subsequently become professional engineer in chemical engineering

Double Degree



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
- Chemical Engineering Laboratory IV
- Project Year II

MPU

- TITAS (Local students)/Malaysian Studies 3 (International students)
- Hubungan Etnik (Local students)/B. Melayu Komunikasi 2 (International students)
- Effective Listening
- Pengurusan Ko-kurikulum
- Personal Health Management

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
- Computational and Numerical Analysis
- Industrial Training
- Project Year III
- Engineers and Society

Year 4

- Process and Plant Design
- Transport Phenomena
- Entrepreneurship Development
- Design Project I
- Research Methodology
- Fuel and Energy Utilization
- 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, career opportunities includes: Process engineer, Chemical and allied products, environmental engineering, contracting, oil and gas, consultancy, pharmaceutical, energy, water, food and beverage, materials, and design.

** Elective courses

BSC (HONS) QUANTITY SURVEYING

SEGi UNIVERSITY

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 who are able to:

- 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

MPU

- TITAS (Local students)/Malaysian Studies (International students)
- Hubungan Etnik (Local students)/B. Melayu Komunikasi 2 (International students)
- Effective Listening
- Pengurusan Ko-kurikulum
- Personal Health Management

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.

BSC (HONS) ARCHITECTURE

The BSc (Hons) Architecture is 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 BSc (Hons) 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

Year 1

- Design Studio 1
- Architectural Comm Graphics
- Building Materials
- Architecture History 1
- Environmental Science 1

- Design Studio 2
- Basic CAD
- Architecture History 2
- Building Construction 1
- Structure 1

Year 2

- Design Studio 3
- Building Construction 2
- Architecture Theory Philosophy
- Building Services 1
- Environmental Science 2

- Design Studio 4
- Advanced CAD
- Asian Architecture
- Structure 2
- Working Drawing

Year 3

- Design Studio 5
- Building Services 2
- Sustainable Building Design
- Measured Drawing

- Industrial Training

- Design Studio 6
- Professional Studies
- Construction Project Management

MPU

- TITAS (Local students)/
Malaysian Studies (International students)
- Hubungan Etnik (Local students)/B. Melayu
Komunikasi 2 (International students)
- Business + Professional Ethics
- Effective Listening
- Pengurusan Ko-kurikulum

Career Opportunities

Assistant Architect, CAD Designer, Site Supervisor, Academic Researcher, 3D Visual Artist, Interior Designer, Landscape Designer, Creative Designer.

BA (HONS) IN INTERIOR ARCHITECTURE

SEGi UNIVERSITY

Interest in interior architecture has grown rapidly in recent years. New materials, technologies, and techniques are giving interior architects exciting new ways to explore the way spaces can be reformed or re-imagined for new or different forms of inhabitation.

Interior architecture combines the study and practice of interior design with architecture. It explores how the interiors of buildings such as office blocks, houses, hospitals, and galleries are inhabited, used and experienced. Furthermore, it also explores how interiors of buildings can be changed to meet different needs and to express different functions, for example from a station multi-storey car park to a modern office block. The course will equip students with core architecture skills, knowledge, and attributes to succeed in the industry.

Programme Modules

Year 1

- Theory Practice and Design
- Architectural Principle and Communication
- Building Construction 1
- Building Services 1
- Software Application for Design
- Architecture History 1
- Building Services 2
- Residential Design
- Architectural Graphic
- Auto CAD in Interior Design
- Interior Material and Furnishing
- Building Construction 2

Year 2

- Commercial Design
- Architecture History 2
- Advance Computer 3D Modeling
- Environmental Psychology
- Furniture Design Workshop
- Environmental Management & Technology
- Business Ethic
- Advance Interior Design 1
- Lighting Design
- Construction Contract Law
- Specification and Contract Documentation

Year 3 (18 months)

- Advance Interior Design 2
- Project Construction Management
- Professional Practice for Interior Designer
- Research Methods
- Entrepreneurship
- Internship/Industrial Training
- Design Project
- Thesis

MPU

- Tamadun Islam Tamadun Asia (Local Students)/Malaysian Studies (International Students)
- Ethnic Relations (Local Students)/Bahasa Melayu Komunikasi2 (International Students)
- Personal Health Management
- Effective Listening
- Co-curriculum Management

INTERESTING FACT

96% OF OUR GRADUATES
get employed within a span of 6
months upon graduation



Career Opportunities

Interior Architect, Project Manager, Retail and Commercial Design, Hospitality and Healthcare Design, Set & Exhibit Design, Visual Merchandising, Office Design.

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 programme enables you to gain direct entry into respective degree programmes.

Programme Modules

Semester 1

- Chemistry 1
- Mathematics 1
- Elective 1*
- Elective 2*

Semester 3

- Chemistry 3
- Mathematics 3
- Academic English
- Computer Application
- Elective 5*

Semester 2

- Chemistry 2
- Mathematics 2
- Elective 3*
- Elective 4*

Elective (by Specialisation)*

General

- Biology 1
- Physics 1
- Biology 2
- Physics 2
- Physics 3

Health Sciences

- Biology 1
- Public Speaking
- Biology 2
- Information Technology
- Introduction to Patient Care

Engineering

- Physics 1
- Public Speaking
- Physics 2
- Information Technology
- Physics 3

- * Electives are subjected to change without prior notice.
- * Students intending to articulate into the Health Science degree programmes will have a choice to take either General or Health Sciences Pathway.
- * Students intending to articulate into Engineering degree programmes will have a choice to take either General or Engineering Pathway.

Why study this programme?

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 or engineering programmes.

FOUNDATION IN ARTS

SEGi UNIVERSITY

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

Semester 1

- General Language Training
- Computer Application
- Introduction to Business
- Statistics

Semester 3

- Public Speaking
- Critical Thinking Skills
- Principles of Economics
- Elective 5*

Semester 2

- Academic English
- Elective 1*
- Elective 2*
- Elective 3*
- Elective 4*

* Students will have to choose the electives according to the discipline of undergraduate studies they intend to pursue.

* Electives

Architecture / Interior Architecture

- Colour & Form
- Drawing Fundamentals
- Fundamental Photography
- Intercultural Communication
- Interpersonal Communication

Quantity Survey

- Information Technology
- Interpersonal Communication
- Fundamental of Management
- Introduction to Marketing
- Intercultural Communication

Why study this programme?

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.

* Electives are subjected to change without prior notice.

STUDENT TESTIMONIALS



"The reason I chose SEGi University is because I like the approach this university takes for my course. Also, I was looking for a university which can provide me with good lecturers and a great social life. Therefore, SEGi University became my top choice because I found both criteria here."

Lee Pei Shan

Bachelor of Engineering (Hons) Electrical and Electronic Engineering



"I chose SEGi because of its reputation in the education industry. I remember talking to a friend who was studying the exact same course and he highly encouraged me to pursue my tertiary studies here. On top of that, SEGi also offered me a full academic scholarship which helped me ease my financial burdens."

Ivan Lim Huan-Wen

Bachelors of Engineering (Hons) Civil Engineering

FACULTY EVENTS



Gold Medal Award by The Institution of Engineers, Malaysia IEM 59th Awards Night 2018

Congratulations to Lubna Mohamed, BEng (Hons) Civil Engineering for winning the Gold Medal Award at the IEM Awards Night on 21 April 2018. The Gold Medal Award is for the **Best Final Year Engineering Student** in SEGi University. The Institution of Engineers, Malaysia (IEM) was established in 1959, one of the largest professional organization in the country and its primary function is to promote and advance the science and profession of engineering in any or all of its disciplines and to facilitate the exchange of information and ideas related to engineering.



Passions to design for the future, talent shines like a diamond

Two teams of Bachelor of Electronic & Electrical Engineering Students from Faculty of Engineering and the Built Environment, SEGi University, Kota Damansara, recently won a Diamond, Gold and Silver awards (Young Inventors, undergraduate & staff categories) in International Exhibition and Competition (IIDEX) organised by UiTM 2017 on 25-29 Sept 2017. The team (Sheikh Shamir, Ehsan Siddique, Ooi Yong Zhen, Dilshani Mallikarachchi, Dr Nurulazlina Ramli) who came out with "Design of Low Cost Document Scanner" amazed the judges and received the Gold Medal and Special Diamond Award with RM1,000 Cash prize, while the other team (Khalid Waleed Said Al-Kharusi, Ahmad Azlan Abd Aziz, Mohd Tarmizi Ali, Muhammad Iqbal Khan, Dr Nurulazlina Ramli) with the "Design of High Gain Microstrip Antenna for 2.4 GHz Access Point IoT Application" was given a Silver Award Medal for their brilliant design.

INDUSTRY PARTNERS

These are the active industry partners who have received our students as interns. We want to thank all these industry partners for their generous partnership with SEGi.

- | | | | |
|----|--|----|---|
| 1 | UMW Oil & Gas | 33 | Gruppe Consultant |
| 2 | Mercedes-Benz. | 34 | Hap Seng Properties Development |
| 3 | PETRONAS - GTS/PD&T | 35 | Bayu Megah Engineering Sdn. Bhd. |
| 4 | Bumi Armada | 36 | Brunsfeld |
| 5 | BMW Ingress Auto Damansara | 37 | BAUER |
| 6 | Yokogawa Industrial Safety Systems | 38 | ECOWORLD |
| 7 | SCHNEIDER ELECTRIC INDUSTRIES (M) SDN BHD | 39 | CHINA STATE CONSTRUCTION |
| 8 | Tan Chong Motor Assemblies Sdn. Bhd. | 40 | Veritas |
| 9 | Top Glove Sdn. Bhd. | 41 | REKHA DESIGN SDN BHD |
| 10 | Dunham Bush Industries Sdn Bhd | 42 | SACHI INTERIOR DESIGN SDN BHD |
| 11 | B. Braun | 43 | Daikin R&D |
| 12 | DAIKIN Research & Development Malaysia Sdn Bhd | 44 | Bromma (Malaysia) Sdn Bhd |
| 13 | DIGI Telecommunications Sdn. Bhd. | 45 | Bahru Stainless |
| 14 | Sony EMCS (Malaysia) Sdn Bhd | 46 | Indah Water Konsortium Sdn Bhd |
| 15 | Panasonic Malaysia Sdn. Bhd. | 47 | Allied Group |
| 16 | Tenaga Switchgear Sdn Bhd | 48 | Bandar Utama City Centre Sdn Bhd |
| 17 | Toshiba Transmission Distribution PJ | 49 | Brandt International Sdn Bhd |
| 18 | Infineon Technologies | 50 | Flexiroam Sdn Bhd |
| 19 | Carlsberg Malaysia | 51 | Fraser & Neaves Holdings Bhd |
| 20 | Ranhill Worley Parsons Sdn. Bhd. | 52 | Fuji Xerox Printers Distributor |
| 21 | Dutch Lady Milk Industries Berhad | 53 | George Kent (Malaysia) Berhad |
| 22 | Shell Malaysia Trading Sdn. Bhd. | 54 | Island & Peninsular Bhd |
| 23 | Colgate Palmolive (M) Sdn. Bhd. | 55 | Malaysia Airlines |
| 24 | Petronas Carigali Sdn. Bhd. | 56 | Melium Sdn Bhd |
| 25 | Top Glove Sdn. Bhd. | 57 | MMC Corporation Berhad |
| 26 | F&N Beverages Manufacturing Sdn. Bhd. | 58 | OSK Holdings Berhad |
| 27 | Gardenia Bakeries (KL) Sdn. Bhd. | 59 | Pembinaan Mitrajaya Sdn Bhd |
| 28 | Ranhill Worley Parson Sdn. Bhd. | 60 | Sarawak Energy Berhad |
| 29 | Putra Perdana Construction Sdn Bhd | 61 | Subang SkyPark Sdn. Bhd. |
| 30 | Gamuda Land | 62 | Syarikat Pembinaan Yeoh Tiong Lay Sdn Bhd |
| 31 | YLD PROFESSIONAL SDN BHD. | 63 | Tan Chong Group |
| 32 | i-City Properties Sdn. Bhd | | |



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