Taylor’s University

Since its inception, Taylor’s has continuously provided excellent services for its students in terms of diverse study options, relevant curriculum and teaching methods, ongoing partnerships with leading universities worldwide, strong industry linkages, up-to-date facilities and well-equipped campuses. Taylor’s University offers a myriad of courses in tertiary education, from diploma, to degree, post-graduate and professional programmes. Students can choose to enroll in courses encompassing fields such as Medicine, Pharmacy, Biosciences, Architecture, Computer Science, Engineering, Quantity Surveying, Law, Business, Communications, Design, Psychology, Hospitality, Tourism and Culinary Arts.

The quality of the undergraduate teaching and learning at Taylor’s was acknowledged when it garnered a ‘Tier 5: Excellent’ rating in the Rating System for Malaysian Higher Education (SETARA) by the Ministry of Higher Education Malaysia in all four audit exercises. Taylor’s University is ranked at no. 4 in the World in the graduate employment rate indicator under the QS Graduate Employability Rankings 2019; ranked at no. 135 in Asia in the QS Asia University Rankings 2019, and listed in the top 1 percent of universities in Asia. Taylor’s University was also awarded 5-Star rating in five (5) categories of the QS Stars Rating. Taylor’s University was also recognised as the number 21 university in the world for Hospitality & Leisure Management by QS World University Rankings by Subject 2018. Taylor’s was listed in the top 2% universities in the world by QS World University Rankings. These achievements are important milestones for Taylor’s, in line with its aim of becoming one of Asia’s leading universities.

Taylor’s has received numerous recognitions locally and internationally from professional bodies such as the CDIO Initiative (Conceiving, Designing, Implementing, Operating), National Academy of Engineering in the USA and the Royal Institution of Chartered Surveyors (RICS) to name a few.

Taylor’s continues to play a strong role in developing Malaysia’s human resource capital, and boasts a 100,000-strong alumnus, many of whom have become leaders in their respective fields.
Awards

QS Stars Rated for Excellence & University Ranking By Region

Private University
in Malaysia for
Academic Reputation*

No. 1

World for
Employer Reputation

Top 1%

University in the
World and Top in Asia

No. 4

Graduate Employment Rate*

Based on the QS Graduate
Employability Rankings result 2019

Putra Brand Gold Awards

Performance Rating by Ministry of Higher Education

Reader’s Digest Trusted Brand
Gold Awards

2018

• 135th university in Asia in the 2019 QS Asia University ranking
• 4th best university and Asia’s best for the graduate employment rate indicator in the 2019 QS Graduate Employability Rankings
• Placed in the 216th rank for employer reputation indicator in the 2019 QS World University Rankings results
• Top 21 ranking in the QS World Subject Rankings for Hospitality & Leisure
• Awarded 5-Star in five (5) categories of the QS Stars Rating
• Gold Award in the ‘Education & Learning’ category for the 9th consecutive year in Putra Brand Awards
• Gold Award in the ‘Private University/College’ category for the 8th consecutive year in the annual Reader’s Digest Trusted Brand Awards

2017

• Top 150 universities in Asia in the QS Asia Ranking
• Awarded 5-Star rating in five (5) categories of the QS Stars Rating
• Gold Award in the ‘Education & Learning’ category for the 8th consecutive year in Putra Brand Awards
• Gold Award in the ‘Private University/College’ category for the 7th consecutive year in the annual Reader’s Digest Trusted Brands Award

2016

• Top 200 universities in Asia in the QS Asia Ranking
• Awarded 5-Star rating in five (5) categories of the QS Stars Rating
• Gold Award in the ‘Education & Learning’ category for the 7th consecutive year in Putra Brand Awards
• Gold Award in the ‘Private University/College’ category for the 6th consecutive year in the annual Reader’s Digest Trusted Brands Award
Vice Chancellor and President’s Message

Taylor’s University is a world-class international university which aims to provide its students with outstanding teaching and cutting edge learning facilities.

Our objective is to produce successful graduates who are first choice for leading employers. We also help our students to graduate with the ambition and entrepreneurial skills to establish their own successful businesses. Work experience gained through internship is an integral part of many of our programmes.

Taylor’s University has a strong international outlook based on its international faculty and students which come from all parts of the world. The international community at Taylor’s is something the University is proud of and intends to continue to develop in order to ensure that our graduates are prepared for the modern international workplace.

Research and enterprise are rising ever higher on the Taylor’s University agenda. Developing international-class research and expertise will further raise the reputation and standing of the University and the value of the degrees held by new graduates and alumni.

If you are thinking of becoming a student at Taylor’s University, my colleagues look forward to answering any question you may have and we look forward to your visit to our Lakeside Campus in Subang Jaya.

Sincerely,
Professor Michael Driscoll
Vice Chancellor and President of Taylor’s University
Research & Innovation

Taylor’s University has a firm footing in research and innovation as we believe these efforts can contribute towards knowledge building as well as assist in the development of the industry and society at large. As a University centred on research and innovation initiatives, we adopt a progressive outlook, embedding research components throughout our programmes and encouraging them at various levels in each faculty. Our students and faculty members engage extensively in “applied research”, which enhances the body of knowledge and creates a direct impact on real world applications. All academic staff appointed at the degree level actively undertake research within the institution or in collaboration with industries or universities, either foreign or local. This research work shapes the creation and dissemination of new knowledge, feeding into the practical application of that knowledge, and ultimately informs and enhances teaching at Taylor’s.

Our Research Centres play a crucial role in elevating the capabilities of our faculty members, through various training activities.

Law (CRELDA)

Business (CAFÉ)

Business (Case & Research Centre)

Communication (SEARCH)

Engineering (CERD)

Architecture, Building & Design (MASSA)

Hospitality, Tourism & Culinary Arts (CRiT)
Teaching and Learning Support

TED Teaching & Educational Development

TED complements the work of academic staff to create excellence in teaching through practice, development, and innovation. We offer workshops and seminars that address a range of timely topics associated with teaching, learning and technology in higher education to enhance teaching capability and learning engagement.

eLa e-Learning Academy

The name ‘academy’ reflects our core purpose as a unit which primarily promotes ‘learning how to teach with technology’. Hence, eLA’s task is to help our academic staff effectively and meaningfully implement the use of technology in transforming the learning journey of the students, and hence enable them to learn in a collaborative, self-directed and personalised manner, anytime and anywhere.

SSC Student Success Centre

The Student Success Centre (SSC) assists students as they adjust to university studies. SSC offers intervention for students via a blend of workshops, personalised 1-2-1 consultations and peer support services to provide learning opportunities throughout the students’ journey towards academic success.

SAC Shine Award Centre

SAC spearheads Taylor’s University’s commitment to holistic education by providing a platform for students to obtain formal recognition for their extracurricular involvement through the 2nd Transcript and the SHINE Award. Besides running workshops to equip students with soft skills that will prepare them for the workplace, SAC also creates opportunities for students to engage in experiential activities outside of the classroom.
Engineering for the 21st Century and Beyond

Throughout history, the progress of civilisation has been driven by engineering. Advances in engineering technology have brought about many historic achievements for mankind, including electricity, transportation, computers and communication technologies, as well as improved sanitation and agricultural systems, among others.

In recent decades, globalisation, driven by rapid technological change, has been transforming the world in almost every imaginable way. Apart from economic growth and progress, it has also brought about several challenges for humankind, including expansion in the levels of global poverty, public health challenges, enormous environmental pressures and periods of economic and financial instability.

According to the National Academy of Engineering (NAE), there are “14 Grand Challenges” facing the world today, and it is up to engineers to address and solve these challenges within the 21st century.

In our ultimate quest to address these Grand Challenges, Taylor’s School of Engineering (SOE) adopts a holistic view of engineering education, grooming engineers who are poised to become leaders and innovators of the industry.

Since our establishment in 1996, SOE has set the benchmark for engineering education and served as a role model for other institutions within the region.

We are the first engineering school in Southeast Asia to adopt the CDIO™ Initiative and register with the Grand Challenge Scholars Program (GCSP), enabling us to apply these approaches to create engineers who are able to meet the real-world demands of their profession and provide solutions for the betterment of humankind.

Through project-based learning, we encourage students to explore their passion in their chosen areas of specialisation and work on actual projects that are in-line with the Grand Challenges throughout their duration of study.

This innovative approach to education takes students on a journey that broadens their perspective and instills expert knowledge, creating budding engineers who are not only highly sought-after but also able to shape the future and influence change.
Why Engineering @ Taylor's?

IGNITING ENGINEERING PASSION

We aim to produce passionate future engineers who dare to dream and challenge conventions in the field of engineering. To achieve this, we focus on a personalised learning approach that is heavily centred on project-based learning. Students are encouraged to explore specific areas and discover new dimensions of learning through various activities beyond the classroom.

RESEARCH-DRIVEN EDUCATION

We are led by a strong research culture, embedded within a curriculum that is designed to address real-world challenges. Continuous research and exploration activities create engineers who understand the implications of their work on society and the future.

INNOVATIVE EDUCATIONAL FRAMEWORK

SOE grooms engineers with a 'big picture' view, through the implementation of the CDIO™ Initiative, which stresses on engineering fundamentals set in the context of the whole product life cycle. We are also the first school outside USA to be registered with the Grand Challenge Scholars Program (GCSP), which aligns our teaching and learning with the real-world challenges identified by NAE.

STRONG INDUSTRIAL ALLIANCES

We have established strategic ties with leaders of the engineering community, working closely with them to ensure that we deliver industry-relevant programmes that are aligned with the latest developments and trends of the profession. We continue to benchmark our programmes against the best local and international practices, providing an education that creates forward-thinking engineers equipped to address complex challenges.
NAE GRAND CHALLENGES FOR ENGINEERING

The National Academy of Engineering (NAE) in the USA has identified 14 Grand Challenges, which engineers need to address in the 21st century, in order for humankind to flourish and progress into the next century. These Grand Challenges cover the areas of energy and environment, health, security and education:

ENERGY AND ENVIRONMENT

1 MAKE SOLAR ENERGY ECONOMICAL
Solar energy provides less than 1% of the world’s total energy, but it has the potential to provide much more. Solar energy presents an attractive alternative for a long-term sustainable energy source.

2 PROVIDE ENERGY FROM FUSION
Human-engineered fusion has been demonstrated on a small scale, e.g. the use of lithium in our laptop batteries. The challenge is to scale-up the process to commercial proportions in an efficient, economical and sustainable way.

3 DEVELOP CARBON SEQUESTRATION METHODS
The growth in emissions of carbon dioxide is a prime contributor to global warming. Engineers are now working on ways to capture and store excess carbon dioxide to prevent global warming.

4 MANAGE THE NITROGEN CYCLE
Human-induced challenges in the global nitrogen cycle pose threats to the environment. With better fertilisation technologies and by capturing and recycling waste, engineers can help restore balance to the nitrogen cycle.

5 PROVIDE ACCESS TO CLEAN WATER
In many parts of the world, there is a critical shortage of water for drinking and other uses. Affordable, advanced technologies could make a difference for millions who face shortage of access to clean water.
HEALTH

ADVANCE HEALTH INFORMATICS

6 Stronger health information systems can not only improve everyday medical visits, but they are also essential to counter pandemics and biological or chemical attacks.

ENGINEER BETTER MEDICINES

7 Engineers today are working on developing new systems to use genetic information, sense small changes in the body, assess new drugs and deliver vaccines that meet the unique needs of an individual patient - enabling doctors to improve the quality of treatment.

SECURITY

PREVENT NUCLEAR TERROR

8 As nuclear technologies and nuclear weapons continue to develop, there is a growing need for technologies to prevent and respond to potential nuclear attacks or disasters.

SECURE CYBERSPACE

9 Today, both personal privacy and national security depend on protecting the cyberspace from threats. Despite serious breaches of cyber security occurring in the past, research and development for security systems continue to lag behind.

RESTORE AND IMPROVE URBAN INFRASTRUCTURE

10 Engineers must face the formidable challenge of modernising the fundamental infrastructures that support civilisation (from water and sewer systems to road and rail networks, to national power and natural gas grids) and create more sustainable urban environments.

EDUCATION

REVERSE-ENGINEER THE BRAIN

11 Discovering the secrets of how living brains work may offer the best guide to engineering artificial intelligence (AI) on a larger scale. Reverse-engineering the brain promises great advances in healthcare, manufacturing and communication.

ENHANCE VIRTUAL REALITY

12 Virtual reality is becoming a powerful new tool in many specialised fields, including psychiatry, education, entertainment, healthcare, and manufacturing. True virtual reality creates the illusion of actually being in a different space, and can be used for training, treatment and communication.

ADVANCE PERSONALISED LEARNING

13 Teaching has traditionally followed the one-size-fits-all approach, but with the growing appreciation of more “personalised learning”, there is a need for instruction to be customised based on learning styles, speeds and interests to match the student.

ENGINEER THE TOOLS OF SCIENTIFIC DISCOVERY

14 In the century ahead, engineers and scientists will continue to work hand-in-hand in the great quest for understanding many unanswered questions in areas like biological research, human civilisation and quantum physics.

For more details on the Grand Challenges visit www.engineeringchallenges.org/
Igniting Engineering Passion

At SOE, we have a deep-seated belief that every student should embrace their passion. We inspire our students to explore new ideas, challenge the status quo, and immerse themselves in a journey of continuous learning and discovery.

We take on an explorative view in delivering engineering education, whereby our programme is heavily centred on Project-Based Learning (PBL). PBL enables students to acquire the depth and breadth of knowledge through the application of theories into real engineering solutions that are in-line with NAE's 14 Grand Challenges.

Every student experiences a personalised learning environment. From the first semester of study, students are encouraged to explore an area of the Grand Challenges that excites and stimulates them. In further developing their passions, students are required to propose workable, real-life solutions which they will develop alongside a team of peers from different engineering disciplines. This not only encourages them to discover their interest in the field of engineering, but also exposes them to different disciplines within the field, closely simulating a real working environment.

The hands-on learning that our students are continuously exposed to is designed to fuel their interest and passion in the field of engineering, and groom future engineers who are not only academically qualified but also have a heart for their profession.

“Christopher Chew Mun Kit
Bachelor of Engineering (Hons) in Chemical Engineering

My team and I worked on a project entitled 'Indigenous Tobacco Mosaic Virus Flow Visualisation', which was selected to participate in the annual Malaysian Technology Expo. It was very eye-opening to pitch the project along industry experts and postgraduate students, to a panel of expert professors. My team and I learned about effective communication and presentation skills – the best part is we managed to clinch a Bronze medal from the event.”
National and International Competitions

Students are given the opportunity to participate in various national and international competitions, which challenge them to apply their knowledge, obtain feedback from experts, demonstrate teamwork, boost their confidence and sharpen their practical skills.

Students also attend and observe other competitions in preparation for their own real-world scenarios. This gives them a platform to learn more about latest industry developments, compare best practices and witness the application of engineering work across different industries and scenarios.

01 Fly Your Ideas with Airbus 2013, Toulouse, France
02 Super Taikyu Series 2013, Sportsland Sugo, Japan
03 Taylor’s Business Plan Competition 2012, Taylor’s University, Malaysia
04 6th Hong Kong Underwater Robot Challenge 2011, City University, Hong Kong
05 Shell Eco-Marathon Asia 2011, Sepang International Circuit, Malaysia
06 Formula SAE Race 2011, Melbourne, Australia
07 Annual Formula Varsity Club Prix Circuit
08 Langkawi International Maritime and Aerospace (LIMA) Exhibition
09 Malaysia Technology Expo (MTE)
Taylor’s Engineering Fair

Every semester, SOE organises an Engineering Fair that showcases the students’ work to the campus community, industry members and visiting academicians. This is an avenue for students to demonstrate their technical skills and knowledge, and increase their exposure to aspects of marketing, event organisation and project management. Some of the projects done by our students are showcased below.

Application of Natural Fibres in Acoustic Panel

This project explored the opportunities to commercialise natural products such as coir, corn, oil palm fibres and their wastes, for general use. These products are found to be good sound absorbers at certain frequency bands.

Grand Challenge 14

Low Cost Waste Water Treatment

Through this project, students proved the potential of egg shell powder as a low-cost, environmentally-friendly absorbent for removal of Acid Blue 9 (textile dye).

Grand Challenge 5

Quadrocopter

This project aimed to design a cost efficient, aerodynamically and mechanically designed, 4-rotor helicopter to counter the disadvantages of the helicopter. The quadrocopter was installed with autopilot and long-range camera for navigation and rescuing operations.

Grand Challenge 13

Mind-controlled Wheelchair

This thought-operated machine was designed to aid the disabled or elderly, and includes additional features such as a canopy, LED light, siren and camera. It is operated using EEG (Electroencephalography) - the decoding of brain waves.

Grand Challenge 11

“Yap Wai Kit
Bachelor of Engineering (Hons) in Mechanical Engineering

I was part of the Taylor’s Racing Team, which exposed me to the commercial world and the industry. As the Marketing and Sponsorship Director of the project, I had to deal with people from various industries including motorsports. Not only did I acquire knowledge of the industry from the professionals, I was also able to gain knowledge of marketing and sponsorship, as well as polish my communication skills.”
First Engineering School in Malaysia with a Ranked Racing Team

Taylor’s Racing Team (TRT) is an avenue for students to unleash their potential by challenging themselves and putting their knowledge into practice. Students design and manufacture formula style racing cars to participate in not only home-grown competitions, but also in the Formula Society of Automotive Engineers – a prestigious international competition.

2016
FSAE-ASEAN
Overall 1st Runner Up
- Participated in FSAE-Australasia

2015
Formula Varsity
2nd place - Electric Vehicle

2014
Malaysia Superlap
1st place - Formula Time Attack (Student Category)
- Educational Innovation of Motorsports & Automotive (EIMA) Race
2nd place

2012
Educational Innovation of Motorsports & Automotive (EIMA) Race
2nd place - Taylor’s Racing Team (TRT)

2011
Malaysian Technology Expo
Gold and Bronze - Students and academicians
# Multidisciplinary Laboratories

SOE’s multidisciplinary laboratories are designed for engineering students from all specialisations to come together, collaborate, learn and gain exposure to the different aspects of engineering study.

<table>
<thead>
<tr>
<th>No.</th>
<th>Laboratory Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Advanced Simulations Laboratory</td>
<td>This lab has powerful computers that enable students to simulate real-life challenges using software. The knowledge gained can be used to predict and improve the behaviour of engineering systems.</td>
</tr>
<tr>
<td>02</td>
<td>Automation &amp; Robotics Laboratory</td>
<td>The lab allows teams to collaborate to produce robotic and automation solutions that can perform many industrial tasks that assist in increasing the accuracy and productivity of manufacturing facilities.</td>
</tr>
<tr>
<td>03</td>
<td>Communication &amp; Control Laboratory</td>
<td>This lab trains students to understand the principles behind building wireless communication systems and various automatic control systems.</td>
</tr>
<tr>
<td>04</td>
<td>Energy &amp; Fluids Laboratory</td>
<td>The lab facilitates understanding of different phenomena associated with the behaviour of fluids and the conversion and transfer of energy.</td>
</tr>
<tr>
<td>05</td>
<td>Innovation &amp; Prototyping Laboratory</td>
<td>This one-stop station enables students to take products from the drawing board to the real world. Computer-aided designs are used together with the computer numerical control milling machine and the rapid prototyping machine.</td>
</tr>
<tr>
<td>06</td>
<td>Manufacturing Workshop</td>
<td>The workshop is equipped with all the necessary machinery such as milling, lathe, drilling, grinding and welding machines needed to manufacture metal artefacts.</td>
</tr>
<tr>
<td>07</td>
<td>Materials &amp; Solids Laboratory</td>
<td>This lab is designed to perform experiments and research different aspects and properties of solid materials. This includes automotive, smart materials and building materials for heavy industries.</td>
</tr>
<tr>
<td>08</td>
<td>Processes &amp; Reactions Laboratory</td>
<td>This lab facilitates the study of various chemical processes and reactions, to develop skills that are highly required by the oil and gas, food, pharmaceutical, and cosmetics industries.</td>
</tr>
<tr>
<td>09</td>
<td>Research Laboratory</td>
<td>This lab supports the research-led teaching activities of the school, and provides the space for final year students to carry out their research.</td>
</tr>
<tr>
<td>10</td>
<td>Unit Operations Laboratory</td>
<td>This lab allows students to perform experiments of unit operations such as filtration, condensation, separation, evaporation, etc which is used in various industrial applications.</td>
</tr>
</tbody>
</table>
Innovative Educational Framework

In order to address the widening gap between engineering education and real-world demands of the engineering profession, Taylor’s School of Engineering has adopted the CDIO™ Initiative and registered with the Grand Challenge Scholars Program (GCSP).

Providing students with a 'big picture' view of engineering, the CDIO™ Initiative is woven into our project-based learning approach. We teach students to develop unconventional solutions, including revitalising a system or product to give it a new lease of life – a concept referred to as "cradle to cradle" development. Our engineering graduates are thus able to participate and contribute to the various stages of system or product development.

Every aspect of teaching and learning at our School is also centred on the 14 Grand Challenges in line with the Grand Challenge Scholars Program (GCSP), which is geared towards producing next-generation engineers who are equipped to tackle real-world challenges.

As the first Engineering School in the region to adopt both these innovative frameworks, we are widely regarded as a pioneer in engineering education and have emerged as a benchmark for other institutions to observe and emulate.

We are the first school outside of the USA to offer the Grand Challenge Scholars Program recognised by the National Academy of Engineering, USA.

The National Academy of Engineering (NAE) Grand Challenge Scholars Program (GCSP) is a combined curricular and extra-curricular programme with five components that are designed to prepare students to be the generation that solves the grand challenges facing society in this century.

The Grand Challenges are a call-to-action and serve as a focal point for society’s attention to opportunities and challenges affecting our quality of life.

For more details on GCSP, visit www.grandchallengescholars.org
CDIO™ Initiative

The CDIO™ Initiative was pioneered by the Massachusetts Institute of Technology (MIT), together with leading engineering schools in USA, Europe, Canada, UK, Africa, Asia and New Zealand, to address the gap between industry needs and the quality of engineering graduates being produced.

Students are instilled with engineering fundamentals in the context of the whole product life cycle (Conceiving - Designing - Implementing - Operating), and are able to:

- Master a deeper working knowledge of the technical fundamentals
- Lead in the creation and operation of new products and systems
- Understand the importance and strategic value of research work

Taylor’s School of Engineering is the first Malaysian University to be accepted into this prestigious collaboration, joining the ranks of elite institutions like MIT, Stanford University and University of Sydney.

CDIO™ Conferences and Trainings

The faculty and students participate in various conference and training events organised as part of the CDIO™ Initiative, which facilitate the sharing of best practices and knowledge exchange as well as networking among leading institutions.

01 CDIO™ International Conference 2013, Boston, USA
02 LINC International Conference 2013, Boston, USA
03 7th MIT Conference on Computational Fluid & Solid Mechanics 2013, Boston, USA
04 International CDIO™ Conference 2011, Lyngby, Denmark
05 CDIO™ Regional Conference 2011 Beijing, China
06 Harnessing Innovation Skills at CDIO™ Academy 2011
07 International CDIO™ Conference 2010, Québec, Canada
08 Training & Sharing Session with Vietnam National University
Research-driven Education

As a School led by a strong research culture, we aim to develop future engineers who are able to look beyond engineering. We believe in grooming engineering graduates who are not only well-versed in their technical knowledge, but can also understand, appreciate and analyse their role as well as their impact on society’s progress and existence.

We strive to create ethically-sensitive engineers who are aware of the ethical, social and environmental implications of their work, and are able to positively shape the future by addressing and solving some of the Grand Challenges facing society in the 21st century.

Research Clusters

In order to reiterate the purposeful nature of engineering research done at the School, our research objectives have been realigned to the 14 Grand Challenges. To fully execute this, our staff and students form research groups or clusters to develop their respective solutions to address the Grand Challenges. This ensures that the efforts are effectively channelled towards tackling each of the Grand Challenges identified.

**There are seven (7) clusters within SOE, and their respective Grand Challenges are:**

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Description</th>
<th>Grand Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Engineering Education Lab</td>
<td>13</td>
</tr>
<tr>
<td>02</td>
<td>Energy Research Group</td>
<td>1,2,3</td>
</tr>
<tr>
<td>03</td>
<td>Environment and Water Research Group</td>
<td>4,5</td>
</tr>
<tr>
<td>04</td>
<td>Health Research Group</td>
<td>6,7</td>
</tr>
<tr>
<td>05</td>
<td>Security Research Group</td>
<td>8,9,10</td>
</tr>
<tr>
<td>06</td>
<td>Computer Intelligence Applied</td>
<td>11,12,14</td>
</tr>
<tr>
<td>07</td>
<td>Teaching, Research, Innovation &amp; Learning (TRial)</td>
<td>13</td>
</tr>
</tbody>
</table>

Passionate and Committed Academics

Our highly qualified and passionate faculty possess extensive industry experience and actively pursue research in key areas of specialisation. Across the board, 65% of our teaching staff are PhD-holders, and most of them have published their research papers in leading journals and publications. Our distinguished academic faculty includes 11 Chartered Engineers and 1 Professional Engineer, in the fields of chemical engineering, electrical and electronic engineering and mechanical engineering.

Eureca Conference

All students are required to embark on a key research project in their fourth year of the undergraduate study, which must be aligned with their research group’s overall research objectives. The School organises the annual Engineering Undergraduate Research Catalyst (EURECA) Conference, where each student is expected to present their research paper, as a pre-requisite for graduation.
JESTEC - Peer-Reviewed Journal

The Journal of Engineering Science and Technology (JESTEC) is an open access journal published by the Taylor's School of Engineering. JESTEC publishes and disseminates original peer-reviewed research articles, reviews and discussions on the latest developments in all fields of engineering, science and technology. The Journal serves the engineering research community by providing a high-quality, effective and quick platform for sharing and disseminating research findings.

JESTEC is indexed by Scopus - the number one database in the world for indexing high-impact research - thus pushing the limits in engineering education using innovative teaching and learning techniques.

Adib Bin Abdul Rahim
Bachelor of Engineering (Hons) in Mechanical Engineering

For my industrial training, I was based in Qatar for 3 months and I was involved in a project for New Doha International Airport (NDIA). I was given the opportunity to meet and work with people around the world from countries like the Philippines, United Kingdom, Sweden and Germany.
Strong Industrial Alliances

In our pursuit to bridge the gap between academia and industry, SOE has forged strategic alliances with members of the engineering community, setting in place mutually beneficial partnerships with industry leaders.

The dynamic knowledge exchange that takes place at our School enables our students to gain insight on current developments and issues affecting the engineering practice. It also equips our graduates to hit the ground running in solving the Grand Challenges for the future. From an industry perspective, the School serves as an ideation lab and a gateway to innovation, talent and research activities.

Industry Advisory Panel

The programmes taught at SOE are kept relevant through our close association with members of the industry, who form the School’s Industry Advisory Panel (IAP). The panel meet regularly with our faculty members to review and refine our curriculum and programme content, ensuring that our curriculum remains relevant and in-line with the industry’s demands.

Our IAP members consist of leading local and multinational corporations:

- Cabot Corporation
- Conditioning R&D Malaysia Sdn Bhd
- Daikin
- Energy and Strategy Consulting Sdn Bhd
- GreenTech Solutions
- GSK
- Harvest-Time Properties
- Honeywell
- IChemE
- IEM
- IGL Services Sdn Bhd
- InControl Tech Sdn Bhd
- ISPAHAN
- Malakoff
- Malaysia Automotive Institute
- Motorola
- NHF
- Origine IT
- Panasonic Appliances Air
- Petronas
- Primetech Engineers Sdn Bhd
- SCOMI Group Bhd
- SCOMI Rail Bhd
- SHELL
- Solution Engineering Sdn Bhd
- Strand Aerospace
- Wilra Sdn Bhd
- Winmore Engineering Sdn Bhd
Professional Engineering Lecture Series

The Professional Engineering Lecture Series or PELS, is a platform that links our students with the engineering community, through insightful talks and lectures delivered by industry members. Through this programme, we have invited speakers from leading local and multinational companies to speak about the engineering profession and share their engineering experience with our students.

Ooi Feng Lin  
Bachelor of Engineering (Hons) in Chemical Engineering

As part of the Society of Engineering and Technology (SET), we were given opportunities to organise many events for the School and sometimes for the University itself. Through this, I was able to train myself to become better at time management and improve my ability to work under stress.

- Driving Down the Carbon Footprint – CO2 and Cars
  Professor Gary Hawley  
  Dane and Medlock Chair of Engineering, Faculty of Engineering and Design, University of Bath, UK

- Roles of Technology and Innovation play in the Evolution of the Global Financial System
  Sukhvinder Singh  
  Manager – Group Strategy, Maybank Berhad, Malaysia

- Global Energy Dialogue
  Arnold Teo  
  Manager, Shell Refinery Company Berhad, Malaysia

- Systematic Innovation in Engineering
  Darrel Mann  
  Founder, Systematic Innovation, UK

- Importance of Sustainability
  Joe Eades  
  Managing Director, Ispahan Group Pte Ltd, Singapore

- The Science and (Bio) Engineering of Regenerative Medicine
  Professor Julian Chaudhuri  
  Professor of Biochemical & Biomedical Engineering, University of Bath, UK

- Particle Engineering: Role of Surface Properties
  Dr. Jerry Heng  
  Senior Lecturer, Department of Chemical Engineering, Imperial College London, UK

- Wireless Technology for Process Automation
  Noel J. Jayaratnam  
  Sales Manager, Test & Measurement Section, Yokogawa Electric (M) Sdn Bhd, Malaysia
Industry Visits

Our students are given the opportunity to visit engineering firms and companies, to observe a spectrum of processes. This gives them a first-hand feel and insight into the real world of engineering. Students can also interact with members of the respective organisations during their visits, adding further value to their education.

01 BASF-Petronas Chemicals Sdn Bhd, Pahang
02 Danone Dumex (Malaysia) Sdn Bhd, Negeri Sembilan
03 Digi Telecommunications Sdn Bhd, Selangor
04 Fathopes Energy Sdn Bhd, Selangor
05 LIMA Exhibition, Langkawi
06 Malakoff Power Plant, Perak
07 New Hoong Fatt Holdings Berhad, Selangor
08 Proton Tanjung Malim Sdn Bhd, Perak
09 UMW Toyota Motor Sdn Bhd, Selangor

Aminath Saadha
Bachelor of Engineering (Hons) in Electrical & Electronic Engineering

The industrial placement was a good opportunity to improve my technical knowledge, especially on embedded systems. For my project, I programmed a microcontroller to have different functions. This wholesome experience improved my knowledge, enabled me to apply myself, and also showed me the ropes of working in the industry.
**Employment Rate**

**CHEMICAL ENGINEERING**
- 100%
- National Average: 58.1%

**ELECTRICAL & ELECTRONIC ENGINEERING**
- 100%
- National Average: 65.5%

**MECHANICAL ENGINEERING**
- 100%
- National Average: 66.4%


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**Salary**

**CHEMICAL ENGINEERING**
- RM3,357
- National Average: RM2,075
- 61.8% higher

**ELECTRICAL & ELECTRONIC ENGINEERING**
- RM2,750
- National Average: RM1,917
- 43% higher

**MECHANICAL ENGINEERING**
- RM2,937
- National Average: RM2,047
- 43% higher


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**Knowledge Skills**

- **INTERPERSONAL COMMUNICATION SKILLS**: 89%
- **INOCULATION AND PRACTICING OF POSITIVE VALUES**: 85%
- **EXPOSURE TO GENERAL KNOWLEDGE & CURRENT ISSUES**: 74%
- **PROBLEM SOLVING SKILLS**: 85%
- **CREATIVE & CRITICAL THINKING SKILLS**: 85%
- **ABILITY FOR TEAM/GROUP WORK**: 93%
- **ANALYTICAL SKILLS**: 89%

Alumni Shout-Out!

““The project-based learning challenged me to work outside my comfort zone and to grow in confidence, leadership, and work ethic. The opportunity I had to present a paper at MIT also gave me the foundation required to pursue a PhD candidature.”

Yvonne Lim
(Chemical Engineering, Graduating batch of 2013)
PhD Candidate
Taylor's University

“The structure of the engineering programme here taught me core engineering skills through various projects and prepared me for the wide range of responsibilities an engineer would be entrusted with on the job.”

Sean Malik
(Chemical Engineering, Graduation Batch of 2014)
Process Engineer
Energy Strategy Consulting Sdn Bhd

“My experience in the Taylor’s Engineering programme has given me the confidence to take up any challenge in my professional career today.”

Firnaaz Ahamed
(Chemical Engineering, Graduating batch of 2014)
Drilling Fluids Laboratory Engineer, Assoc. Halliburton Energy Services Baroid Drilling Fluids

“Taylor's University has provided me with substantial knowledge, tools and the exposure needed to become a professional engineer.”

Muhammad Hidayat Bin Hamzah
(Mechanical Engineering, Graduating Batch Of 2016)
Project Engineer (Mechanical)
Thye Heng Engineering Sdn Bhd

“Taylor's University has provided me with the exposure needed to pave the way to my success through skills and exposure to basic engineering techniques in problem solving.”

Khek Chun Hong
(Chemical Engineering, Graduating batch of 2014)
Chemical Engineer
AP Oil Private Ltd

“The problem solving skills that I have acquired through ongoing projects helped provide me with the framework to solve various challenges faced in my work, which is key to becoming a successful engineer.”

Jonathan Chin Eu Tsun
(Electrical & Electronic Engineering, Graduating batch of 2014)
Structural Physical Design Engineer (Backend Design)
Intel Microelectronics Sdn Bhd

“The Taylor’s School of Engineering encouraged me to propose new ideas and challenge the norms. It also gave me the opportunity to explore real-world challenges.”

Tan Huey Meing
(Mechanical Engineering, Graduating batch of 2015)
Product Development Engineer
Continental Tyre Technology Center Malaysia

“Taylor’s University provided me with the high quality education that the engineering board looks for. I learned how to work effectively, emphasizing the professionalism that the engineering field demands.”

Jang Kyung Moon
(Mechanical Engineering, Graduating batch of 2011)
Intern
NSI Engineering
Reference List

- Association of Consulting Engineers Malaysia
  www.acem.com.my

- Board of Engineers Malaysia
  www.bem.org.my

- Chemical Industries Council of Malaysia
  www.cicm.org.my

- Grand Challenges for Engineering
  www.engineeringchallenges.org

- Institute of Electrical and Electronics Engineers
  www.ieee.org

- Institution of Chemical Engineers
  www.iche.me.org

- Institution of Mechanical Engineers
  www.imeche.org

- International Association of Engineers
  www.iaeng.org

- Malaysian Institute of Chemistry
  www.ikm.org.my

- Malaysian Petrochemicals Associations
  www.mpa.org.my

- Malaysian Society for Engineering and Technology
  www.mset.org.my

- Ministry of Science, Technology and Innovation
  www.mosti.gov.my

- The Electrical and Electronics Association of Malaysia
  www.teeam.org

- The Institution of Engineers Malaysia
  www.myiem.org.my

- Washington Accord
  www.washingtonaccord.org

- Worldwide CDIO Framework
  www.cdio.org
ENGINEERING

Bachelor of Engineering (Hons) Mechanical Engineering
Bachelor of Engineering (Hons) Chemical Engineering
Bachelor of Engineering (Hons) Electrical & Electronic Engineering
EDUCATION PATHWAY

- SPM / O Level / Equivalent
  - Foundation in Engineering
    - 1 Year
  - STPM / UEC / A Levels / SAM / SACEi / CPU / IB / Equivalent
    - 1-2 Years

- Bachelor of Engineering (Hons) Mechanical Engineering
- Bachelor of Engineering (Hons) Electrical & Electronic Engineering
- Bachelor of Engineering (Hons) Chemical Engineering
  - 4 Years with Internship

- Master of Science in Engineering
DEGREE PATHWAYS

The curriculum of all of our engineering degree programmes are made up of 3 distinct sections.

Year 1
In year 1, a student will be introduced to how engineers design and build an engineering system using various tools and techniques which includes the CDIO™ framework and 3-D printing. You will also learn fundamental mathematics knowledge applicable to all engineering disciplines and have the opportunity to savour a variety of modules through our complementary study options.

Years 2 & 3
In these 2 years, a student will acquire discipline specific knowledge and skills relating to their engineering field of choice, while continuing to experience engineering design in both years.

Year 4
In year 4, students will apply their engineering knowledge and skills to solve real-world, industry-related, complex engineering challenges and projects through discipline specific group projects and an individual, research-oriented final year project.

Project-Based Learning
This pathway is applicable to all students who enrol into any engineering degree at Taylor’s University. To be part of the below pathways, students will require to meet additional requirements. Our pedagogy of choice, project-based learning requires our students to work in teams to design and build an engineering system every year.

Taylor’s Grand Challenge Scholars Programme (TGCSP)
This pathway was designed for students who are looking to diversify their learning, enhance their soft-skills and gain international exposure. Students who successfully complete the TGCSP will receive an endorsement letter from the National Academy of Engineering, USA upon graduation.

EUFORIA - Research
EUFORIA - Research is industrial adoption within the research arena. Research EUFORIANs will focus on working on high-impact research projects from within the engineering school. Upon completion of each project, they would receive a completion certificate and are guaranteed to have their names of at least 2 research publications. This pathway was designed for students who are keen to pursue their postgraduate studies in engineering research.

EUFORIA - Research For Industrial Adoption (EUFORIA)
EUFORIA is an industrial adoption programme that requires students to work on a real-life industrial challenge/project offered by an MNC at least once a year. Upon the successful completion of each year, EUFORIANs would receive a completion certificate from the MNC and would be offered an internship programme and employment with the same MNC. This pathway was designed for students who want to immerse themselves in industry early on in the undergraduate journey.
OVERSEAS TRANSFER OPTIONS*

UNITED KINGDOM

UNIVERSITY OF BIRMINGHAM
Students pursuing their degree in Chemical Engineering, Electrical & Electronic Engineering or Mechanical Engineering at Taylor’s University have the option to transfer their credits to the University of Birmingham at the end of their second year (minimum requirement CGPA 2.67), allowing them the opportunity to complete their 3rd and 4th year at the University of Birmingham, UK.

*Admission is subject to the transfer requirements established by the respective universities.
BACHELOR OF ENGINEERING (HONS) MECHANICAL ENGINEERING

KPT/JPS (R2/521/6/0070) (MQA/FA9624) 05/25

INTAKE: MARCH & AUGUST

This programme is designed to equip students with a sound understanding of fundamental theories and concepts in mechanical engineering, primarily the scientific knowledge to solve challenges and design systems in automotive, power generation, aerospace and manufacturing industries, to elevate our quality of life.

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>YEAR 2</th>
<th>YEAR 3</th>
<th>YEAR 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Mathematics II</td>
<td>Engineering Statics</td>
<td>Electronics &amp; Microprocessors</td>
<td>Mechanical Engineering Group Project II</td>
</tr>
<tr>
<td>Computing Applications for Engineers</td>
<td>Engineering Fluid Mechanics</td>
<td>Automatic Control and Instrumentation</td>
<td>Final Year Project I</td>
</tr>
<tr>
<td>Engineering Design</td>
<td>Introduction to Electronics &amp; Electrical Power Machines</td>
<td>Mechanical Vibration</td>
<td>Final Year Project II</td>
</tr>
<tr>
<td></td>
<td>Engineering Design and Project Management</td>
<td>Engineering Solid Mechanics</td>
<td>Professional Engineers and Society</td>
</tr>
<tr>
<td></td>
<td>Computer Aided Engineering</td>
<td>Advanced Thermodfluid Engineering</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Properties and Applications of Materials</td>
<td>Engineering Dynamics</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Numerical Analysis for Engineers</td>
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<tr>
<td></td>
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<td></td>
<td>Industrial Training</td>
</tr>
</tbody>
</table>

Primary Core + University Core + Minor = Min. 4 Years (132 Credit Hours)
Primary Core + University Core + Free Electives = Min. 4 Years (132 Credit Hours)

**Note:**

**University Core**
- Community Service Initiative
- Hubungan Etnik / Malaysian Studies 3
- Life Skills for Success & Well-Being
- Millennials in Malaysia: Team Dynamics and Relationship Management
- Tamadun Islam dan Tamadun Asia / Bahasa Melayu Komunikasi 2

*Students are requested to take Bahasa Kebangsaan A if they do not obtain a Credit for Bahasa Malaysia in SPM.*

**Complementary Studies**

**Choose ONE (1) of the below packages:**

**Minor**
- Recommended Packages:
  - IC Design and Embedded Systems
  - Power and Energy Systems
  - Robotics
  - Energy and Sustainability Engineering
  - Process Integration and Unit Operation

Choose any Minor package* offered by Taylor’s University.
Refer to the Complementary Study Guide for the list of Minor packages.

**OR**

**Free Electives**
- Choose any FIVE (5) Free Electives* offered by Taylor’s University.
  Refer to the Complementary Study Guide for the list of Free Electives.

*Subject to availability
*Meet min. module pre & co-requisite

**100 Credit Hours**
**12 Credit Hours**
# Bachelor of Engineering (Hons) Chemical Engineering

**KPT/JPS (R2/524/6/0028) (MQA/FA8741) 05/25**

## Intake: March & August

This programme is designed to equip students with a sound understanding of fundamental theories and concepts in chemical engineering, primarily the knowledge to transform raw materials into useful products efficiently and safely, with minimal environmental impact.

### Primary Core

**Year 1**
- Engineering Mathematics I
- Engineering Mathematics II
- Engineering Design
- Computing Applications for Engineers

**Year 2**
- Thermodynamics and Heat Transfer
- Material and Energy Balance
- Engineering Fluid Mechanics
- Biochemical Processes
- Engineering Design and Project Management
- Sustainable Development in Engineering
- Properties and Applications of Materials

**Year 3**
- Chemical Engineering
  - Thermodynamics and Simulation
  - Separation Processes
  - Process Control and Instrumentation
  - Safety in Process Plant Design
  - Chemical Reaction Engineering
  - Process Plant Design and Economics
  - Mass Transfer
  - Advanced Heat and Momentum Transfer
  - Industrial Training

**Year 4**
- Chemical Engineering Group Project I
- Chemical Engineering Group Project II
- Final Year Project I
- Final Year Project II
- Professional Engineers and Society

### University Core

- Community Service Initiative
- Hubungan Etnik / Malaysian Studies 3
- Life Skills for Success & Well-Being
- Millennials in Malaysia: Team Dynamics and Relationship Management
- Tamadun Islam dan Tamadun Asia / Bahasa Melayu Komunikasi 2

*Students are requested to take Bahasa Kebangsaan A if they do not obtain a Credit for Bahasa Malaysia in SPM.*

### Complementary Studies

**Choose ONE (1) of the below packages:**

#### Minor

**Recommended Packages:**
- IC Design and Embedded Systems
- Power and Energy Systems
- Robotics Design
- Design and Manufacturing
- Mechanical Design

Choose any Minor package* offered by Taylor's University. Refer to the Complementary Study Guide for the list of Minor packages.

**Free Electives**

Choose any FIVE (5) Free Electives* offered by Taylor's University. Refer to the Complementary Study Guide for the list of Free Electives.

*Subject to availability

*Meet min. module pre & co-requisite

### Note:

Primary Core + University Core + Minor = Min. 4 Years (132 Credit Hours)
Primary Core + University Core + Free Electives = Min. 4 Years (132 Credit Hours)
BACHELOR OF ENGINEERING (HONS) ELECTRICAL & ELECTRONIC ENGINEERING

KPT/JPS (R2/522/6/0040) (MQA/FA9625) 05/25

INTAKE: MARCH & AUGUST

This programme is designed to equip students with a sound understanding of fundamental theories and concepts in electrical and electronic engineering; from designing and manufacturing the latest consumer devices to sophisticated scientific and industrial technologies.

<table>
<thead>
<tr>
<th>Primary Core</th>
<th>Complementary Studies</th>
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<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>• Engineering Mathematics I</td>
<td>Choose ONE (1) of the below packages:</td>
</tr>
<tr>
<td>• Engineering Mathematics II</td>
<td>Minor</td>
</tr>
<tr>
<td>• Computing Applications for Engineers</td>
<td><strong>Recommended Packages:</strong></td>
</tr>
<tr>
<td>• Engineering Design</td>
<td>• Energy and Sustainability Engineering</td>
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<td></td>
<td>• Heating Ventilation &amp; Air Conditioning</td>
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<tr>
<td>YEAR 2</td>
<td></td>
</tr>
<tr>
<td>• Signals and Systems</td>
<td>Choose any Minor package* offered by Taylor’s University. Refer to the Complementary Study Guide for the list of Minor packages.</td>
</tr>
<tr>
<td>• Electrical Power and Machines</td>
<td>or</td>
</tr>
<tr>
<td>• Electromagnetic Fields &amp; Waves</td>
<td><strong>Free Electives</strong></td>
</tr>
<tr>
<td>• Digital and Analogue Electronics</td>
<td>Choose any FIVE (5) Free Electives* offered by Taylor’s University. Refer to the Complementary Study Guide for the list of Free Electives.</td>
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<tr>
<td>• Engineering Design and Project Management</td>
<td>*Subject to availability</td>
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<td>• Programming Techniques</td>
<td>*Meet min. module pre &amp; co-requisite</td>
</tr>
<tr>
<td>• Circuits and Devices</td>
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<tr>
<td>YEAR 3</td>
<td></td>
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<tr>
<td>• Power System Analysis and Protection</td>
<td></td>
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<tr>
<td>• High Voltage Engineering</td>
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<tr>
<td>• Automatic Control and Instrumentation</td>
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<tr>
<td>• Power Electronics and Industrial Drives</td>
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<tr>
<td>• Integrated Electronics</td>
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<tr>
<td>• Elec Energy Generation and Utilisation</td>
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<tr>
<td>• Microprocessors and Computer Architecture</td>
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<tr>
<td>• Communication Systems</td>
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<tr>
<td>• Industrial Training</td>
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<tr>
<td>YEAR 4</td>
<td></td>
</tr>
<tr>
<td>• Electrical &amp; Electronic Engineering Group Project I</td>
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<td>• Electrical &amp; Electronic Engineering Group Project II</td>
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<td>• Final Year Project I</td>
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100 Credit Hours

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12 Credit Hours

Note:
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Primary Core + University Core + Free Electives = Min. 4 Years (132 Credit Hours)

*Students are requested to take Bahasa Kebangsaan A if they do not obtain a Credit for Bahasa Malaysia in SPM.
This publication contains information, which is current as of October 2018. Changes in circumstances after this date may impact upon the accuracy or timeliness of the information. Taylor’s University does its best to ensure that the information contained herein is accurate, but reserves the right to change any information described in this prospectus without notice. Readers are responsible for verifying information that pertains to them by contacting the university.