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1 Introduction

1.1 Message from the Chairman

South Asian Institute of Technology and Medicine (SAITM), inaugurated in the year 2008, is the first non-state sector multi-faculty higher educational institute in Sri Lanka. Recognized by the University Grants Commission (UGC) of Sri Lanka as a degree awarding institute, the campus is located in a picturesque setting with all modern amenities and requirements at Malabe, in the District of Colombo.

Established on the 1st of July 2009, SAITM Faculty of Engineering is offering study programs in Engineering leading to BSc. (Honors) degrees in affiliation with the Asian Institute of Technology (AIT), Thailand. Students who enroll in the program will be completing the first two years of the 4 year degree program at SAITM in Sri Lanka before transferring to AIT for the final 2 years.

I am pleased to note that the engineering faculty progressing rapidly & producing quality graduates who are drawing high commendations for the industry. The faculty has achieved many milestones such as “Research Symposium on Engineering Advancement”, a pioneering research symposium among non-state sector higher educational institutes & holding very successful events such as the “Annual SAITM Robotics Challenge”.

This student hand book will provide a complete guide with regard to the courses offered and other related details at SAITM Faculty of Engineering.
South Asian Institute of Technology and Medicine (SAITM) is the first non-state higher education institution with several faculties established in 2008 by Dr. Neville Fernando. The Faculty of Engineering was established on 1st July 2009 with Dr. Sisuru Sendanayake as the first Dean of the Faculty. To date, SAITM has enrolled five batches of students – a total of 585 to study BSc (Honors) Engineering courses. The Faculty consists of three departments namely Department of Civil and Infrastructure Engineering, Mechatronics Engineering and Environmental & Biosystems Engineering.

The degree is a four year programme and is affiliated with the Asian Institute of Technology (AIT), Thailand. All students enrolling for the BSc degree programme will spend the first two years at SAITM and the final two years at AIT.

I am happy to report that the students from the first and second batches have performed very well at the final examination held at AIT. SAITM is very proud of their excellent achievement.

It is noted that all SAITM/AIT graduates have readily secured employment in government & reputed private sector organizations which indeed is an endorsement of the quality of the program.

The Engineering students at SAITM also engage in many extracurricular activities such as Rugby, Football, Cricket and Basketball. They have taken part in interuniversity activities. The Faculty of Engineering hopes to conduct local degree programmes which will enable many more students to follow the BSc in Engineering degree locally.
1.3  Message from the Dean, Faculty of Engineering

It is a well-known fact that the world is in need of more and more engineers to sustain life on the planet. The massive amount of infrastructure development and services required in keeping with the rising world population and occurrence of unprecedented natural catastrophes, demand that engineers take the leadership in guiding the humankind into a stable and safer era in which all human beings can exist with basic amenities and freedom. It is also important that re-building and new developments are based on sustainable principles.

With the world economic power shifting to Asia it is inevitable that the global knowledge base in the future will be firmly established in that region with more and more intellectual and skilled personnel produced. In the light of these developments it is an important and timely step that South Asian Institute of Technology and Medicine (SAITM) setting up a fully fledged Faculty of Engineering, becoming the pioneering non-state sector higher education institute to produce quality Engineering graduates, who will be capable of meeting the local, regional and international standards.

Faculty of Engineering of SAITM within the short period of time since its establishment has set up fully functional state of the art engineering laboratories and a team of top academics drawn from local and foreign universities in addition to all the necessary infrastructure facilities for a world class engineering education. With the backing of the Asian Institute of Technology (AIT), with whom SAITM engineering programs are affiliated, our engineering undergraduates can obtain a top quality internationally recognized honors degree in Bachelor of Science which certainly can be considered a great boon for the youth of Sri Lanka and the South Asian region.
Mission

To become a Faculty which will continue to produce world class Engineers, highly employable with a solid background in advance Engineering knowledge, research and hands on skills who are ready to face future challenges with discipline and confidence.

Vision

To turn – out highly skilled world class Engineering graduates who will command preference in the local, regional and international industry on their graduation.
2  Organization and Administration of Faculty of Engineering

2.1  Departments

Faculty of Engineering consists of three departments as follows,

- Department of Civil and Infrastructure Engineering
- Department of Mechatronics Engineering
- Department of Environmental & Biosystems Engineering

2.2  General Contact Information

Faculty of Engineering,
South Asian Institute of Technology and Medicine (SAITM),
Millennium Drive, New Kandy Road, Malabe, Sri Lanka

Tel: +(94) 11 241 3351, +(94) 11 241 3331, Fax: +(94) 11 241 3332
Email: info@saitm.edu.lk
Web: http://www.saitm.edu.lk/

Administration Offices:

Ground floor  : Offices of Registrar, Assistant registrar, and Bursar
1st floor      : Dean's office, Faculty Coordinating office and Department offices
2nd floor      : Chairman's office, Library
3rd floor      : Auditorium and the Examination hall
2.3 Faculty Layout
3 Introduction

Established on the 1st of July 2009, SAITM faculty of Engineering is the pioneering and the leading non-state sector school of engineering in Sri Lanka offering 4 year full time Bachelor of Science (BSc.) Engineering degrees in affiliation with the prestigious, United Nations backed, international university, the Asian Institute of Technology (AIT) Thailand.

Equipped with the state of the art physical resources, with international standard engineering and computer laboratories, well stocked library and modern lecture halls, the faculty can boast of highly qualified top notch team of full time academics and researchers and a selection of the best senior lecturers from state universities in Sri Lanka and abroad as visiting faculty.

The faculty also has an expert panel of extended faculty representing a wide spectrum of industries supplementing the study programs and research with industry links, mentoring, in-plant training and industry exposure culminating in ready employment opportunities for our graduates.

3.1 Staff

The academic staff of the faculty consists of highly qualified persons in a wide range of specializations.

Their academic backgrounds, teaching experiences, research capabilities and industrial exposure are the main strengths that contribute to the present dynamic role played by the Faculty. Over the past years the faculty has been successful in establishing significant contacts with local industry through its collaborative programmes such as Annual Research symposium, Robotics competition and Industry consultative Board meeting.
3.1.1 Academic Staff

Dean, Faculty of Engineering

Dr. S. Sendanayake  
B.Sc Eng (Hons.), M.Sc, PhD (Moratuwa).  
Ext: 207, Room: 201  
email: sisuru.s@saitm.edu.lk,

Head/ Civil & Infrastructure Engineering

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Head/ Mechatronics Engineering

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B.Sc Eng (Hons.), M.Eng. (AIT), AMIESL  
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Head/ Environmental & Bio systems Engineering

Dr. N. Miguntanna  
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Head/Electronics & Telecommunications Engineering

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Senior Lecturer in Information Technology

Mr. T. Gunarathne  
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Senior Lecturer in Civil & Infrastructure Engineering

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Lecturer in Biosystems Engineering

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Research Assistant  
Dept. of Mechatronics Engineering

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3.1.2 Visiting Faculties – Semester (I – IV)

Prof. Nimal Ekanayake
Visiting Lecturer
B.Sc. University of Ceylon, M.Sc. (UK), PhD (Canada)

Prof. Lanka Udawatta
Visiting Lecturer
B.Sc.Eng (Moratuwa), MEng (Saga), PhD (Saga), CEng, MIEEE

Prof. (Mrs.) Indra Dayawansa
Visiting Consultant
B.Sc.(Cey), Dip EE(IEE, London), M.Sc.(Wales), PhD(Wales), FIEE, FIP(SL), MIEEE

Prof. Janaka Ekanayake
Visiting Consultant
B.Sc.Eng (Peradeniya), Ph.D. (UK)

Dr. K. A. S. Susantha
Visiting Lecturer
B.Sc.Eng (Peradeniya), MEng (AIT), PhD (Japan)

Dr. M. Gamage
Visiting Lecturer
B.Sc.Eng(Hons), MEng(UEC), PhD(UEC)

Dr. R. Rodrigo
Visiting Lecturer
B.Sc. Eng (Hons.) M.Eng.(Canada) PhD(Canada)

Prof. Lanka Udawatta
Visiting Lecturer
B.Sc.Eng (Moratuwa), MEng (Saga), PhD (Saga), CEng, MIEEE

Prof. Janaka Wijekulasooriya
Visiting Lecturer
B.Sc.Eng (Peradeniya), PhD (Northumbria, UK)

Dr. Asela K. Kulathunga
Visiting Lecturer
B.Sc. Eng. (Peradeniya),PhD (Aus)

Dr. L.I.N. De Silva
Visiting Lecturer
B.Sc.Eng. (Moratuwa), M.Eng. (Japan), Ph.D,(Japan)

Dr. P. N.Dasanayake
Visiting Lecturer
B.Sc. (Jayawardenepura), PhD (USA)

Mr. Eranda Jayathunga
Visiting Lecturer
B.Sc.(Hons) (Peradeniya), M.Eng. (ICT) Thailand

Ms. Ganga Rasanjalee Abeywickrama
Visiting Lecturer
B.Sc.(Colombo).MSc. (Bangalore)

Dr. Dinithi C. Peiris
Visiting Lecturer
B.Sc. (Colombo), PhD (UK)

Dr. P. K. D. M. C. Karunarathne
Visiting Lecturer
B.Sc. (Jayawardenepura), PhD (Jayawardenepura)

Mr. Varuna Priyanka
Visiting Lecturer
B.Sc.Eng (Hons) (Ruhuna), M.Phil (Ruhuna)

Mr. T. I. Alles
Visiting Lecturer
Specialist English Trained

Ms. Thanuja Wijesinghe
Visiting Lecturer
MA (Kelaniya)
BA (English Special)

Mr. Susantha Hewa
Visiting Lecturer
B.A(English Special), M.A.(Linguistics)

Ms. A. Gamage
Visiting Lecturer
B.Sc. (Peradeniya), M.Sc. (Peradeniya)
## Visiting Faculties – Semester (V – VIII)

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Matthew N. Dailey</td>
<td>Visiting Consultant</td>
<td>Ph.D., University of California, San Diego</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Bonaventura H. W.</td>
<td>Ph.D., University of Kansas, Kyoto University, Japan</td>
</tr>
<tr>
<td>Dr. Ching-Jong Wang</td>
<td>Visiting Consultant</td>
<td>Ph.D (University of Arizona)</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Chotchai Charoenngam</td>
<td>Ph.D., University of Hong Kong, Thailand</td>
</tr>
<tr>
<td>Dr. Damien Jourdain</td>
<td>Visiting Consultant</td>
<td>Ph.D., Montpellier University, France</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Damien Jourdain</td>
<td>Ph.D., University of Hong Kong, Thailand</td>
</tr>
<tr>
<td>Dr. Denis Sweatman</td>
<td>Visiting Consultant</td>
<td>Ph.D., University of Queensland, Thailand</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Freek van der Meer</td>
<td>Visiting Consultant</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Djoen San Santoso</td>
<td>Ph.D., University of Queensland, Thailand</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Erik L.J. Bohez</td>
<td>Ph.D., University of Florida, United States</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Huynh Trung Luong</td>
<td>Ph.D., University of Florida, United States</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Huynh Trung Luong</td>
<td>Ph.D., University of Florida, United States</td>
</tr>
<tr>
<td>Dr. Iyyanki. V. Murali</td>
<td>Krishna Acharyulu</td>
<td>Ph.D., University of Technology, United States</td>
</tr>
<tr>
<td>Dr. Joko Harsono Widjaja</td>
<td>Visiting Consultant</td>
<td>Ph.D., University of Technology, Sydney-North Australia</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Indrajit Mukherjee</td>
<td>Ph.D., IIT, India</td>
</tr>
<tr>
<td>Professor Joydeep Dutta</td>
<td>Visiting Consultant</td>
<td>Ph.D., Indian Institute of Technology, United States</td>
</tr>
<tr>
<td>Professor Kazi Mohiuddin</td>
<td>Ahmed</td>
<td>Ph.D., University of Newcastle, Sydney-North Australia</td>
</tr>
<tr>
<td>Professor Kazi Mohiuddin</td>
<td>Ahmed</td>
<td>Ph.D., University of Newcastle, Sydney-North Australia</td>
</tr>
<tr>
<td>Professor Kanchana</td>
<td>Kanchanasut</td>
<td>Ph.D., University of Technology, Sydney-North Australia</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Kiyoshi Honda</td>
<td>Ph.D., University of Technology, Sydney-North Australia</td>
</tr>
</tbody>
</table>


Visiting Faculties – Semester (V – VIII)

Associate Professor Manukid Parnichkun
Visiting Consultant
Ph.D. The University of Tokyo
M.Eng. University of Tokyo, Japan
B.Eng. Chulalongkorn University, Thailand

Professor Mario T. Tabucanon
Visiting Consultant
D.Eng, Industrial Engineering & Management, AIT
M.Eng., Systems Engineering & Management, AIT
B.Sc. in Mechanical Engineering, CIT, Philippines
B.Sc. in Electrical Engineering, CIT, Philippines

Dr. Meng Heng Loke
Visiting Consultant
PhD. The University of Birmingham
M.Sc. Universiti Sains Malaysia
B.Sc.Hons. Universiti Sains Malaysia

Professor Mukand Singh Babel
Visiting Consultant
D. Eng. AIT
M. Eng., AIT
B. Eng. (honors) Rajasthan Agricultural University, India

Associate Professor Noppadol Phien-wej
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M.Sc. University of Illinois at Urbana-Champaign, U.S.A
Ph.D. University of Illinois at Urbana-Champaign, U.S.A.

Professor Phan Minh Dung
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Ph.D. Dresden University of Technology, Germany
M.Sc. University of Technology, Germany

Senior Instructor Punchet Thammarak
Visiting Consultant
PhD., The University of Texas, Austin
B.Eng. Chulalongkorn University, Thailand

Assistant Professor Raphael Duboz
Visiting Consultant
Ph.D, University of Paris

Assistant Professor Sangam Shrestha
Visiting Consultant
Ph.D.(Japan), M.Sc. (Thailand), M.Sc.(Nepal)

Dr. Shinichai Nakamura
Visiting Consultant
Ph.D (Tokyo)

Dr. Masahiko Nagai
Visiting Consultant
Ph.D. University of Tokyo, Japan
M.Sc., Asian Institute of Technology, Thailand
B.S., St. Cloud State University, USA.

Assistant Professor Mongkol Ekpanyapong
Visiting Consultant
Ph.D. Georgia Institute of Tech, Atlanta, USA.
M.Sc. Georgia Institute of Tech, Atlanta, USA.
M.Eng. AIT
B.Eng. Chulalongkorn University

Associate Professor Nitin Afzulpurkar
Visiting Consultant
Ph.D. Canterbury University, New Zealand
B.E., University of Pune, India

Associate Professor Pham Huy Giao
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D. Eng. Engg. (Engg. and Applied Geology), AIT
M. Eng. AIT
Dipl. Eng. (M.Sc.), Bucharest University, Romania

Assistant Professor Poompat Saengudomlert
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Ph.D. MIT, USA,
M.Sc. MIT, USA
B.Sc., USA,

Associate Professor R.M.A. Premanandana Rajatheva
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Ph.D. University of Manitoba, Canada
M.Sc. University of Manitoba, Canada
B.Sc (Hons).University of Moratuwa, Sri Lanka

Associate Professor Roberto S. Clemente
Visiting Consultant
Ph.D. McGill University, Canada
M.Eng. Asian Institute of Technology Thailand
B.Sc. University of the Philippines, Philippines

Professor Santosh G. Thampi
Visiting Consultant
M.Sc. Kerala Agricultural University
M.Sc. IIT Madras
Ph.D. Indian Institute of Science, Bangalore

Professor Seishiro Kibe
Visiting Consultant
Ph.D. University of Tokyo, Japan
M.Sc. University of Tokyo, Japan
B.Sc. University of Tokyo, Japan

Associate Professor Shinya Hanaoka
Visiting Consultant
Ph.D.(Japan), M.Sc(Japan), B. Eng.(Japan)
Prof. Sumanta Guha  
*Visiting Consultant*  
Ph.D. (India), Ph.D. (USA), M.S. (USA)

Dr. Surat Lertlum  
*Visiting Consultant*  
B.Sc (U.S.A.), M. Eng. (U.S.A.)  
Ph.D. (AIT)

Dr. Suwat Athichanagorn  
*Visiting Consultant*  
Ph. D. (USA)

Professor Akashi Nakatsuji  
*Visiting Consultant*  
D.Eng. (Japan), M.Eng. (Japan), B.Eng. (Japan)

Dr. Taravudh Tipdecho  
*Visiting Consultant*  
D Tech Sc. (AIT), M.Sc. (THAILAND), B.Sc (THAILAND)

Professor Thimmegowda Rangaswamy  
*Visiting Consultant*  
Ph. D. (India), M. Sc. (Engg)- (India)

Assistant Prof. Thirayoot Limanond  
*Visiting Consultant*  
Ph.D. (California), M.S.(USA), B.Engg. (Thailand)

Senior Lecturer Udupi Sripati  
*Visiting Consultant*  
Ph. D.(IIT) India.

Assistant Professor Surachet Pravinvongvuth  
*Visiting Consultant*  
Ph.D. (USA), M.Eng. (AIT), B.Eng. (Thailand)

Dr. Sutat Weesakul  
*Visiting Consultant*  
D.Eng. AIT  
M.Eng. AIT  
B.Eng. Chulalongkorn University

Associate Professor Sylvain Perret  
*Visiting Consultant*  
PhD (France)

Dr. Tapio Erke  
*Visiting Consultant*  
M.Eng. (Finland)

Associate Professor Teerapat Sanguankotchakorn  
*Visiting Consultant*  
D.Eng (Tokyo), M.Eng (Tokyo), B.Eng. (Thailand)

Professor Thippur V. Sreenivas  
*Visiting Consultant*  
M.E. (India), Ph.D. (India)

Associate Professor Vatcharaporn Esichaikul  
*Visiting Consultant*  
Ph.D. (USA), M.B.A. (USA), B.Acc.(Honors) - (Thailand)

Senior Research Associate Vivarad Phonekeo  
*Visiting Consultant*  
Ph.D. (AIT), M.Sc. (AIT), B.Sc. (Russia)
3.1.3 Non Academic Staff

**Registrar**

Mrs. W. H. R. Hussain  
*BA (Special) in Economics (Sri J.), PG Dip. in Economic Development (Col.), MPA (Sri J.)*  
Ext: 104  email: info@saitm.edu.lk

**Bursar**

Mr. A. P. Galhena  
*B.Sc (Sri J.), Chartered Finalist*  
Ext: 226  email: galhena.p@saitm.edu.lk

**Lab Technician**

Mr. M. Wickramasinghe  
Room: G06

**Lab Technician**

Mr. P. N. K. A. D. Ravin Samanpriya  
Room: G06

**Assistant Faculty Coordinator**

Mrs. Sudarshini Godellewatte  
Room: 222

**Assistant Faculty Coordinator**

Mr. Yasith Nilanka Perera  
Room: 222
4 Degree Programs and Administration

4.1 Entry Requirements

- For Civil and Infrastructure /Mechatronics/ Industrial /Telecommunication and Electronics Engineering - Minimum 3 passes from local or London A/L’s including Mathematics, Physics and Chemistry.

- For Environmental & Biosystems Engineering - Minimum 3 passes from local or London A/L’s including Biology, Physics and Chemistry.

- Minimum English language requirement: Credit pass for English language from the GCE O/L examination conducted by Ministry of Education in Sri Lanka and 5.5 points from IELTS, depending on the levels specified from time to time.

5 Facilities Offered by the Faculty

5.1 Working Hours and Access to Facilities

The normal working time of the academic programme of the faculty is from 8.30 a.m. to 4.30 p.m. on weekdays, but there are instances where it goes beyond 4.30 p.m. In addition, sometimes the students are requested to attend guest lectures and additional classes during weekends. The faculty may decide on conducting lectures on public holidays if necessary.
5.1.1 SAITM Library

SAITM library that serves the needs of the students is located in the 3rd floor of the main building with On-site access to the library system with borrowing privileges. On-site access to computer workstations designated as Public Access Workstations for use of the Library catalogue and electronic resources (some restrictions may apply) and basic reference services are also available.

The Library contains at present approximately 4000 volumes (books in Engineering, medicine, Management, IT, Media, Languages, journals, etc.) with a seating capacity of 150.

Normal Library open hours are as follows:

Lending & Return: 8.30 a.m. to 04.30 p.m. (Monday – Friday)
8.30 a.m. to 12.30 p.m. (Saturday)

Reference Books: Lending after 2.30 p.m. (Monday – Saturday)
Return: 10:30 am (Monday – Saturday)

Examination periods 8.30 a.m. – 5.30 p.m.

Mercantile Holidays & Poya Days - Closed
5.2 Engineering Laboratories at SAITM

5.2.1 Civil and Infrastructure Engineering Laboratory

All required practical, demonstration sessions are carried out as per the AIT standards at department of Civil and Infrastructure Engineering for the following modules,

- CIE 205 Structural analysis I
- IE 202 Strength of Materials
- CIE 202 Fluid mechanics
- CIE 201 Soil mechanics
- CIE 203 Site surveying
5.2.2 Mechatronics Engineering Laboratory

All relevant practical, demonstration sessions are carried out as specified by AIT, at the department of Mechatronics Engineering for the following modules,

- UG 101 Mechanics
- UG 105 Electromagnetism and optics I
- UG 207 Electromagnetism and optics II
All relevant practical, demonstration sessions are carried out as specified by AIT, at the department of Electronics Engineering for the following modules,

- EL 201 Semiconductor devices
- EL 202 Electrical circuits
- EL 204 Electronics circuits
5.2.4 Engineering Workshop

Academic activities of the Faculty of Engineering in the workshop are coordinated by the Department of Mechatronics Engineering. Exposure to workshop practice is provided through the conventional facilities of the Main Workshop. It consists of Fitting, Machining, and Metal & Wood-work sections.

The main function of the workshop is to provide hands-on training to develop prototypes for the student project activities, provide exposure to the modern hi-tech facilities of the Computer Aided Design/Computer Aided Manufacturing/Computer Aided Engineering (CAD/CAM/CAE). 100 students can be accommodated per session in the workshop. The workshop is equipped to provide practical and demonstration sessions required for, IE 201 Manufacturing Processes.
5.2.5 **Computer Laboratories**

The faculty provides highly sophisticated learning environment to students by providing a modern language laboratory with 30 iMac computers with internet facility and state-of-the-art IT laboratories with 72 high-end pc’s backed by a fiber optic backbone catering to the modern video conferencing needs together with comfortable seating arrangements.
5.2.6 **Engineering Drawing Laboratory**

Fully comprehensive hands on practical sessions are carried out for the engineering drawing module at drawing laboratories and Computer Aided drawing using AutoCAD at computer laboratories.

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5.2.7 **Lecture Halls/Exam Halls**

Fully equipped air-conditioned lecture halls and an Auditorium complete with audiovisual facilities. Each can accommodate approximately 60 students.
5.2.8 Common Room/Recreation Area

A recreation area with access to Free Wi-Fi zone is the ground floor which has the capacity to accommodate 150 students at any one time.

5.2.9 Reading Area

An area of 10,000 Sq.ft is allocated for the students to use as a reading area on the 1st, 3rd & 4th floors (library floor).

5.2.10 Sports Complex

An area of 10,000 Sq. ft at the lower ground floor is allocated for indoor and a gymnasium on the 5th floor games. A swimming pool, in-door gymnasium and a play ground to promote sports will be available by December 2015.
5.2.11 Cafeteria

The main canteen is located on the ground floor, easily accessible from the academic and administration wings with the capacity to accommodate approximately 500 students at one time. Wholesome meals are provided throughout the day for staff and students.

5.2.12 Shuttle Service

Campus operates a shuttle service between SAITM & Students hostels, Malabe, Kaduwela & from the turn off at Chandrika Kumaratunga Mawatha.

5.2.13 Car Parks

Three separate car parks are available for students, academic staff and visitors.
5.2.14 Medical Support

A well-equipped medical center located in the first floor for all emergency care coverage. If necessary, student patients can be transferred to NFTH.

5.2.15 Security

The purpose of the Security Force is to ensure that the campus provides a safe environment to study. Each floor of the main building is manned by a security officer round the clock with security offices at all entrance/exit points of the campus premises.

5.2.16 ATM Facilities

A Bank of Ceylon ATM facility is available for students and staff at the premises.

5.2.17 Accommodation

Lodging is available for students on request at F & G Housing complex, Talahena. The Campus provides board and lodging for students at this Housing Complex with all facilities including a swimming pool and sports complex.
5.2.18 English Support Program

English language support is offered by SAITM for students who lack proficiency in English language.

5.2.19 Student Counselling Services

Student counselors from the department of psychology, faculty of medicine are providing the counselling service for the students in the first four semesters at the Faculty of Engineering. They offer services to assist students in academic problems: personal/interpersonal, study problems and relationships, appeal, withdrawal, assignments, marital problems, social problems, family problems and all other issues that may affect their academic performance.

5.2.20 Academic Guidance

The provision of academic guidance and counselling services is an integral part of the student support system and welfare in SAITM.

In addition to the high level of academic guidance typically provided in the class room by the lecturers a faculty advisor has been appointed for each student. The faculty advisor plays a central role in guiding the student’s academic program, assisting in course selection, and providing guidance and counseling in all academic matters. Students are required to meet with their faculty advisor to discuss their academic progress and to resolve and clarify any academic related issues at any time previously set up with the agreement of both the student and the advisor. Furthermore, it is required to obtain faculty advisors recommendations and signature for all the academic affairs whenever is necessary.
5.2.21 Printing and Electronic Media Services

The institute provides quick and professional printing, photocopying and scanning services to students at a reasonable cost depending on the quality for which the service is needed.

5.2.22 Access to Free Internet (Wi-Fi zone)

The institute provides full IT services and facilities such as email, access to the Internet, and student information system (Moodle). Students can access the Internet and intranet wirelessly anywhere on campus.
6 Curriculum and Degree Programs

6.1 Curriculum

All programs under the Faculty of Engineering are affiliated to Asian Institute of Technology (AIT), Thailand.

AIT (http://www.ait.ac.th) is an independent International University set up under the auspicious of the United Nations with the Board of Governors consisting of ambassadors of countries in the region as well as outside the region.

AIT established in 1959 has introduces UG programs (http://www.ug.ait.ac.th) in Mechatronics, Electronics, Telecommunication, ICT and Civil and Infrastructure Engineering from 2009.

Hitherto a postgraduate Institute, AIT has earned itself an unenviable reputation as a top notch International university recognized for its producing of world class Engineers.

Curriculum with the relevant semester details are as follows.

**Civil and Infrastructure Engineering / Mechatronics Engineering Curriculum**

Note: *The Last two rows of each table shows the sub total credits for that particular semester and total credits covered until that particular semester, respectively.*

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**Year III Semester I**

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**Inter-Semester Year III & IV**

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**Year IV Semester I**

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<td>TC402 Optical Communications 3(2-1)</td>
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<td>IEEE 403 Software</td>
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<tr>
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**Technical Elective IV 3(-)**

- IT401 Internet Technology 3(3-0)
- Technical Elective IV 3(-)
- TC401 Digital Communications 3(2-1)
- Technical Elective I 3(-)
- Technical Elective II 3(-)
- Technical Elective I 3(-)
- EL402 Embedded Systems 3(2-1)
- Technical Elective V 3(-)
- TC402 Optical Communications 3(2-1)
- EL402 Embedded Systems 3(2-1)
- Technical Elective II 3(-)
- Technical Elective III 3(-)
- Technical Elective IV 3(-)
- Technical Elective VI 3(-)

**Technical Elective V 3(-)**

- IT402 Database Design 3(3-0)
- Technical Elective VI 3(-)
- TC403 Teletraffic Engineering 3(2-1)
- Technical Elective I 3(-)
- Technical Elective III 3(-)
- Technical Elective IV 3(-)
- Technical Elective VI 3(-)
Year IV Semester II

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<th>TC</th>
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Technical Elective VII 3(-) IT405 Web Application Engineering 3(1-2)

Technical Elective VIII 3(-) Technical Elective II 3(-) Technical Elective VIII 3(-) Technical Elective I 3(-) EL401 Analog Integrated Circuits 3(3-0) Technical Elective IV 3(3-0) Technical Elective V 3(3-0) Technical Elective IV 3(3-0)

Technical Elective IX 3(-) Technical Elective III 3(-) Technical Elective IX 3(-) Technical Elective II 3(-) Technical Elective II 3(-) Technical Elective V 3(3-0) Technical Elective VI 3(3-0) Technical Elective V 3(3-0)

Technical Elective X 3(-) Technical Elective VII 3(-) Technical Elective VII 3(-) Technical Elective III 3(-) Technical Elective VI 3(3-0) Technical Elective VII 3(3-0) Technical Elective VI 3(3-0) Technical Elective VI 3(3-0)

17(-) 17(-) 16(-) 16(-) 16(-) 16(-) 16(-) 16(-)

142(-) 142(-) 141(-) 147(-) 147(-) 147(-) 147(-) 146(-)

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**Biosystems Engineering Curriculum**

**Year I Semester I**

BS101 Introduction to Biosystems Engineering 2(2-0)

UG101 Mechanics/Physics 4(3-1)

BS102 Calculus 4(4-0)

BS103 Biology I 3(3-0)

UG103 English Communication Skills I 3(2-1)

UG110 Engineering Drawing 3 (1-2)

Subtotal19 (15-4)

**Year I Semester II**

BS104 Biology II 3(3-0)

UG107 English Communication Skills II 3(2-1)

UG109 General chemistry 4 (3-1)

UG112 Thermodynamics 3 (3-0)

CS103 Computer Programming for non-Specialists 3(2-1)

Subtotal16 (13-3)

**Year II Semester I**

UG201 Linear Algebra 3(3-0)

UG202 Applied Mathematics Laboratory 1(0-1)

CIE202 Fluid Mechanics 3(2-1)

UG203 Material Science 3 (2-1)

BS201 Organic Chemistry 3(2-1)

BS202 Microbiology 3(2-1)
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
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<tbody>
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<td>BS203</td>
<td>Genetics</td>
<td>3(3-0)</td>
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<tr>
<td>BS204</td>
<td>Plant Physiology</td>
<td>3 (3-0)</td>
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<tr>
<td>BS205</td>
<td>Animal Physiology</td>
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<td>BS206</td>
<td>Analytical Chemistry</td>
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<td>BS207</td>
<td>Biostatistics</td>
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<tr>
<td>BS208</td>
<td>Electrical Engineering and electronics for Bio-engineers</td>
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**Year II: Inter-Semester**

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<td>UG611</td>
<td>Internship I</td>
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**Year III Semester I**

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<tr>
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<td>BS301</td>
<td>Food, Nutrition and Wellness</td>
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<tr>
<td>BS302</td>
<td>Food Science and Technology</td>
<td>3(3-0)</td>
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<tr>
<td>BS303</td>
<td>Crop, Livestock, and Fish Production Systems</td>
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<td>BS304</td>
<td>Biochemistry</td>
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<td>BS306</td>
<td>Biosystems Engineering Applications</td>
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<tr>
<td>BS312</td>
<td>Industrial Microbiology</td>
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**Year III Semester II**

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<tbody>
<tr>
<td>UG305</td>
<td>Technical writing</td>
<td>3(3-0)</td>
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<tr>
<td>BS305</td>
<td>Instrumentation and Measurement</td>
<td>3(2-1)</td>
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<tr>
<td>BS307</td>
<td>Workshop techniques and practice</td>
<td>3(1-2)</td>
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<tr>
<td>BS308</td>
<td>Engineering Properties of Bio-materials</td>
<td>3(2-1)</td>
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<td>BS309</td>
<td>Bioprocess Technology</td>
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<tr>
<td>BS310</td>
<td>Food Process Engineering</td>
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<tr>
<td>BS311</td>
<td>Food Analysis and Quality Assurance</td>
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**Year III: Inter-semester**

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<td>UG 612</td>
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**Year IV Semester I**

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<td>UG401</td>
<td>Capstone Project 1</td>
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<td>BS401</td>
<td>Bio-energy Systems</td>
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<td>BS402</td>
<td>Bio-separation Process</td>
<td>3 (2-1)</td>
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<td>BS403</td>
<td>Advance Molecular Biology</td>
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<td>BS405</td>
<td>Postharvest Engineering</td>
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<tr>
<td>UG402</td>
<td>Principles of Innovation and Entrepreneurship*</td>
<td>2(2-0)</td>
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**Year IV Semester II**

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<td>BS404</td>
<td>Farm Power, Machinery and Renewable Energy Systems</td>
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<td>BS406</td>
<td>Laws and Regulations of Food and Bioprocess Industry</td>
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<td>BS407</td>
<td>Life Cycle Inventory Analysis and Product Design*</td>
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<tr>
<td>BS408</td>
<td>Food and Bioprocessing Plant Management</td>
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<tr>
<td>UG406</td>
<td>Engineering Professional Practice*</td>
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**Subtotal**: 16 (11-5)
### 6.2 Course Description (Only for first two years)

#### 6.2.1 B.Sc. Eng in Mechatronics/ Electronics/ Telecommunication/ Industrial Engineering

<table>
<thead>
<tr>
<th>Course/ Subject Title</th>
<th>Description</th>
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<tr>
<td><strong>Calculus I</strong></td>
<td>Functions &amp; graphs, Limits and continuity, Derivatives, Rules of differentiation, Higher order derivatives, Mean Value Theorem, L'Hospital's Rule, Integrals, Fundamental Theorem, Techniques of integration, Definite integrals. Applications of differentiation and integration, Basic Differential equations, parametric equations, Polar Coordinates, Infinite sequence and series</td>
</tr>
<tr>
<td><strong>Introduction to Computer and Programming</strong></td>
<td>Objects and classes; fundamental data types; control structures; arrays; inheritance, interfaces, and polymorphism; I/O and string processing; Exceptions; searching and sorting</td>
</tr>
<tr>
<td><strong>Mechanics</strong></td>
<td>Review of dimensions and measurements, concepts in dynamic mechanical systems displacement, velocity and acceleration, Introduction to vectors, two dimensional motion, Concept of force, Newton’s laws on force and applications, Centre of gravity, Static systems with distributed loads, Angular motion, Numerical Molding in dynamics, Kinetic and potential energy.</td>
</tr>
<tr>
<td><strong>Electrical Circuits</strong></td>
<td>Circuit elements and Kirchhoff’s Law, Analysis of resistive circuits, Network theorems, Alternating Current theory, Three-Phase Circuits, Electrical measurements. Non sinusoidal wave forms, Electrical Installations</td>
</tr>
<tr>
<td><strong>Praxis I</strong></td>
<td>Design principles, Creativity and reasoning, Analysis and synthesis, Decision making, Simple but comprehensive design case studies, mechanical, material, electrical, electronic and IT aspects in design, Group based design, Preparing work plans and delegating duties, Deadlines and costs constraints, Basic procedures in conceptual, preliminary and detailed designs, Report and presentation</td>
</tr>
<tr>
<td><strong>Calculus II</strong></td>
<td>Vectors and the Geometry of Space, vector functions, functions of several variables, partial differentiation, Multiple Integration, vector analysis and higher order differential equations.</td>
</tr>
<tr>
<td><strong>Electromagnetism and optics I</strong></td>
<td>Elements of electromagnetism, Electromagnetic theory and applications, A.C. Circuits, R, L, C circuits, Introduction to optics, Lenses and optical instruments, Applications of optics and LASER, Basic electrical measurements</td>
</tr>
<tr>
<td><strong>Material Science</strong></td>
<td>Atomic structure, Crystal geometry and structure, Crystal Imperfections, Surface imperfections, Fundamentals of diffusion in solids, Phase transformations in materials, Metals and Ceramics, Electrical, Magnetic and Optical properties of materials</td>
</tr>
<tr>
<td><strong>Object Oriented Programming and Web Application</strong></td>
<td>Data structures and algorithms, recursion, graphical user interfaces, multithreading, streams, sockets, databases, and web applications.</td>
</tr>
<tr>
<td><strong>Semiconductor devices</strong></td>
<td>Semiconductor fundamentals, Operation and applications of analog and digital electronics devices, Diode, Diode circuits and applications, Bipolar junction transistors (BJTs), BJT circuits and applications, Field effect transistors (FETs), FET circuits and applications, Logic gates, Introduction to sequential and combinational logic circuits, Semiconductor device fabrication</td>
</tr>
<tr>
<td><strong>Praxis II</strong></td>
<td>Software tools for engineering design, equipment used for manufacturing, documentation and reporting</td>
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<td>Course</td>
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<tr>
<td><strong>Discrete Mathematics</strong></td>
<td>Basic logic, mathematical reasoning, proof techniques, sets, functions, relations, counting, discrete probability, graphs, trees.</td>
</tr>
<tr>
<td><strong>Electronics Circuits</strong></td>
<td>Review on Diode, Transistor Circuits, Differential Amplifiers, Operational Amplifiers, Power Electronic Devices, Logic Circuits, Combinational Circuits, and Sequential Circuits, Other Devices (PLAs, RAM, ROM, and microcontrollers).</td>
</tr>
<tr>
<td><strong>Introduction to Telecommunication</strong></td>
<td>Standardization, Conventional telephony, Signaling to the Exchange from the telephone, Telephone numbering, Switching and Signaling, Local-Access Networks, International Networks, Network Management, Traffic Engineering, Simplex, Half-duplex, and Full- Duplex communication, Frequency and Bandwidth, Analog and digital signal and systems, Analog signals over digital networks, PCM, Other speech-coding methods, Power levels of signals and decibels, Basic concepts of transmission systems, Radio transmission, Data rate of a transmission channel, Coding, Regeneration, Multiplexing, transmission media, Transmission equipment in the network, Cellular radio principles, Structure of a cellular networks, Operating principles of a cellular network, Mobile communication systems, GSM, Operation of the GSM network, GPRS, Data communication, Physical devices and networks, Protocols, Networks, Applications</td>
</tr>
<tr>
<td><strong>Linear Algebra</strong></td>
<td>System of Linear Equations, Linear Transformation and Matrix, Vector Space, Linear Transformation, Linear Independence, Basis, Determinants, Eigen value and Eigenvector, Inner Product, Orthogonality</td>
</tr>
<tr>
<td><strong>CAD/ CAM</strong></td>
<td>Solid modeling of component using Solid works/AutoCAD, Generation of complex shapes, Assembly modeling, Obtaining Mechanical Drawing, Component analysis (by FEM using available software), Data exchange, CNC machining and CAD/CAM interfacing.</td>
</tr>
<tr>
<td><strong>Applied Mathematics Laboratory</strong></td>
<td>Basic programming concepts including: algorithm development, data types, number representation, control structures, functions, plotting and basic numerical analysis techniques. The basic numerical analysis techniques covered in the course include matrix operations, systems of equations, solving equations, roots, curve fitting, interpolation, numerical integration and ordinary differential equations.</td>
</tr>
<tr>
<td><strong>Basic Kinematics and Dynamics</strong></td>
<td>Review of particle mechanics. Different coordinate representations, Mechanics of rigid bodies</td>
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<tr>
<td>Course/ Subject Title</td>
<td>Description</td>
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**6.2.2  B.Sc. Eng in Civil and Infrastructure Engineering**

<table>
<thead>
<tr>
<th>Course/ Subject Title</th>
<th>Description</th>
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<tr>
<td><strong>Mechanics</strong></td>
<td>Review of dimensions and measurements, concepts in dynamic mechanical systems displacement, velocity and acceleration, Introduction to vectors, two dimensional motion, Concept of force, Newton's laws on force and applications, Centre of gravity, Static systems with distributed loads, Angular motion, Numerical Molding in dynamics, Kinetic and potential energy.</td>
</tr>
<tr>
<td><strong>Calculus I</strong></td>
<td>Functions &amp; graphs, Limits and continuity, Derivatives, Rules of Differentiation, Higher order derivatives, Mean Value Theorem, L'Hospital's Rule, Integrals, Fundamental Theorem, Techniques of integration, Definite integrals. Applications of differentiation and integration, Basic Differential equations, parametric equations, Polar Coordinates, Infinite sequence and series</td>
</tr>
<tr>
<td><strong>Introduction to Computer and Programming</strong></td>
<td>Objects and classes; fundamental data types; control structures; arrays; inheritance, interfaces, and polymorphism; I/O and string processing; Exceptions; searching and sorting</td>
</tr>
<tr>
<td><strong>Engineering Drawing</strong></td>
<td>Introduction to basic principle of engineering drawing including lettering, applied geometry, orthographic drawing and sketching, sectional views and conventions, detail drawing, assembly drawing, dimensioning: basic descriptive geometry dealing with points, lines &amp; planes and their relationship in space and basic developed views.</td>
</tr>
<tr>
<td><strong>Praxis I</strong></td>
<td>Design principles, Creativity and reasoning, Analysis and synthesis, Decision making, Simple but comprehensive design case studies, mechanical, material, electrical, electronic and IT aspects in design, Group based design, Preparing work plans and delegating duties, Deadlines and costs constraints, Basic procedures in conceptual,</td>
</tr>
<tr>
<td>Course Title</td>
<td>Course Description</td>
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</tr>
<tr>
<td>Electromagnetism and Optics I</td>
<td>Elements of waves, Thermodynamics, Introduction to optics, Lenses and optical instruments, Applications of optics and LASER, Modern physics</td>
</tr>
<tr>
<td>Calculus II</td>
<td>Vectors and the Geometry of Space, vector functions, functions of several variables, partial differentiation, Multiple Integration, vector analysis and higher order differential equations.</td>
</tr>
<tr>
<td>Engineering Mechanics</td>
<td>Introduction; Forces and Force Systems; Equilibrium of Rigid Bodies; Center of Gravity, Center of Mass, and Centroid; Kinematics of a Particle; Kinetics of a Particles; Kinematics of a Rigid Body; Planar Kinetics of a Rigid Body; Energy and Momentum in Rigid Body Dynamics.</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Review of atomic structure and bonding; Gases, Liquid and Solids; Metals and non-Metals; Precipitation and Corrosion; Chemical Thermodynamics; Ionic Equilibrium; Grignard’s Reagent; Organic Compounds</td>
</tr>
<tr>
<td>Praxis II</td>
<td>Software tools for engineering design, equipment used for manufacturing, documentation and reporting</td>
</tr>
<tr>
<td>Linear Algebra</td>
<td>System of Linear Equations, Linear Transformation and Matrix, Vector Space, Linear Transformation, Linear Independence, Basis, Determinants, Eigen value and Eigenvector, Inner Product, Orthogonality</td>
</tr>
<tr>
<td>Applied Mathematics Laboratory</td>
<td>Basic programming concepts including: algorithm development, data types, number representation, control structures, functions, plotting and basic numerical analysis techniques. The basic numerical analysis techniques covered in the course include matrix operations, systems of equations, solving equations, roots, curve fitting, interpolation, numerical integration and ordinary differential equations.</td>
</tr>
<tr>
<td>Fluid Mechanics</td>
<td>Fluid properties; Hydrostatics; Fluid Kinematics; Conservation of Mass; Momentum and Energy; Flow in Open Channels; Pipe Flow; Turbo machinery; Fluid Measurements; and Similitude and Dimensional Analysis.</td>
</tr>
<tr>
<td>Soil Mechanics</td>
<td>Origin and definition of soil; physical properties of soil; engineering soil classification; soil compaction; flow of water in soil; stresses within soil mass; shear strength; soil compressibility; consolidation and settlement.</td>
</tr>
<tr>
<td>Strength of Materials</td>
<td>Introduction; Bar under Axial Loading; Torsion of a Shaft; Bending of Beam; Transformation of Stress and Strain; Deflection of Beams; Energy Methods; Buckling of Compressed Member.</td>
</tr>
<tr>
<td>Surveying</td>
<td>Ability to use the chain, tape, level, theodolite and other surveying Equipment to carry out field surveys, produce relevant maps and drawings, and do associated computations required for engineering applications.</td>
</tr>
<tr>
<td>Course/ Subject Title</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Mechanics</td>
<td>Review of dimensions and measurements, concepts in dynamic mechanical systems displacement, velocity and acceleration, Introduction to vectors, two dimensional motion, Concept of force, Newton's laws on force and applications, Centre of gravity, Static systems with distributed loads, Angular motion, Numerical Molding in dynamics, Kinetic and potential energy.</td>
</tr>
<tr>
<td>Engineering Drawing</td>
<td>Introduction to basic principle of engineering drawing including lettering, applied geometry, orthographic drawing and sketching, sectional views and conventions, detail drawing, assembly drawing, dimensioning: basic descriptive geometry dealing with points, lines &amp; planes and their relationship in space and basic developed views.</td>
</tr>
</tbody>
</table>
| Chemistry             | Review of atomic structure and bonding; Gases, Liquid and Solids; Metals and non-Metals; Precipitation and Corrosion; Chemical
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermodynamics</td>
<td>Thermodynamics; Ionic Equilibrium; Grignard’s Reagent; Organic Compounds</td>
</tr>
<tr>
<td>Biology- I</td>
<td>Biodiversity of earth; phylogeny and the tree of life; plant diversity and evolution; plant growth and development; animal diversity and evolution; animal growth and development</td>
</tr>
<tr>
<td>Biology- II</td>
<td>The chemical context of life; cellular structure and function; basic principles of biology; the cell cycle; inheritance; gene expression; cellular metabolism; and cell communication.</td>
</tr>
<tr>
<td>Introduction to Bio Systems Engineering</td>
<td>Agricultural, food and bioprocess engineering; bioengineering; Biosystems engineering; role of Biosystems engineers; bioengineering resources and careers.</td>
</tr>
<tr>
<td>Thermodynamics</td>
<td>Basic concepts of Thermodynamics; The First law of thermodynamics; Properties of pure substances; Energy transfer by heat, work and mass; The Second law of thermodynamics; Power and Refrigeration cycles.</td>
</tr>
<tr>
<td>Computer Programming for non-Specialists</td>
<td>Data Types; The Python Type System; Program Structures; Functions; Modules; Classes; Applications.</td>
</tr>
<tr>
<td>Linear Algebra</td>
<td>System of Linear Equations, Linear Transformation and Matrix, Vector Space, Linear Transformation, Linear Independence, Basis, Determinants, Eigen value and Eigenvector, Inner Product, Orthogonality</td>
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<td>Applied Mathematics Laboratory</td>
<td>Basic programming concepts including: algorithm development, data types, number representation, control structures, functions, plotting and basic numerical analysis techniques. The basic numerical analysis techniques covered in the course include matrix operations, systems of equations, solving equations, roots, curve fitting, interpolation, numerical integration and ordinary differential equations.</td>
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<td>Fluid properties; Hydrostatics; Fluid Kinematics; Conservation of Mass; Momentum and Energy; Flow in Open Channels; Pipe Flow; Turbo machinery; Fluid Measurements; and Similitude and Dimensional Analysis.</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>Molecular structure and bonding; isomerism and stereochemistry; organic acid and bases; structure, reactions and synthesis of hydrocarbons; functional groups and organic reactions of selected organic compounds; biomolecules; and structure determination</td>
</tr>
<tr>
<td>Microbiology</td>
<td>Introduction to the science of microbiology; types of microorganisms; bacteriophage and viruses; structure of microorganisms, nutrient and growth requirements; introduction to mycology; and introduction to applied microbiology</td>
</tr>
<tr>
<td>Genetics</td>
<td>Principles of genetics; Genetics workshop; Quantitative genetics;</td>
</tr>
<tr>
<td><strong>Bioinformatics; Applications.</strong></td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Plant Physiology</strong></td>
<td>Cell Physiology; Transpiration; Plant Pigments; Photosynthesis; Translocation of Solutes; Respiration; Crop Growth and Development.</td>
</tr>
<tr>
<td><strong>Animal Physiology</strong></td>
<td>General Anatomy (Ruminants, Non-ruminants and Aquatic animals) and intracellular organization; circulatory and Lymphatic Systems: respiratory system; Digestive system: excretory System; nervous system: spinal cord and brain functions, autonomic nervous system; concept of Homeostasis in endocrine physiology; physiology of lactation and Reproduction in farm animals.</td>
</tr>
<tr>
<td><strong>Analytical Chemistry</strong></td>
<td>Analytical chemistry: an introduction to qualitative chemical analysis; Equilibria in analytical chemistry; Homogenous solutions; Heterogeneous solutions.</td>
</tr>
<tr>
<td><strong>Biostatistics</strong></td>
<td>Population and variates; sampling from populations; sampling design; probability; data distributions; hypothesis testing; experimental design; correlation and regression; and application of selected multivariate techniques.</td>
</tr>
<tr>
<td><strong>Electrical Engineering and electronics for Bio-engineers</strong></td>
<td>Basic Concepts and Circuit Elements; Electrical Measuring Instruments; AC Fundamentals; Inductance in a DC Circuit; Capacitance and Capacitors; Electromagnetism &amp; Magnetic Circuits; Semiconductor Theory; Diodes and Diode Application; Special Purpose Diodes; Bipolar Junction Transistors; Field Effect Transistors; BJT Biasing Circuits and Small Signal Analysis; FET Biasing Circuit &amp; FET Small Signal Analysis.</td>
</tr>
</tbody>
</table>

### 7 Administrative Policies

#### 7.1 Academic

##### 7.1.1 Absence for Semester Examinations

a. A student who is absent for an assessment (mid & end semester examination) must inform the head of department and submit a valid medical certificate (MC) to the faculty coordinating office within three (3) days. This medical certificate will be verified by the University Medical Officer. If the medical certificate is not accepted, the student will be considered as “absent”.

b. Students are advised to present themselves before the University Medical Officer in case of illness. If this is not possible students are advised to get a MC from a registered medical officer from a government hospital.

c. Having scrutinized any medical certificate submitted, the institute shall decide whether medical certificate submitted by a student will be accepted by the institution for granting any benefit or giving any concessions. The final authority on this matter will be the Medical Board.

d. A student not covered by an MC will be given zero marks for the attempt.
The procedure to be followed when a student is absent for an Examination on Medical Grounds

a. In the event of a sickness, the student or parent/guardian shall formally inform the faculty coordinating office/registrar in the morning of the day of the exam his/her (student’s) inability to take part in the examination stating the illness the student is suffering from. This must be conveyed by a way of SMS, e-mail or telegraph - mail or a letter and have evidence for giving such notification. This must be done even if the student is suffering from an illness already notified to the faculty.

b. If the student is intending to claim any benefit or concession for being absent from the examination, a medical certificate MUST be submitted within three days of the day of the examination to the Faculty Coordinating Office /University Medical Officer irrespective of he/she continues to suffer from that illness.

c. A medical certificate so submitted must be from a Medical Practitioner / Dental Surgeon attached to a government hospital from whom the student has taken treatment and who is duly registered with the Sri Lanka Medical Council at the time of issuing such medical certificate.

d. The medical certificate so submitted must include the diagnosis and also the fact that the student (patient) is medically unfit to sit the examination on that particular day (date of the examination must be mentioned)

e. The University Medical Officer /Faculty Coordinator shall submit the medical certificate, so submitted to the Registrar, SAITM stating the specialty under which the illness is classified.

f. The Registrar shall arrange a medical board consisting of three members to scrutinize the medical certificate and the board shall consist of Specialists from the relevant specialty as specified by UMO.

g. The medical board may summon the student, if deemed necessary, for clarification of any matter relevant to the medical certificate and/or the illness or any other medical record. In the event the student declines to be present when so summoned or fails to produce medical records, or fails to divulge information to the board, this may adversely affect the student’s claims.

h. The medical board shall submit its decision to the Registrar in a confidential manner stating that;

i. The Medical Certificate submitted by the student can be accepted for him/her being absent from the examination held on the specified date

ii. The Medical Certificate submitted by the student CANNOT be accepted for him/her being absent from the examination held on the specified date

i. If the medical certificate is accepted by the Medical Board the student will be entitled for the following benefits/ concessions:

i. To sit the comparable examination at a time specified by the faculty.

ii. If the Medical certificate is accepted the student can sit for the repeat examination, which will be considered as his/her first attempt and will be eligible for honours.

iii. If the medical certificate is not accepted the student can sit the repeat examination which will be considered as his/her 2nd attempt and will not be eligible for honours.
7.1.2 Student Obtaining a Grade ‘F’ for a Particular Module

a. In the above case a grade ‘F’ will be appear in the records. The student must pass all modules for which he/she obtained ‘F’ grades to be eligible for graduation. The student will be required to complete all the academic requirements for that particular module (lectures \ labs \ practical sessions \ assignments \ tutorials), in the case if the student obtaining an "F" grade after the repeat exam.

b. If a student obtains an ‘F’ grade in a subject module in the 2nd, 3rd or 4th semester but still fulfills transfer CGPA requirement, he/she can complete the subject module at AIT for a fee specified by AIT upon transfer.

c. For re-taking a complete module at SAITM a fee is charged based on the following criterion,

\[
\text{Payment for the module} = \frac{\text{Total Semester Fee}}{\text{Total number semester credits}} \times \left(\text{Credits for the particular module}\right)
\]

7.1.3 Repeating a Course Module

To assign a grade to a given module, the student should at least fulfill the following requirements;

a. Sit for the end semester exam of the module

b. Maintain an attendance factor of 0.6 or above for the lectures and Lab sessions of the module

i. Students absent from the end semester exam other than due to a medical reason accepted by the faculty, and those who are failing a module will have to go through the full module with the subsequent batch.

ii. Cumulative Grade Point Average (CGPA) is calculated at the end of 4th semester for a given batch and only those students who score CGPA of 2.2 or above will be eligible to transfer to AIT for the final phase of the course. However students with CGPA between 2.2 and 2.5 will be placed under probation and will be dismissed at AIT if a CGPA of less than 2.5 is obtained for two consecutive semesters.

iii. Students who fail to transfer to AIT in the first instance are advised as follows;

Students, who are to follow the whole module, including the lectures, as directed by the Faculty, can do so with the subsequent batches by registering for failed or incomplete modules at a fee. In such an event, student is expected to go through the module completing all assignments, lab sessions and attending to lectures maintaining an attendance factor of 60% or above. In the event, the student will have to pay for the full module as specified in section 1.2

The original grade obtained by the student in the first attempt will be printed in the transcript along with the new grading.
7.1.4 The Transfer Criterion from SAITM to AIT

For the students to be eligible to transfer from SAITM to AIT the following minimum credit requirement shown in Table 1 should be fulfilled in each discipline:

**Table 1: Minimum credit requirements (* subject to change at the discretion of faculty)**

<table>
<thead>
<tr>
<th>Department</th>
<th>Specialized area</th>
<th>Minimum Credit Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil &amp; Infrastructure Engineering</td>
<td>Civil &amp; Infrastructure Engineering</td>
<td>70</td>
</tr>
<tr>
<td>Mechatronics Engineering</td>
<td>Mechatronics Engineering</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>Telecommunication Engineering</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>Electronics Engineering</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>Industrial Engineering</td>
<td>70</td>
</tr>
<tr>
<td>Biosystems Engineering</td>
<td>Biosystems Engineering (Specialization in Food Technology)</td>
<td>70</td>
</tr>
</tbody>
</table>

7.1.5 Eligibility for Exams

Before an end semester examination, student's eligibility for exams will be displayed based on their attendance to lectures in the particular subject module. The marks obtained for a given module will be multiplied by an attendance factor to obtain the final grade and the attendance factor will be calculated based on the number of academic sessions conducted for a given module. If a student obtains an attendance factor of less than 0.6, then an ‘F’ grade will appear in the student records.

Whether a re-take examination is offered for a particular subject module in a given semester is at the sole discretion of the faculty.

7.1.6 Review of Answer Scripts

Upon request, students are allowed to see answer scripts in the presence of the relevant subject lecturer and if any discrepancy is noted, it should be brought to the attention of the lecturer and recorded. However under no circumstances a given mark will be altered at the review stage and the lecturers are not authorized to do so.

Once a discrepancy is noted, student can request the faculty coordinating office for re-correction, upon which the answer scripts will be re-examined by a panel appointed by the faculty in the presence of the subject lecturer and the student. The decision of the panel is final for any amendment of marks. However, allowing the reviewing of an answer script is at the discretion of the faculty.
7.1.7 Evaluation of Performance

The performance of each course will be evaluated by giving different weights to the following course requirements – Mid Semester examination, Assignments, Laboratory Work and Final Examination. All requirements except the Final Examination carries a combined weight of not less than 30% and not more than 60% of the total marks, except in internship, camps, research projects and other similar requirements.

The course requirement may be based on a specified combination including laboratory work, tutorials, quizzes, presentations, mid-semester examinations, term papers and assignments. The mid-semester examinations are usually held on the 8th week of the semester during lecture hours which are normally based on coursework, assignments and classroom tests. Corrected mid-semester examination papers and assignments are returned to students and may be discussed with the Course Instructor. The weight of each of the above component used in the determination of the final grade for each course should be clearly conveyed in writing to the students by the Course Instructor during the first week of the commencement of each course along with the outline of the course.

The final examinations for all courses are held three to five days after classes end. All final examination arrangements are announced by Registry via e-mail and posted on the Registry website.

The Academic Senate will meet at the end of each semester to decide on the performance and the academic standing of each student registered for that year.

7.1.8 Grading System

Letter grades based on the grade point system and corresponding description, as illustrated in the table below, will be used to assess the performance of each student in each course.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
<th>Value</th>
<th>Grade Definition</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>85-100</td>
<td>A+</td>
<td>4.0</td>
<td>Excellent</td>
<td>Strong evidence of original thinking; good organization, capacity to analyze and synthesize; superior grasp of subject matter with sound critical evaluation; evidence of extensive knowledge base.</td>
</tr>
<tr>
<td>75-84</td>
<td>A</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70-74</td>
<td>A-</td>
<td>3.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65-69</td>
<td>B+</td>
<td>3.3</td>
<td>Good</td>
<td>Grasp the subject matter, some evidence of critical capacity and analytical ability; reasonable understanding of relevant issues; evidence of familiarity with the literature.</td>
</tr>
<tr>
<td>60-64</td>
<td>B</td>
<td>3.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55-59</td>
<td>B-</td>
<td>2.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>Grade Points</td>
<td>Comment</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>--------------</td>
<td>---------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
<td>Adequate</td>
<td>Profiting from the academic experience; understanding the subject matter; ability to develop solutions to simple problems in the material.</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-</td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
<td>Marginal</td>
<td>Some evidence of familiarity with the subject matter and some evidence that critical and analytical skills have been developed.</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
<td>Inadequate</td>
<td>Little evidence of even superficial understanding of subject matter; weakness in critical analytical skills, with limited or irrelevant use of literature.</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>0.0</td>
<td>Incomplete</td>
<td>Grade not earned.</td>
<td></td>
</tr>
</tbody>
</table>

Note: Grade D or above is required to earn credit for a course.

### 7.1.9 Grade Point Average (Semester)

The calculation of the Semester Grade Point Average (GPA) will be based on the summation of Grade Points earned for all courses registered for credit in a semester weighted according to number of credits (see the formula below). The Semester Grade Point Average is rounded to the nearest second decimal place. The Semester Grade Point Average is reported on the transcripts and is issued for each semester.

$$GPA = \frac{\sum n_i \times g_i}{\sum n_i}$$

Where $n_i$ is the number of credits for the $i^{th}$ course in a given semester and $g_i$ is the grade points earned for that course.

### 7.1.10 Grade Point Average (Cumulative)

The Cumulative Grade Point Average (CGPA) describes a student's current standing in terms of all courses registered for credits up to given point of time weighted according to the grades assigned to each course and the academic year of the course. The weight for each year will be uniform.

$$CGPA = \frac{\sum n_i \times g_i}{\sum n_i}$$

Where $n_i$ is the number of credits for the $i^{th}$ course in a given semester and $g_i$ is the grade points earned for that course.
7.1.11 Calculation of GPA and CGPA

In case of failed modules and grade improvements, the original grade and the re-take grade will be counted for the GPA calculation. However, credits obtained for the module will be counted once only for the fulfillment of the total credit requirement.

7.1.12 Students Awards

A student who obtains a Semester Grade Point Average of 3.70 or greater in any academic semester (except during inter-semester) will be recommended by the Board of Examiners to be included in the Dean's List and such a placement will also be noted on the student's transcript. In addition to the Semester GPA, participation in extracurricular activities would also be given consideration.

7.2 Code of Conduct

7.2.1 Punctuality

Students are not allowed to access the lecture rooms or laboratories later than 10 minutes after the lecture/lab session commences. Students coming late will be allowed in with a written permission from the Dean or a Senior Lecturer of the Faculty after presenting him/her with a valid explanation for the late arrival. No more than 3 such permits will be issued per semester under any circumstances.

7.2.2 Conduct towards Lecturers and General Conduct

Students should be courteous to lecturers at all times. Any discourteous or derogatory vocabulary used against a lecturer or violent behavior displayed will warrant immediate suspension from attending for lectures or practicals/tutorials for a period of 7 working days upon receiving of a complaint. Within that period the student will be notified in writing to appear before a disciplinary committee, headed by the Dean, FoE, comprising of the registrar for a hearing and to determine the course of action which may range from extension of suspended period or dismissal from studentship. However exoneration or relief may possible if found not guilty. The decisions of the disciplinary committee will be final and binding. The time spent during suspension will be considered as absent days and will reflect in final grading of the semester modules. The decisions of the disciplinary committee will be notified to the student and his/her parents in writing. Offences such as damage to campus property, sexual harassment, physical assault of fellow students, academic or non-academic staff members will also carry similar disciplinary action.
7.2.3 Dress Code

Male students to wear longs, short or long sleeved/rolled up office wear shirts with covered shoes and female students to wear jeans/pants, blouses and other dresses (acceptably covered) on days when lectures are conducted. No T-Shirts, Revealing dresses, Sandals, Thongs/Slippers will be permitted at any time within a lecture hall or laboratory. Multi-colored or Tinted hair or fancy hair cuts will not be permitted at any time. If a physical disability compels a student to wear otherwise, he/she will be required to obtain written permission from the Dean of the Faculty or in his absence from a senior lecturer of Faculty of Engineering.

7.2.4 Examination By Laws

(A). Regulations Governing the Conduct of Examinations

1. A Candidate shall be present at their respective examination hall at least 15 minutes before the commencement of an examination and should enter the examination hall at the request of the supervisor.

2. Candidates shall occupy the seats carrying their respective Index Numbers or as allocated by the Supervisor.

3. Candidates shall take only pens, pencils, erasers, foot-rulers, boxes of colours, mathematical instruments, transparent water bottle and such other essential articles or materials authorized by the supervisor into the examination hall.

4. No candidate shall be admitted to the examination hall after thirty minutes have elapsed from the commencement of an examination and no candidate shall be permitted to leave the examination hall before thirty minutes have elapsed from the commencement of the exam.

5. Every candidate should bring his Admission Card, and Student’s Identity Card issued by SAITM to the examination hall. If a candidate loses the Identity Card or Admission Card during the examination period, he/she should immediately report to the Registrar/Senior Assistant Registrar and obtain a duplicate of such documents.

6. A candidate shall produce any document, written material or item of stationery in his possession or custody when requested to do so by the Supervisor.

7. No candidate shall ask for or exchange anything with any other candidate, copy or attempt to copy anything written by any other candidate or communicate with, any other candidate. A candidate shall not permit or assist any other candidate to copy.

8. A candidate shall use only the answer book and sheets of paper issued for that day for the purpose of the examination.

9. Stationery (Writing paper, graph paper, drawing paper, ledger and graph paper, etc.) shall be issued to candidate as required. A candidate shall not tear, fold, crumple, scratch or in any other
way damage any item of stationery issued to him. A candidate shall use only the stationery
issued to him by the supervisor and Invigilator, and shall leave on his desk his answer scripts,
mathematical tables and any other returnable material issued to him before he leaves the
examination hall. A candidate shall not take out of the examination hall any paper, answer book
or any other material issued to him by the Supervisor or other authorized officer.

10. Before commencing to answer an examination paper a candidate shall write his index number
with the name of the examination in the appropriate space in the answer book or sheet and he
shall write his index number on every sheet or paper used by him. No candidate shall write his
name or make any identification mark in any answer script. Any candidate who writes an
index number and code other than his own on an answer script shall be guilty of an
examination offence.

11. All papers used for rough work as well as writing paper shall be attached to the answer script,
but all material, which does not form a part of the answer script, shall be cancelled by drawing
lines across such material.

12. Candidates shall conduct themselves in the examination hall in such a manner as not to cause
any obstruction or harassment to the supervisor, the Invigilators and other candidates, and
shall observe silence both inside the examination hall and outside.

13. A candidate shall not permit another person to impersonate him/her at any examination, and
shall not appear on behalf of any other person at any examination.

14. The supervisor or an invigilator may obtain from a candidate a written statement in respect of
any matter that occurs in the examination hall. A candidate shall not decline to make
such statement or to place his/her signature on such statement.

15. During the course of answering a paper, no candidate shall be permitted to leave the
examination hall temporarily. In case of an emergency the supervisor may grant permission to
do so under the supervisor’s surveillance.

16. A candidate shall remain seated in his/her seat till the answer scripts are collected and shall
hand over his/her answer script only to the Supervisor or an Invigilator.

17. A candidate shall not attempt to make improper use of a document, drawing or instrument.

18. Every candidate who is eligible for an examination shall be deemed to have sat the examination
unless

   a. He/she submits a valid reason such as illness, death of immediate family (parent,
sibling, spouse or child) or tragic event to withdraw from the examination
   Documentary evidence in support of these claims have to be submitted

   b. In a case of illness a medical certificate in support of his/her absence, should be
   submitted prior to the commencement of the examination or he/she shall inform the
   Dean of the Faculty in writing of his/her inability to attend the examination and submit
   the medical certificate within three days after the commencement of the examination.
   The medical certificate shall be from a Government Registered Medical officer or a
   Dental Surgeon as the case may be with the seal.
19. A student who withdraws or absents himself/herself from any examination with a valid reason as in 18 above shall be eligible for honours at a subsequent examination. A student who withdraws or absents himself/herself from any examination without a valid reason (stipulated in 18. above) shall not be eligible for honours at a subsequent examination.

20. Students are prohibited from carrying cellular phones or any other electronic device used for communication during the course of written, oral, clinical or practical examinations.

21. It shall be the responsibility of every candidate to refrain from any act that may lead to any suspicion that he has committed any examination offence or is likely to commit such offence.

(B). Examination Offences (The following are considered as examination offences)

1. Possession of any notes, electronic devices and documents, while in the examination venue, other than those issued at the venue for purposes of the exam.
2. Copying.
3. Cheating.
4. Removing items of stationery and other material belonging to SAITM from the examination hall.
5. Misconduct.
6. Impersonation.
7. Improper access to the contents of a question paper or to the subject matter of a test, or obtaining aid and assistance to commit an examination offence,
8. Exercising improper influence on officers engaged in the conduct of an examination,
9. Any other act considered as an examination offence by SAITM.

Such offences need to be reported to the Registrar in writing who will institute a board of inquiry. The Board of Inquiry will recommend the necessary penalties for consideration and approval of the Senate.

(C). Penalties for Examination Offences

1. **Possession of any unauthorized materials:** Being in possession of unauthorized material such as documents cancellation of candidature for any period not exceeding two academic years.

2. **Copying:** cancellation of candidature and debarring the candidate from sitting for any examination conducted by SAITM for any period not exceeding three years and the imposition of other penalties as recommended by the Board of Inquiry.

3. **Cheating:** Cancellation of candidature and debarring the candidate from sitting for any examination conducted by SAITM for a period of time, decided by the Board of Inquiry.

4. **Removing out of the examination hall items of stationery and other material belonging to SAITM:** cancellation of candidature and debarring the candidate from sitting for any examination conducted by SAITM for a period of time determined by the Board of Inquiry.
5. **Improper conduct**: cancellation of candidature and debarring the candidate from sitting for any examination conducted by SAITM for a period not exceeding five years and other penalties at the discretion of the Board of Inquiry.

6. **Impersonation**: cancellation of candidature and debarring the candidate from sitting for any examination conducted by SAITM for a period not exceeding five years and other penalties at the discretion of the Board of Inquiry.

7. **Exercising improper influence on examiners or officers engaged in the conduct of an examination**: Any penalty imposed at the discretion of the Board of Inquiry.

8. **Committing an examination offence for the second time**: deregistration.

### 7.2.5 Assignments/ Lab Reports

All assignment and course works/lab reports should be hand written and submitted on or before the deadline. Failure to do so and late submissions will result in the student getting no marks (zero) for the assignments. Report formats specified by the relevant department should be strictly followed when submitting assignments and lab reports.

Any of the above submission found to be copied from another student will result in both students getting zero marks.

### 7.2.6 Attendance Criteria

Students are required to maintain above 80% attendance level in all semesters during the course. If the attendance of a student falls between 60%-80% for any given module in any given semester, the final marks obtained for the relevant module will be multiplied by the corresponding attendance factor and taken for the calculation of final Grade. No medical or other excuses will be considered in calculating the attendance factor.

Students falling below the 60% attendance level will be considered having failed the module for not completing the stipulated lecture hours, and will be compelled to repeat the particular module with a subsequent batch/intake in order to achieve a Pass Grade.

In order to re-schedule a practical session a valid medical certificate should be submitted.

In the event of a prolonged medical condition supported by evidence of hospitalization, the student may appeal to the faculty examination board.

### 7.2.7 Additional Collection of Payments

a. Rs. 5000.00 for Site visits / Guest lectures / Industrial training inspections.

b. Rs. 2000.00 for SAITM Research Symposium and SAITM Robotics Challenge.

An additional training fee will be charged from the civil engineering students for Heavy machinery training at ICTAD.
Above payments are compulsory and will appear as dues which will automatically exclude the student from the student services system.

Payments due dates will be notified in advance by the coordinating office.

* The above charges are subject to change.

8 Accreditation and Quality Assurance

Civil & Infrastructure and Mechatronics Engineering B.Sc. Engineering degree programmes by the Institution of Engineers Sri Lanka (IESL).

The University Grants Commission has implemented a quality assurance mechanism for degree programmes offered by local universities, which involves evaluating the quality of education within a specific discipline, focusing on the student learning experience and on student achievement. This subject review process evaluates the quality of both undergraduate programmes. Under this scheme, the Departments were evaluated on following aspects.

- Curriculum design, content and review
- Teaching, learning and assessment methods
- Quality of students including student progress and achievements
- Extend and use of student feedback (both qualitative and quantitative)
- Postgraduate studies
- Peer observations
- Skill development
- Academic guidance and counseling
9 Research Competencies

9.1 SAITM Research Symposium on Engineering Advancements (RSEA)

SAITM, annual Research Symposium on Engineering Advancements has been designed to further augment the involvement of the SAITM in research and to disseminate the research findings among potential users. The symposium is designed to bring together the university students, researchers, academics and industrialists in an open and interactive forum that recognizes engineering and scientific challenges, practical barriers, theoretical developments and their applications in order to bring a sustainable development.

9.1.1 Main Thematic Areas

| 3. Highway Construction & Transportation Engineering | 10. Disaster Management & Risk Assessment |
| 7. Food Processing & Technology | 14. Electronics & Instrumentation |
| | 15. Robotics, Control & Automation |
| | 16. Artificial Intelligence |
| | 17. Industrial Automation & Process Control |
| | 18. Production Planning & Maintenance Engineering |
| | 19. Quality Control & Management |
| | 20. Power, Energy & High Voltage Engineering |
| | 21. Textile and Clothing Technology |
9.2 SAITM Robotics Challenge (SRC)

The SRC2013 was the first of its kind to be organized by the Faculty of Engineering, SAITM, followed by 2nd annual competition was held in 2014. Undergraduates from Engineering, Science and technology disciplines from seven state sector Universities including University of Moratuwa, University of Peradeniya and University of Colombo participated for the event. In addition there were participants from four non-state universities as well.

In organizing SRC2013 & SRC2014, SAITM Faculty of Engineering strive to promote engineering design at university level and encourage Sri Lankan youth to come forward with innovative solutions to real life applications.

Many academics and professionals from state universities and industries contributed for evaluating the events.
9.3 Industry Consultative Board

The SAITM-Industry Consultative Board (ICB) is to set up in order to strengthen the university-industry interaction and the methods of the research information dissemination. The primary objectives of SAITM ICB are as follows:

1. To obtain the industry feedback for future curriculum revisions
2. To improve the quality of the internship programmes
3. To offer short training programs & workshops which industry needs
4. To invite industrial experts to the SAITM to share their practical experiences
5. To identify the needs of the industry and hence to develop the research projects to meet the requirements
6. To disseminate the research information with the industry partners and to obtain the industry feedbacks in order to further improve the quality of the research at SAITM.

9.4 Guest Lectures & Workshops

Throughout the academic year, the faculty hosts free, public lectures & workshops on a variety of topics. Guest speakers are invited to present their research as part of multiple ongoing lecture series.
The industrial training placement is organized by the departments for the fourth semester students for a period of three months, since 2011. Pioneers of the construction industry in Sri Lanka are selected for the placement of students. Furthermore, all the selected organizations are the registered organizations under Institute for Construction Training and Development (ICTAD). Moreover, the faculty is currently processing with the application for the recognition from the National Apprentice and Industrial Training Authority (NAITA).

The evaluation of the industrial training placement is conducted based on the records of the daily diary provided to the students at the commencement of the training program, comments of the interim supervision made by the lecturers in the respective departments, and the final report which should be submitted at the end of the training period.
9.6 Special Training Programmes

Civil Engineering students will go through two days of heavy Machinery training course at “The Institute for Construction Training and Development” (ICTAD).

ICTAD has a large fleet of construction machinery which are available for hire at the Operator Training Centre - Galkulama, Anuradhapura. Some of the available machines are: Loaders, Backhoe Loaders, Excavators, Motor Graders, Forklifts, Dozers, Plant Transporters, Mobile Cranes, Dump Trucks, Road Compactors, Air Compressors, Concrete Mixers, Water Bowsers, Fuel Bowsers, Portable Generators, Water Pumps, Pneumatic Rammers etc.
9.7 Students Association

Is an organization, operated by students at the faculty, whose membership normally consists only of students. The leaders elected will also be expected to associate closely with the faculty and organize social events to strengthen the bond among the fellow students.

9.8 Recreation & Students Activities

The division offers many services, organizations, clubs, and recreational activities to help students participate in campus life, and become active members of the society.

Students are advised to seek a balance between academics and extracurricular activities. Participation in student activities outside of class not only provides a much-needed break from the intense academic rigors, but also helps many students to manage their time better, and can lead to a more rewarding and successful university experience.
9.9 Community Service Projects

A number of Community service Projects are organized by SAITM students annually for those who wish to donate time to help the local community and environment.
9.10 SAITM Sports

Facilities for champions
10 Life at Asian Institute of Technology (AIT)

**VISION**

AIT will strive to become a leading and a unique regional multicultural institution of higher learning, offering state of the art education, research and training in technology, management and societal development.

**MISSION**

The mission of AIT in the context of the emerging environment is "to develop highly qualified and committed professionals who will play a leading role in the sustainable development of the region and its integration into the global economy".

The Asian Institute of Technology promotes technological change and sustainable development in the Asian-Pacific region through higher education, research and outreach. Established in Bangkok in 1959, AIT has become a leading regional postgraduate institution and is actively working with public and private sector partners throughout the region and with some of the top universities in the world. AIT Recognized for its multinational, multi-cultural ethos, the Institute operates as a self-contained international community at its campus located 40 km (25 miles) north of Bangkok, Thailand. Besides the usual labs and academic buildings, the main campus includes housing, sports, and medical facilities, a conference center, and a library with over 230,000 volumes and 830 print and on-line periodicals.
10.1 Key Facts and Figures of AIT

- 2300 Students from 50+ Countries/Territories
- 22000 Alumni from 85 Countries/Territories
- 28000+ Short-term Trainees from 70+ Countries/Territories
- 120 World Class Faculty from 20+ Countries
- 100+ Research Staff
- 500+ Support Staff from about 30 Countries
- About 400 Sponsored Research Projects
- 330 Partners
- 33 Board of Trustee members from 19 Countries
- 3 Schools
- 15 Research and Outreach Centers
- 32 Fields of Study
- 1000+ Courses
10.2 Contact Details

**Street Address:**
Asian Institute of Technology
58 Moo 9, Km. 42,
Paholyothin Highway
Klong Luang
Pathumthani 12120
Thailand

**Undergraduate Program:**
Asian Institute of Technology
P.O. Box 4,
Klong Luang
Pathumthani 12120, Thailand
Phone: +66 (0)2 524 5210/5333
Fax: +66 (0)2 524 6236
Email: admissionug@ait.asia

**Admissions Office:**
Undergraduate Program
Admissions and Scholarships Unit
Asian Institute of Technology
P.O. Box 4, Klong Luang
Pathumthani 12120, Thailand
Phone: +66 (0)2 524 5210/5333
Fax: +66 (0)2 524 6236
Email: admissionug@ait.asia
http://www.ug.ait.ac.th
10.3 AIT Offers

- Bachelors degrees, Masters degrees
- Executive Master Degree Programs
- Doctoral Degrees: DEng, DTechSc, PhD
- Diploma and Certificate Programs
- An intensive English language and academic Bridging Program
- Non-degree continuing education courses for practicing professionals

Guided by the above clear, timeless vision and mission, the dedicated students, faculty and staff of AIT are set to steer the Institute along its path of becoming:

- A trailblazer in advanced education in the region, with leadership in IT and new types of multidisciplinary programs
- An exemplary institution, with an emphasis on academic quality in terms of courses and other aspects of operation
- A leader in professional development programs
- A hub for the implementation of regional and transnational research projects, and a research facility for academic professionals. A nexus for networking with other academic and research institutions in the region and the world
- A model international citizen
- A collaborator and partner of national postgraduate institutions
- A financially viable, self-sustaining institution, able to draw support from donors the private sector and individuals, with good governance and strong leadership
- A strong partner to its alumni, who are principal stakeholders through the AIT Alumni Association (AITAA)
In the AIT Undergraduate Engineering Program, students enjoy a large and diverse faculty from whom to draw inspiration. They are internationally-recognized engineering faculty, representing a diversity of ages, backgrounds, interests, and nationalities, and are always renewing themselves professionally and personally.

For AIT faculty, teaching and learning go hand in hand. They share their enthusiasm and expertise with the entire community, and they commit themselves to helping their students live informed and fulfilling lives. Most faculty members participate in a wide variety of activities; they teach, supervise research, serve as advisors, develop curriculum, serve on committees, and participate in continuing professional development programs. Many are active members of professional organizations.
The program is also proud of another extraordinary resource in its staff members who are dedicated to utilizing their knowledge and experience to provide unique living and learning opportunities for all students.
10.5 Campus Support

10.5.1 Accommodation

AIT student housing office provides a variety of dormitories for all types of students (single, married, etc.). Dormitories are equipped with furniture, telephones, and hook-up to the Internet via the wireless network. The Accommodation cost is about 3,000 ~ 4,000 Baht/room/month.
There are plenty of places on campus to enjoy an inexpensive meal, with different types of cuisine. Thai, Western, vegetarian and halal menus are served daily.
10.5.3 Medical Services

AIT will arrange with an annual premium for standard insurance plan which covers certain costs of hospitalization, outpatient treatment, dental and personal accident but not major medical expenses. The estimated cost is Baht 2,599/year. (US$ 75/year). Medical services are provided by health professionals and medical staff on a 24-hour basis.

10.5.4 Visa Arrangements

Visa Arrangements are effectively facilitated by the Government Relations Office to all non-Thai students, faculty and staff, including assistance in securing visas for their spouse and children. The educational visa extension fee is Baht 1,900 per year.

10.5.5 Counseling

Counseling is available at all times. The counselor guides students outside of his/her academic activities, in all aspects of his/her life at AIT, from enrollment to finding employment.
10.5.6 Religious Life

AIT supports individual religious participation and spiritual search. It seeks to attract and support students and faculty of a wide variety of religious backgrounds while offering no institutional preferences or affiliation. A common prayer room is provided for all beliefs.

10.5.7 Weekend and Activities

The Student Union organizes regular weekend activities in exploring Thailand and neighboring countries. On-campus, students enjoy weekly movies, parties, and sports tournaments.
Sports and Recreation include a golf course, a swimming pool, badminton courts, tennis courts, table tennis, basketball courts, football grounds, cricket and hockey fields and squash courts. Students, whether seasoned athletes or novices, can enjoy a wide variety of athletic pursuits.
10.5.9 Women's Support

Women's Support is apparent in most activities. The Women Study Circle promotes the advancement of women to strengthen their role in the development process.

10.5.10 Other Services

Other Services include conference facilities and a hotel, a post office, bookstore, bank, and convenience stores.

10.6 Costs and Expenses

This section gives an estimate of the costs and expenses a full-time student without financial aid should expect throughout the duration of his/her study program. AIT offers financial aid for the Bachelor's degree program, on a competitive basis, to applicants who are outstandingly qualified and to applicants who have strong academic backgrounds and proven financial need.

10.6.1 Tuition and Fees

Students in full-time attendance pay a registration fee of Baht 7,200 per semester and a tuition fee of Baht 216,000 per year. If the academic program is not completed within the prescribed duration, the registration fee of Baht 7,200 per semester is to be paid for each semester of extension.
10.6.2 Living Costs

All students are encouraged to reside on or near the Institute’s campus to benefit from the international environment for intellectual development and personal growth. The estimated living expense is Baht 130,000 per year. Living expense may vary depending on individual lifestyles and needs.

10.6.3 Other Campus Fees

10.6.3.1 Medical Insurance
There is an annual premium for the standard insurance plan, which covers certain costs of hospitalization, outpatient treatment, dental treatment, and personal accidents but not major medical expenses.

10.6.3.2 Visa Extension
Renewing the educational visa costs 1,900 baht (approx. 60 USD) per year.

10.6.3.3 Student Union Fee
A 150 baht (approx. 5 USD) fee per semester is required as a contribution to the Student Union and Student Welfare Fund. Please pay at the Cashier, AIT Finance Department.

10.6.4 Estimating your Costs and Expenses

<table>
<thead>
<tr>
<th>Tuition Fees and Expenses Per Year</th>
<th>Study at AIT</th>
<th>US Dollars¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition Fee</td>
<td>216,000 baht / year</td>
<td>7,250 USD</td>
</tr>
<tr>
<td>Registration Fee</td>
<td>7,200 baht / semester</td>
<td>240 USD</td>
</tr>
<tr>
<td>Living Expenses</td>
<td>130,000 baht / year*</td>
<td>4,400 USD*</td>
</tr>
</tbody>
</table>

* This is for the purpose of indication only. Actual expense may vary.

¹ The equivalent amount in US dollars is given for convenience based on the print-time rate of exchange; actual tuition and fee are in Thai Baht only.

10.6.5 Fee Review

Fees are regularly reviewed. Approved changes become effective on the date stipulated.

The Asian Institute of Technology (AIT) reserves the right at any time to change or modify any aspect of information in this primer whenever, in its judgment, it becomes necessary or advisable to do so. As a result of the on-going process of consultations on the Institute academic reform, there may be changes in academic fees and other fees over time, which will become effective on the date stipulated.
10.7 AIT Map

Don Muang Airport
about 22 km, 25 mins

Suvarnabhumi Airport
about 52 km, 50 mins
10.8 Schools

The Asian Institute of Technology (AIT) is an autonomous, international institute established in 1959 to help meet the growing need for advanced engineering education in Asia. Since that time, AIT has become an active partner in the promotion of technological change and development in the region. Academic programs at AIT are conducted at the doctoral, master, diploma and certificate levels by the following schools:

- School of Engineering and Technology
- School of Environment, Resources and Development

10.8.1 School of Engineering and Technology (SET)

School of Engineering and Technology (SET) is the synergistic integration in November 2005 of the two former Schools, namely, the School of Civil Engineering (SCE) and the School of Advanced Technologies (SAT). Historically, these two schools came into existence only in January 1993 when the Institute reorganized the need to reform its academic structure from smaller-sized units called "Divisions" to larger bodies named "Schools".

The School of Civil Engineering (SCE) represents the legacy of AIT when it was established with a single field of study in Hydraulics Engineering. Subsequently, other civil engineering fields of study were launched to assist the recovery from the ravages of the Second World War. SCE emphasized on a learning process that combines theoretical problem-solving and real life application of engineering
principles. Its research orientation was outward-looking, addressing the actual and anticipated needs of the built environment.

The School of Advanced Technologies (SAT) consisted of fields of study that were launched in response to the needs of the regional industrialization in the second and third decades of AIT’s existence. The School was committed to being international, multidisciplinary centers of excellence in Information, Communications, Industrial Systems, and Space Technologies through education, research and outreach.

The new School of Engineering and Technology amalgamating the School of Civil Engineering (SCE) and the School of Advanced Technologies (SAT) will strive to create synergies between the activities of the two former schools to build up world-class multidisciplinary and cross-disciplinary education, research and outreach activities across the boundaries of traditional fields of knowledge. More interdisciplinary programs shall be launched so faculty members can work effectively across the disciplinary walls. The new school will enhance its academic portfolio by emphatically injecting the "5I" features namely internationality, innovation, integration, information technology and industrial partnership.

10.8.2 School of Environment, Resources and Development (SERD)

The School of Environment, Resources and Development (SERD) established in 1993 by amalgamating the Divisions of Agriculture and Food Engineering, Environmental Engineering, Human Settlements and Energy Technology, is now composed of ten fields of study - Agricultural Systems and Engineering, Aquaculture and Aquatic Resources Management, Food Engineering and Bioprocess Technology, Energy, Environmental Engineering and Management, Pulp and Paper Technology, Gender and Development Studies, Natural Resources Management, Regional and Rural Development Planning and Urban Environmental Management.

In the 2012-2013 ranking of the best 4000 Master's and MBA Programs in 30 specializations at 1000 business schools and universities in 154 countries, The Master of Agribusiness Management program was deemed the world's best in the category of Master's in Agribusiness / Food Industry Management.
10.9 News at AIT & Graduation

10.9.1 121st AIT Graduation Ceremony

121st graduation held at AIT conference center on 23rd May 2014. On that day 68 Sri Lankan students from SAITM graduated, amongst many others from different nationalities, as the second group of honors graduates in Bachelor of Engineering (BSc. Eng Hons.) Moreover, SAITM students secured 16 First Class Honors, 21 Second Class Upper Division Honors and 21 Second Class Lower Division Honors engineering degrees. Out of the 68 SAITM students, 30 graduated as Civil & Infrastructure Engineers, 24 as Mechatronics Engineers, 7 Industrial Engineers, 4 Telecommunication Engineers and 2 as Electronics Engineers. The excellent performance of Sri Lankan students is a tribute to the immense efforts taken by SAITM faculty of Engineering and AIT to maintain the academic quality and standards along with the infrastructure made available, in par with the best in the world thus help producing high quality engineers who will be world class professionals.
23rd May 2013 will be marked as a historical day at the Asian Institute of Technology (AIT), Bangkok, Thailand. On that day 40 Sri Lankan students graduated, amongst many others from different nationalities, as the first group of honors graduates in Bachelor of Engineering (BSc. Eng Hons.) at the 119th graduation held at AIT conference center. Moreover, Sri Lankan students secured 13 First Class Honors, 8 Second Class Upper Division Honors and two Sri Lankan students, Ms. Thamali Gunaratne and Mr. Imthishan Mohammed Thasleem bagging the most outstanding Civil Engineering student and most outstanding Mechatronics Engineering student awards respectively. Out of the 40 Sri Lankan students 24 graduated as Civil & Infrastructure Engineers, 13 as Mechatronics Engineers and 3 as Electronics Engineers.

The excellent performance of Sri Lankan students is a tribute to the immense efforts taken by SAITM faculty of Engineering and AIT to maintain the academic quality and standards along with the infrastructure made available, in par with the best in the world thus help producing high quality engineers who will be world class professionals.

Of those who graduated from AIT at the 119th graduation in 2013, 13 students secured 100% scholarships, 8 students 75% scholarships and 10 students 50% scholarships to pursue Masters degree in the chosen fields of study at AIT which is a record for any university in Sri Lanka.
10.9.2 The AIT Alumni Community

The AIT alumni community is a global network of science, technology and management leaders and entrepreneurs.

Out of the 19,850 alumni who have graduated from Asian Institute of Technology since 1959, 14,491 are male and 5,359 are female. Approximately 90 percent of AIT alumni remain in Asia and have formed a strong workforce and economic base for their respective countries.

Recent landscape changes in higher education have lead to a stronger competition from national universities heavily funded by local governments. This prompts AIT to seriously review its mission and consider a structural transformation in all contexts. After its first 50 years of existence, alumni network is AIT’s most important asset. What AIT has achieved over the past 50 years is exactly what other top-ranked regional universities have been longing for - a truly international community of faculty and students, and a global network of alumni.