

# The Open University of Sri Lanka Faculty of Engineering Technology

# Student Guidebook 2021 / 2022

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Faculty of Engineering Technology
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"The mission of the Faculty of Engineering Technology is to provide lifelong learning opportunities in Engineering and Technology for all to meet industrial and social needs through open and distance learning, and support research & scholarship by efficient & sustainable use of resources."

## Message from the Dean



On behalf of the Faculty of Engineering Technology, I warmly welcome you.

The Mission of the Open University of Sri Lanka is to enhance access to high quality, affordable and relevant education through Open Distance Learning methodologies and ensure lifelong learning opportunities to face challenges in a knowledge society. We offer full-time programmes of study in English, while allowing you to learn at a pace comfortable to you. Learners are expected to complete their studies within three times the minimum duration stipulated in this guidebook.

The Bachelor of Technology (BTech Hons) degree programme is offered in the streams of Agricultural and Plantation, Civil, Mechanical, Mechatronics, Electrical, Computer Engineering, Electronics and Telecommunication, and Textile and Clothing Engineering. The Bachelor of Industrial Studies (BIS Hons) study programme is offered in Agriculture, Apparel production and management, Fashion design, and product development and Textile manufacture. The Bachelor of Software Engineering (BSE Hons.) Programme is conducted by the Centre for Information Technology Education Services (CITES).

Learners enrolled in the BTech and BIS programmes can exit with a Higher Diploma, having fulfilled the requirements for the award. The faculty offers an Advanced Certificate programme in Apparel Technology. Learners are allowed to take a maximum of 18 course credits as Stand Alone, without fulfilling their pre-requisites, without having to enrol in a programme of study.

Learners entering the BTech Programme requires to have at least three (3) passes in the GCE Advanced Level Mathematics Stream, in one and the same sitting. Learners enrolling in the BIS Agriculture specialisation requires three (3) passes in biological stream in the GCE Advanced Level while Learners enrolling in other BIS specialisations requires any three (3) passes in the GCE Advanced Level, in one and the same sitting. Learners could enter either programmes of study by successfully completing the Advanced Certificate in Science Programme, or by producing an equivalent or a higher qualification acceptable to University's Senate. The faculty recognises your prior learning to enter at several lateral entry points, at different levels. Exemptions based on prior learning are granted up to a fifty per cent

(50%) of course credits. These include several nationally recognised certificate and diploma level programmes. This guidebook lists such qualifications considered for exemptions. Learners can request the faculty to evaluate any other qualifications by forwarding an application within the period stipulated in this guidebook.

The programmes offered by the faculty are recognised by the University Grants Commission and are designed to meet the requirements stipulated in the Sri Lanka Qualification Framework (SLQF). Our graduates are successful in the public and the private sectors, in Sri Lanka and abroad. Some have pursued post-graduate studies in local universities and abroad. At present, our BTech programme is being re-evaluated by the Institution of Engineers Sri Lanka (IESL), for its recognition. The Institution of Engineers Sri Lanka provides a carrier path to become a Chartered Engineer, and to apply for the Associate Membership, one requires a minimum 2Cs and an S pass at the GCE Advanced Level Examination, in the Mathematics Stream, obtained during one and the same sitting.

The faculty offers a one-year master's degree programme in Energy Management and a two-year Master of Science programmes in Industrial Engineering and Structural Engineering. The Open University also enrol learners to Master of Philosophy (MPhil) and Doctor of Philosophy (PhD) degrees.

This guidebook provides information on courses offered in the study streams of the BTech and BIS programmes, and Advanced Certificate programmes conducted by the six academic departments. It highlights the compulsory courses and electives with their pre-requisite courses, and cost per course credit at different levels.

The faculty offers its programmes of study in the Open Distance Learning (ODL) mode and the academic coordination is done by competent permanent academics and visiting academics from the industry. The learning environment provided to you at the Central Campus and at the Regional and Study Centres are limited to Laboratory and Design classes, and a few interactive sessions. Hence it is advisable to be in the relevant industry-based environment during the learning period.

The faculty uses the Learning Management System (LMS) MOODLE to facilitate online access to all courses. Practicing Self Learning, learning in study groups (i.e. Collaborative Learning) and timely completion of learning activities are important to ensure your success. The main mode of course delivery is through Self Instructional Course Material. The teachers provide you with feedback and necessary guidance to move forward. Learners are required to attend the Day Schools that are a few face-to-face interactive sessions held during the academic year, conducted via a video conferencing system. The Open University is moving towards online examinations and the faculty may follow the same as per UGC guidelines.

Learners are required to follow the following two courses in the Student Academic Readiness Training, i.e., StART@OUSL:

- o English for General Academic Purposes (EGAP)
- o Empowering for Independent Learning (EfIL)

Both these courses are planned to be offered online via LMS MOODLE and the face-to-face interaction via a video conferencing system.

We hope that you would enrol in a programme of study offered by the Faculty of Engineering Technology and we take this opportunity to wish you the very best in your future endeavours.

Dr H.G.P.A. Ratnaweera Dean, Faculty of Engineering Technology

## Time schedule for student registration

Bachelor of Technology Honours in Engineering, Bachelor of Industrial Studies Honours, Advanced Certificate in Apparel Technology, Stand Alone courses, and Postgraduate Study Programmes

Certificate in Apparet Technology, Stand Alone courses, and Postgraduate Study Programmes		
Type of Registration	Centres	Dates
New-Registration	All Regional Centres & All Study Centre (except Kuliyapitiya)	To be announced
Re-Registration	Colombo Regional Centre	To be announced
(only present students)	All Regional Centres (except Colombo) and Gampaha, Kalutara SCs	To be announced
Late Registration for New Students	All Regional Centres and Gampaha, Kalutara SCs	To be announced
Late Registration for Re-Registration	All Regional Centres and Gampaha, Kalutara SCs	To be announced

#### **Important Dates**

Activity	Centres	Date
Last date for claiming approved exemptions	Colombo Regional Centre	To be announced
Last date for obtaining studentship	All Regional Centres & All Study Centre (except Kuliyapitiya)	To be announced
Last date for applying ERU Gold Medal (refer Page: 05)		Two months after the last date of the Final examination
Last date for the applying for the Award of the Degree, Higher Diploma, Diploma and Certificate		Within one week of the last re registration date

#### On-line submission of application forms

Applicants should submit applications on-line by visiting the university website **(payment.ou.ac.lk)**. Relevant payment could be made online through Debit/Credit cards or at the Centres.

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#### **Section 1: General Information**

#### 1.1 The University

Established in 1980 under the Universities Act No. 16 of 1978, the Open University of Sri Lanka (OUSL) is the only recognised university in Sri Lanka where students may pursue further education by distance education techniques in keeping with the philosophy of Open and Distance Learning. With the OUSL Ordinance No. 1 of 1990, as amended, the OUSL has the same legal and academic status as any other national university in Sri Lanka. As per the Public Administration Circular No. 16/92, dated 13/03/1992, issued by the Ministry of Public Administration, Provincial Councils and Home Affairs, the degrees awarded by the OUSL are treated as equivalent to degrees awarded by other universities under the purview of the University Grants Commission (UGC) of Sri Lanka. The OUSL offers its own programmes of study leading to Certificates, Advanced Certificates. Diplomas, Higher Diplomas, Honours Degrees, Postgraduate Diplomas and Masters Degrees. In addition to these main academic programmes, Stand Alone courses are offered. The OUSL is also fully equipped to support postgraduate research studies leading to Master of Philosophy (MPhil) and Doctor of Philosophy (PhD) degrees.

## 1.2 Faculty of Engineering Technology

The Faculty of Engineering Technology is one of the six academic faculties of the OUSL. The other five faculties are the Faculty of Natural Sciences, the Faculty of Humanities and Social Sciences, the Faculty of Education, the Faculty of Health Sciences, and Faculty of Management Studies.

The administrative and academic head of the faculty is the Dean. The faculty consists of the following six Academic Departments.

- Agricultural and Plantation Engineering
- Civil Engineering
- Electrical and Computer Engineering
- Mathematics and Philosophy of Engineering
- Mechanical Engineering
- Textile and Apparel Technology

The Faculty Board of the Faculty of Engineering Technology regulates all academic activities in the faculty under the direction of the Senate of the OUSL. The faculty also has a multi-disciplinary Engineering Research Unit (ERU) dedicated to enhance research in the Faculty and to provide a forum for discussion of matters pertaining to Engineering research.

This student guidebook describes the study programmes offered by the faculty, which have been revised according to the Sri Lanka Qualification Framework and meeting the professional accreditation requirement.



### 1.3 The Study System

The study system adopted by the Open University of Sri Lanka is based on multimedia instructional materials with a strong emphasis on Distance Education techniques using printed course material, online learning facilities and audio-visual aids. The Faculty of Engineering Technology is one of the pioneers, among all academic institutions in the world, in the delivery of engineering degree study programmes in distance education mode.

#### **Course Components**

The central component of Distant Education is the printed course material that offers the student the equivalent to lectures in a conventional university. Printed course material is supplemented by audio-visual material, online classes, face to face discussions/clarification classes (Day-Schools), tutor clinics, laboratory work, fieldwork, case studies, mini projects and seminars. Laboratory work and fieldwork form an integral part of

many courses in engineering technology and are compulsory. Pre-scheduled Day-Schools are conducted by the academics for groups of students at Regional and Study Centres of the University. The centres where Day schools are conducted may change depending on the course. As most of the programmes are offered in English medium, an acceptable level of fluency in English is expected from our students.

The OUSL is meant primarily for working students. Therefore, it is possible for a student to study while working, without much difficulty. Those students who have passed GCE (A/L) or equivalent qualifications may join the Honours Degree programmes directly. Others will be required to first follow the foundation programmes offered by the University.

#### **Activity Schedule**

All students are given an Activity Diary when they register for a study programme. This gives dates, times and venues of all activities conducted for all the courses in the academic year together with the assessment criteria for each course. In addition, the contact information of course academic coordinators as well as details of continuous assessments are included in the Activity Diary, available online. While the University is making every effort to schedule as many activities as possible during weekends and public holidays, certain activities such as laboratory classes and examinations may have to be scheduled during weekdays. Since the Activity Diary for the whole year is given to the student at the beginning of the academic year, it is hoped that they can plan his/her work well in advance.

#### **Enrolling for a Study Programme**

A student who joins the OUSL for a particular programme by fulfilling Entry requirements is required to register for at least eight credits of courses in the programme at the 1<sup>st</sup> registration. To register for a particular course, the student should have fulfilled the given Prerequisites for that course. Students are allowed to change their selection of courses after going through the study material, during the subsequent Add/Drop Period without any penalty. From the last date of Add/Drop period, for a further one-

month students can withdraw from the courses which they are unable to handle. In this event, the fees already charged will be forfeited.

#### Assessment

Assessment of courses consists of two components, namely Continuous Assessment (CA) and Final Examination (FE). Continuous assessment is not merely a means of assessment; it is one of the significant means of facilitating learning. Activities such as laboratory work, field classes, tutor marked assignments (TMAs), presentations, mini projects (MP) and continuous assessment tests (CATs) and Design Projects (DP) are integral parts of learning and assessment.

A student is required to obtain a minimum of 40% marks as the Overall Continuous Assessment Mark (OCAM) for a particular course to pass that course. The OCAM is computed by combining the marks obtained for different CA components according to a predetermined criterion. If this minimum mark is not obtained, the student is considered to have failed in that course and has to re-register in a subsequent year by re-paying the tuition fee. In this event, the student can obtain only a simple pass (C grade) for the course after successful completion. Therefore, it is recommended that a student only register for the number of courses which s/he can cope within the time available.

A student gaining more than 40% OCAM in a particular course is expected to sit the final examination in the same academic year by application. However, facing the final examination may be postponed to following year if necessary, within the valid period of 2 academic years including the year the student passed CA.

Therefore, the student must effectively involve in continuous learning throughout the academic year. Since a fair proportion of the activities used to impart knowledge in distance education involve self-study, success is only possible based on motivation and commitment.

Final mark of any course depends on the performance at both Continuous Assessment and Final Examination. For the courses offered by the faculty these components carry equal weightage.

A student who obtains the minimum OCAM for a course but fails to obtain the minimum pass mark at the final examination will be considered as a re-sit student. Re-sit students are not required to re-register for that particular course but should sit and pass the Final examination in the following academic year. A Re-sit student can obtain only a C grade for the particular course.

## 1.4 Student Academic Counselling

Academic counselling aims to assist the student in the clarification of his/her life/career goals and in the development of educational plans for achieving of these goals.

For this purpose, the faculty has a well organised procedure. The student can discuss his/her problems, especially related to course selections, with any academic staff member of the Faculty. With regard to activities related to a particular course, the student may contact the relevant course coordinator(s).

In addition, the faculty has a "Student Forum", to discuss more general issues affecting a group of students or the entire student population of the faculty. The Faculty Student Forum consists of a representative from each department (Student Counsellors) and two elected members from among the students. The students can forward their issues to the Student Forum through their representatives.

The Student Counsellors attend to the issues and provide solutions at the departmental level. Unresolved issues are forwarded to the Faculty Board for discussion, where the two student representatives are also members.

#### 1.5 Student Discipline

It is very important that a peaceful environment is ensured all the time within the University premises so that everyone can attend to the studies without any disturbance. Therefore, everyone should behave without affecting the freedom of others. Although a majority of students behaves conforming to socially accepted norms, one cannot completely eliminate indiscipline behaviour of a few. Therefore, the University has a set of regulations to deal with student indiscipline for the benefit of all students and staff.

#### 1.6 Faculty Student Union

The Faculty Student Union is the legitimate body that communicates with the faculty the issues faced by the student. The Faculty Student Union is composed of 15 members elected by ballot from among all students of the faculty. In the same ballot, two members are also elected to serve as student representatives to the Faculty Board.

The students can forward their grievances through the student representatives to the Faculty Board.

## **Section 2: Study Programme Common Information**

#### 2.1 Structure of the Curricula

The curricula of all study programmes of the Faculty of Engineering Technology ensure that the student receives an academically as well as professionally recognised qualification in a particular field. However, it still allows the student to structure the subject combinations and total duration of study to suit individual needs. To gain a qualification with a particular specialisation, a specific course combination stipulated for that specialisation needs to be fulfilled.

#### **Courses**

The fundamental entity in the dissemination process of knowledge is known as a "course" In other words, a course is equivalent to a subject.

#### **Course Categories**

Each course is classified into one of the Course Categories denoted by specific letters as given below.

•	
Engineering	X
Engineering projects	Y
Mathematics	Z
Industrial	I
General	J
Computer literacy	K
English	Е
Management	M

#### **Course Levels**

Each course is also assigned a "SLQF Level", between one (1) and ten (10). The Level indicates the relative complexity of the course content. SLQF Levels 1 and 2 comprise the certificate programmes. SLQF Levels 3 to 7 are different stages in undergraduate study programmes leading to Higher Diploma and Honours Degree qualifications. Finally, the courses of postgraduate programmes are placed at Levels 7, 8,9 and 10.

#### **Credit Rating of a course**

The Credit Rating assigned for a course reflects the amount of time an average student is expected to devote for its study.

Total effective time expected to be spent by an average student for a course with a Credit Rating of one (1) is about 50 notional hours and for engineering projects it is about 100 notional hours. The credit rating of a course is denoted by the fifth character in the Course Code.

Example: The course MHZ3551 has a credit rating of 5, which means the student is expected to spend about 250 notional hours of learning during the academic year.

#### **Course Codes**

Each course is assigned with a code consisting of letters and numbers. The course code denotes the Department that offer the course, Course Category, SLQF Level, Credit Rating and the serial number of the course assigned by the Department.

The codes allocated for the Departments of the Faculty are as follows:

Department/Faculty	Code
Agricultural and Plantation Engineering	AG
Civil Engineering	CV
Electrical and Computer Engineering	EE
Mathematics and Philosophy of Engineering	МН
Mechanical Engineering	DM
Textile and Apparel Technology	TA
Faculty of Engineering Technology	FD

Following are the codes for the Departments of the Faculty of Humanities and Social Sciences which offer certain courses for the study programmes of the Faculty of Engineering Technology.

Department	Code
Department of English Language Teaching	LT
Legal Studies	LL

Example: Course code MHZ3551

MH - Mathematics and Philosophy of Engineering

Z – Mathematics Course Category

3 – SLQF level

5 - Credit Rating

51 – Serial Number assigned by the Department

The fifth character indicates the credit rating from 1 to 9. Credits values from 10 onwards are indicated by letters; A, B, C, ......Z,

#### 2.2 Study Programmes

Study Programmes are made up of different course combinations. For the award of a qualification through a programme such as Advanced Certificate, Diploma, Higher Diploma or Honours Degree, three major considerations need to be fulfilled:

- 1. A total stipulated number of Course Credits required for an award should be acquired, while fulfilling the minimum requirements at different Levels.
- 2. Minimum stipulated number of Category Credits required for an award should be fulfilled by the student under each Course Category at identified Levels.
- 3. In order for the student to qualify in a Particular Field of Study, (e.g. Civil, Mechanical, Electrical, etc.), the list of Compulsory Courses required for an award in that field of study should also be satisfied.

#### 2.3 Assessment

The Overall Assessment Mark (Z %) of a student in respect of any course is based on the Overall Continuous Assessment Mark (X %) and the mark obtained at the Final Examination (Y %), and is computed as follows. In order to sit for the Examination, X should be greater than or equal to 40%.

$$Z = 0.5X + 0.5Y, if Y \ge 40$$
  
 $Z = Y, if Y < 40$ 

Each student who sits for the Final Examination of a course will be awarded a grade and a Grade

Point Value, as given in Table based on the Overall Assessment Mark (Z%).

Grade	<b>Grade Point Value</b>
A+	4.00
A	4.00
A-	3.70
B+	3.30
В	3.00
B-	2.70
C+	2.30
С	2.00
C-	1.70
D+	1.30
D	1.00
Е	0.00

#### **Performance Ranking**

The performance of student for degree study programmes are ranked based on Grade Point Average (GPA). The method of computing GPA is given under the description of each study programme in Section 3.

A student who achieves a Cumulative GPA above a certain value and satisfy other conditions as determined by the faculty is included in the Dean's List for each academic year.

#### 2.4 Special Awards

Students who have performed extremely well in Honours Degree programmes are rewarded with Gold Medals. The Gold Medals awarded by the Faculty are:

- Kulshreshtha Gold Medal for the best student in Bachelor of Technology Honours in Engineering programme.
- Thurairajah Gold Medal for the best final year project in Bachelor of Technology Honours in engineering programme
- ERU Gold Medal for the best research paper submitted for publication based on final year research project in Bachelor of Technology Honours in Engineering programme.
- Mrs. S.M. Abeygunesekera de Silva gold medal for the best student in Mechatronics Engineering specialisation of Bachelor of Technology Honours in Engineering Programme.
- Liyanaguruge Assie Annette de Silva gold medal for the Best Student in Bachelor of

- Industrial Studies Honours (Agriculture) programme.
- Virtusa Academic Excellence Gold Medal for the student with highest GPA in Bachelor of Software Engineering Honours programme.
- Gold Medal for the Best Civil Engineering Final Year Project in Bachelor of Technology Honours in Engineering Programme
- Gold Medal for the Best Civil Engineering student in Bachelor of Technology Honours in Engineering Programme

#### 2.5 Exemptions

Students who have academic qualifications other than entry requirements may be granted exemptions according to their qualifications. Such qualifications the student could claim exemptions are listed under each study programme. However, notwithstanding the exemptions obtained, a student has to follow the relevant OUSL courses and obtain certain minimum number of credits to qualify for an award. Such minimum limits are given under the description of each study programme. If you possess any qualification other than those listed in this guidebook, you can seek exemptions by sending duly filled application form which is downloadable from the faculty webpage and sent it on or before the specified date. The application form is also included in the **Annex 1.** Any exemptions granted will be informed at the time of registration.

### 2.6 StART@OUSL Programme

As the Open University conducts its study programmes using Open and Distance Learning pedagogy, it is very necessary that the students become familiar with self-learning. The student should also have a proficiency in English language, as all study programmes (except some certificate/Advanced certificate programmes) of the Faculty of Engineering Technology are conducted in English medium. To meet this requirement the University conducts a programme called Student Academic Readiness Training at OUSL (StART@OUSL) for all new students.

All students who wish to enrol in a programme of study leading to an Honours Degree at the OUSL should complete some courses offered under the StART@OUSL programme. You are strongly advised to follow this programme as some of these courses will be prerequisites for the courses in the main degree programme.

**NOTE:** Activities of the compulsory courses are scheduled without clashing with levels 3 and 4 compulsory courses of the main study programme. Activities of the optional courses may be scheduled at the same timeslots with regular courses. So you must check the activity diary for any clashes if you wish to offer any optional courses.

#### **Programme Content**

Course Code	Course Title		
	Compulsory Courses		
LTE3401	English for General Academic Purposes [EGAP]		
FDE3020	Empowering for Independent Learning [EfIL]		
	Optional Courses		
LTE3111	Second National Language (Sinhala)		
LTE3112	Second National Language (Tamil)		
FXE3114	Soft Skills for Personal Development		
CSE3213	ICT Skills		
DSE3215	Social Harmony		

#### Fees for StART@OUSL

For LTE3410, the fee is to be announced and there is no fee for FDE3020. The students should pay the total course fee along with the 1st instalment.

## 2.7 Registering for Courses

#### **Pre-requisites**

In order to register for a course, a student has to have fulfilled certain pre-requisites. This could be one or several of the following: passing of related lower level course/s, passing only the Continuous Assessments of certain lower level courses, concurrent registration for course/s or acquisition of a certain number of credits at different levels and in course categories. These conditions are abbreviated as given below.

P – Pass, CA – Pass in Continuous Assessment, CR – Concurrent Registration

#### **Level Pre-requisites**

In addition to the pre-requisites specific to individual courses, level pre-requisites related to EGAP and EfIL will apply for registering courses at different levels as given below.

Level	Requirement	
3	FDE3020 [CR], LTE3401 [CR] or VTL2001	
4	FDE3020 [CA], LTE3401 [CA] or VTL2001	
5, 6 and 7	FDE3020 [P], LTE3401 [P] or VTL2001	

**NOTE:** Those who have obtained a pass for General English at the G.C.E. (A/L) examination will be granted VTL2001, however they will not be granted exemption for LTE3401. Therefore, it is compulsory that every undergraduate offers LTE3401. (Though the students can obtain VTL2001 based on their prior qualification, the student must complete LTE3401 to be to eligible for the award of degree).

## Minimum and Maximum Number of Credits

When a student enrols a study programme s/he has to register for a minimum of 8 credits. In subsequent years, this minimum limit does not apply, but s/he has to obtain the studentship by paying relevant fees except course tuition fees.

Maximum number of credits a student can register in an academic year is 38.

## 2.8 Fees for Study Programmes

Unlike the other national universities in Sri Lanka, the OUSL does charge fees from its students. This is related to the fact that the OUSL was set up primarily to cater to the needs of employed students. As these students would naturally be earning at least a modest income, it was felt that the decision to levy fees is justified.

However, there is no intention of recovering the full cost of education from the students. As of today, the income from fees meets only a fraction of the total expenditure of the University. The Government, by grants disbursed through the University Grants Commission, meets the major component of the total expenditure. The fees payable by a student includes, registration fee, facilities fee,

exemption fee (where applicable), library facility fee, tuition fee, etc.

The fees applicable for the academic year 202 1/22 are as follows:

Type of Fee	Certificate, Diploma and Degree Programmes	Postgraduate Programmes
Registration	To be announced within a week	To be announced within a week
Facilities	To be announced within a week	To be announced within a week
Library Facility	To be announced within a week	To be announced within a week
Exemption	To be announced within a week	
Tuition fee	Depends on the Course Level	

Tuition fee applicable for the academic year 2021/22, the Bachelor of Technology Honours, and the Bachelor of Industrial Studies Honours Programmes are given in the table below.

Course SLQF Level	Tuition fee Rs per credit
3 and 4	To be announced within a
3 allu 4	week
5, 6 and 7	To be announced within a
	week

The students registering for the courses TAI3270 Fashion Illustration I and TAI4373 Fashion Illustration II conducted by the Department of Textile and Apparel Technology are required to pay an additional sum of Rs. 1,725/= per course

The students registering for the course CVX5440 Surveying II conducted by the Department of Civil Engineering are required to pay an additional sum of Rs. 10,500/= for participation at the residential survey camp.

Tuition fee applicable for the Advanced Certificate in Apparel Technology study programme is to be announced.

These rates are liable to be revised for subsequent academic years.

All students who submit online applications will receive two vouchers; one for the main Faculty Programme (first instalment) and the other for the StART@OUSL. When you come for the registration you need to bring the university copies of two payment receipts for vouchers after both the payments have been made. The course material for the first dispatch (first part of the course material) will be issued at the registration.

The second instalment voucher (amount of which will be based on your course credits) will be sent in due course. When you come to collect the course material for the second dispatch you have to produce the payment receipt for the voucher.

#### **Scholarships**

The University has a limited number of bursaries, including University Bursaries and Mahapola Scholarships to help students who are in need of financial support. For details See **Annex 2**.

## **Section 3: Study Programme Details**

This Section describes in detail the following Programmes of Study conducted by the Faculty of Engineering Technology.

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Extract from the "SRI LANKA QUALIFICATION FRAMEWORK (SLQF)" published by the University Grants Commission, 2015

SLQF Level	Qualification Awarded	
12	Doctor of Philosophy/Doctor of Letters/Doctor Science	
11	Master of Philosophy	
10	Master with course work and a research component	
9	Masters by course work	
8	Postgraduate Diploma	
7	Postgraduate Certificate	
6	Bachelors Honours	
5	Bachelors	
4	Higher Diploma	
3	Diploma	
2	Advanced Certificate (G.C.E. A/L or equivalent)	
1	Certificate (G.C.E. O/L or equivalent)	

## **Bachelor of Technology Honours in Engineering Degree Study Programme**

#### Aim of the Study Programme

The aim of the Study Programme is to provide an access, for the right candidates, to an educational systems composed with outstanding and up-to-date academic content delivered within a well planned curriculum framework and course syllabuses with a provision for high flexibility in course selection, facilitating the focus on emerging subject areas in the industry, that will disseminate essential knowledge and skills in a wide range of engineering disciplines, and most suited for open distance learning pedagogy. The study Programme also gives due consideration to the social and environmental impacts and prepare the students to undertake postgraduate studies and research as career options.

#### **Study Programme Educational Outcomes**

To produce competent engineers;

- With up-to-date knowledge and expertise in their own specialty areas and acquired ingenuity to address engineering problems with holistic approach with due consideration to environment and society.
- With inspiration to be leaders in the advancement of their specialty areas of engineering by engaging in continuous professional development and research and scholarship.

## 3.1 Bachelor of Technology Honours in Engineering Degree Study Programme

The Bachelor of Technology Honours in Engineering degree is designed carefully according to the requirements of the Sri Lanka Qualification Framework (SLQF), specifying minimum and maximum limits for each category of courses, to ensure that the programme is balanced, and that it meets the academic requirements of major Engineering Institutions, both in Sri Lanka and overseas (e.g. The Institution of Engineers, Sri Lanka).

The faculty expects a student who is awarded the Bachelor of Technology Honours in engineering degree to be able to:

- Develop creative and analytical ability and innovative thinking in engineering,
- Address social, environmental and economic issues related to engineering and
- Access and utilise engineering knowledge to the benefit of the society.

It is also possible for a student to obtain a Higher Diploma in an approved Technology discipline after successful completion of a required combination of courses and credit requirements. The Higher Diploma is one of the main avenues to enter middle-level technical grades within the engineering disciplines.

The Faculty expects a student who has been awarded the Higher Diploma in Technology to be:

- Competent in the application of the well-known principles of engineering technology,
- Aware of social, environmental and economic issues related to technology and
- Self-motivated and capable of furthering career advancement

#### **Duration**

The minimum duration of the Honours Degree programme starting from level 3 is 5 academic years and the maximum number of academic

years a student can spend to complete the degree programme is fifteen (15).

#### Medium of instruction

The medium of instruction of the study programme is English.

#### **Areas of Specialisation**

- Agricultural Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Electronic and Communication Engineering
- Mechanical Engineering
- Mechatronics Engineering
- Textile and Clothing Engineering

#### **Eligibility for Admission**

A person seeking admission to the programme leading to the award of the Degree of Bachelor of Technology Honours in Engineering shall be required to have:

- Obtained passes in the subjects, Combined Mathematics, Physics and Chemistry at the General Certificate of Education (Advanced Level) Examination, Sri Lanka, in one and the same sitting or
- Obtained the Advanced Certificate in Science with courses in the disciplines of Mathematics, Physics and Chemistry, offered by The Open University of Sri Lanka or
- Obtained a minimum three (3) credit (C) passes for Mathematics, Physics and Chemistry in Cambridge/Edexcel Advanced Level Examination within three years or
- Obtained an equivalent or higher qualification acceptable to the Senate.

## Recognition for the Associate Membership of the Institution of Engineers, Sri Lanka (IESL)

The student should be aware that in order to obtain associate membership of the IESL, in addition to an IESL recognised degree, the candidate should have at least two credit passes and one simple pass in physical science stream (Physics, Chemistry, and Combined Mathematics) in the General Certificate of Education (Advanced Level) examination of Sri

Lanka at one and the same sitting (you may refer www.iesl.lk), before embarking in the degree programme.

#### Requirements for the award of the Degree

In order for a student to qualify for the award of the Degree of Bachelor of Technology Honours in Engineering, S/he has to meet the following requirements (within a maximum period of 15 academic years).

- (1) Successful completion of all compulsory courses for the selected engineering specialisation, and
- (2) Fulfil the level-wise and category-wise course credits as given in Table 1

Table 1 - Course credits requirements for the Award of Bachelor of Technology Honours in Engineering Degree

Category	Minimum credits	Maximum credits
Engineering (X)	90 Subject to a minimum of 40 at Level 5 or above, of which at least 5 at Level 7	95 Subject to a minimum of 40 at Level 5 or above, of which at least 5 at Level 7
Engineering projects (Y)	9 of which at least 8 at Level 7	14 of which at least 8 at Level 7
Mathematics (Z)	20 subject to a minimum of 5 at Level 5 or above	25 subject to a minimum of 5 at Level 5 or above
General (J)	5	10
Management (M)	15 Subject to a minimum 10 at Level 5 or above	20 Subject to a minimum 10 at Level 5 or above
Industrial Training (W)	8	8
Total	152 Subject to a minimum of 75 at Level 5 or above, of which at least 20 at Level 7	

## Requirements for the award of the Higher Diploma

A student could obtain Higher Diploma in an approved technology discipline as an intermediate award. In order to qualify for the award of Higher Diploma, a student has to meet the following requirements.

- (1) Successful completion of all compulsory courses at levels 3 and 4 for the selected engineering specialization, and
- (2) Fulfil the level-wise and category-wise minimum course credits as given in Table 2.
- (3) Pass all Level 3 & 4 Compulsory courses, excluding MHZ4553.

Table 2- Course credits requirements for the Award of the Higher Diploma in an approved discipline

Category	Minimum credits	Maximum credits
Engineering (X)	45 Subject to a minimum of 20 at Level 4 or above	50 Subject to a minimum of 20 at Level 4 or above
Engineering projects (Y)	1 at Level 4	4 at Level 4
Mathematics (Z)	10	15
General (J)	0	5
Management (M)	5 at Level 3 or 4	7 at Level 3 or 4
Industrial Training (W)	8	8
Total	74 Subject to a minimum of 30 at Level 4	

#### **Grade Point Average (GPA)**

The GPA is computed by considering the courses at levels 4, 5, 6 and 7 totalling to 90 credits. In selecting the courses for 90 credits the following sequence will be followed.

- (1) Compulsory courses at levels 5, 6 and 7
- (2) Non-compulsory courses at levels 5, 6 and 7
- (3) Compulsory courses at level 4

In a situation, where exactly ninety (90) credits cannot be obtained, the courses are selected to the nearest value below ninety (90), and the remainder credit is taken as a Part Credit of the next course.

The Grade Point Average (GPA) is computed as follows:

$$GPA = \frac{\left\{\sum \qquad (CreditRatingoftheCourse)*(GPV)\right\} + (PartCreditoftheCourse)*(GPV)}{90}$$

#### **Limits for Exemptions**

Notwithstanding any exemptions granted for prior qualifications, a student shall acquire, by successful completion in accordance with the Scheme of Assessment, a minimum number of credits as shown below for the awards.

#### For Degree:

Minimum credit requirements a student shall acquire by successful completion in accordance with the Scheme of Assessment for the award of the Honours Degree are as given below.

- Level 7 (considering all Categories): 10
- Level 7 (considering X and Y categories): 7
- Levels 5, 6 and 7 (considering all Categories): 38

• Levels 5, 6 and 7 (considering X, Y and Z Categories): 27

• Total (considering all Categories and all levels from 3 to 7): 76

#### For Higher Diploma:

Minimum credit requirements a student shall acquire by successful completion in accordance with the Scheme of Assessment for the award of the Higher Diploma are as given below.

- Level 4 (considering all Categories): 15
- Level 4 and above (considering X and Y Categories): 11
- Total (considering all Categories and all levels from 3 to 7): 37

A list of qualifications for which exemptions could be claimed is given in Page 37.

#### **Curricula for different specialisations**

The curriculum of the Programme of Study leading to the awards of Bachelor of Technology Honours in Engineering degree and the Higher Diploma has been revised to comply with the Sri Lanka Qualification Framework and to meet the professional accreditation requirements and is named the Revised Curriculum.

This Section gives the combination of courses for the specialisations of the Bachelor of Technology Honours in Engineering Degree.

## Special notes applicable for all specialisations

Engineering Mathematics (Z) and General (J) Category courses have to be selected from the following list if not included in the compulsory lists for specialisations, in order to meet Z and J Category Course Credit requirements.

Cour	ses (Revised Curriculum)	Pre-requisites
MHZ3551	Engineering Mathematics I	None
MHZ3552	Engineering Mathematics II	None
LLJ3245	Introduction to Laws of Sri Lanka	None
MHZ4553	Engineering Mathematics III	MHZ3551(CA), MHZ3552(CA)
MHJ4241	History of Technology	Pass in 20 credits
MHZ5554	Engineering Mathematics IV	MHZ3551(P), MHZ3552(P), MHZ4553(CA)
MHZ5355	Discrete Mathematics	MHZ3551(P)
MHJ5342	Technology, Society and Environment	Pass in 45 credits
MHJ5343	Nature of Science	Pass in 45 credits

Students are required to apply in a prescribed form after completing the award requirements to receive the Higher Diploma or the Degree

## **Curriculum for Agricultural Engineering Specialisation**

#### **Compulsory courses**

	Course	Pre-requisites
	Level 3	-
AGX3201	Basic Biology	None
CVX3340	Introduction to Hydraulics & Hydrology	DMX3401 (CR), MHZ3551 (CR)
EEX3410	Introduction to Electrical Engineering	MHZ3552 (CR)
EEX3417	Software Development for Engineers	AGM3203 (CR)
EEX3351	Electronics I	EEX3410 (CR)
DMX3401	Fluid Mechanics and Thermodynamics	None
DMX3302	Engineering Mechanics	MHZ3551(CR), MHZ3552(CR)
DMX3305	Introduction to Engineering Design Graphics	None
DMX3107	Workshop Practice	None
MHZ3551	Engineering Mathematics I	None
MHZ3552	Engineering Mathematics II	None
AGM3203	Communication Skills	None
	Level 4	1
AGX4404	Crop Technology	None
AGX4405	Postharvest Engineering and Technology I	None
AGX4356	Soil Science	None
CVX4342	Surveying I	DMX3305(P), MHZ3551(P), MHZ3552(P)
DMX4205	Strength of Materials I	DMX3302(CA), MHZ3551(CA), MHZ3552(CA)
AGX4302	Design of Agricultural Machine Elements	DMX3302(CA), DMX3305 (CA), DMX4205(CR)
AGX4376	Crop Processing	AGX4404(CR) or AGX4405(CR)
AGY4180	Group Project (Agricultural Engineering)	Pass in 15 credits
MHZ4553	Engineering Mathematics III	MHZ3551(CA), MHZ3552(CA)
AGM4307	Economics and Marketing for Engineers	Pass in 18 credits in Level 3
	Level 5	
AGX5206	Food Science	None
AGX5308	Soil Management Tillage and Traction	AGX4356 (CA)
AGX5314	Engineering Design (Agricultural Engineering)	DMX4205(CA), DMX4307(CA), AGX4302(CA), AGX5511(CR)
AGX5510	Design and Management of Irrigation and Drainage	AGX4356(CA)
AGX5511	Farm Power and Mechanization	DMX4205(CA)
MHZ5554	Engineering Mathematics IV	MHZ3551(P), MHZ3552(P), MHZ4553(CA)
CVM5401	Accounting for Engineers	AGM4307 (P)
	Level 6	
AGX6180	Research Methodology and Project Identification (Agricultural Engineering)	30 credits at Level 4 or above (P)
DMM6601 *	Management for Engineers	CVM5401 (CA), 60 credits (P)
AGX6387	Plantation Crop Technology	AGX4404 (P)

Level 7		
AGX7216	Structural Designs for Commercial Farming	DMX3305(P), MHZ5554(CA)
AGX7417	Agricultural Hydrology	CVX3340(P), AGX4356(P),
AGX7418	Food Engineering	AGX4405 (P)
AGX7283	Groundwater Resources Management	AGX4356(P)
AGY7880	Engineering Research Project (Agricultural Engineering)	Pass in 80 credits including 50 credits Pass in X category courses
Industrial Training		
AGW4401	Industrial Training I	Pass in 36 credits at level 3
AGW5401	Industrial Training II	AGW4401 (CR), pass in 15 credits at level 4 or above

<sup>\*</sup>Not offered in 2020/2021

#### **Elective courses**

AGX5212	Postharvest Engineering and Technology II	AGX4405(CA), AGX5206(CR)
AGX5277	Food Safety and Quality Management Systems	AGX5206(CR), AGX4405(CA)
AGX5415	Horticultural Landscaping Technology	AGX4404 (CA)
AGX5565	Soil Plant Water Relationship	AGX4356(CA)
AGX5309	Sustainable Agricultural Technology	AGX3201(P), AGX4356(CR)
AGX6377	Precision Agriculture	MHZ4553(P)
AGX6284	Impact of Climate Change on Water Resources	AGX4356(P)
AGX6490	Soil and Water Conservation	AGX4356(P)
DMX6302	Energy, Environment and Sustainability	75 Credits (P)
CVX7350*	Remote Sensing and GIS	none

<sup>\*</sup>Not offered in 2020/2021

#### **Special Note:**

Bachelor of Technology Honours in Engineering (Agricultural Engineering) will be offered only if adequate number of students (as decided by the Department) are registered for the programme. In the event BTechHons in Agriculture is not offered, those students who have applied will be allowed to register for any other specialisation or study programme provided they possess the required entry qualifications.

#### **Curriculum for Civil Engineering Specialisation**

#### **Compulsory Courses**

	Courses	Prerequisites	
	Level 3		
CVX3340	Introduction to Hydraulics & Hydrology	DMX3401 (CR), MHZ3551 (CR)	
CVX3441	Structural Analysis and Design I	DMX3305 (CR), CVX3442 (CR)	
CVX3442	Strength of Materials	MHZ3551(CR), MHZ3552(CR)	
EEX3410	Introduction to Electrical Engineering	MHZ3552 (CR)	
EEX3417	Software Development for Engineering	AGM3203 (CR)	
DMX3401	Fluid Mechanics and Thermodynamics	None	
DMX3305	Introduction to Engineering Design Graphics	None	

DMX3107	Workshop Practice	None
MHZ3551	Engineering Mathematics I	None
MHZ3552	Engineering Mathematics II	None
AGM3203	Communication Skills	None
	Level 4	
CVX4240	Hydraulic Engineering I	CVX3340 (P), DMX3401 (P), MHZ3551 (P)
CVX4241	Engineering Hydrology	CVX3340 (P), MHZ3551 (P), MHZ3552 (P)
CVX4342	Surveying I	DMX3305(P), MHZ3551(P), MHZ3552(P)
CVX4343	Soil Mechanics	CVX3340 (P), CVX3442 (P)
CVX4344	Engineering Geology	CVX4343 (CR), CVX4241 (CR)
CVX4545	Structural Analysis and Design II	CVX3441 (P), CVX3442 (P)
CVX4446	Construction Engineering & Materials	CVX3442 (P), MHZ3552 (P), AGM3203 (P), DMX3107 (CR)
MHZ4553	Engineering Mathematics III	MHZ3551(CA), MHZ3552(CA)
AGM4307	Economics and Marketing for Engineers	Pass in 18 credits in Level 3
	Level 5	1
CVX5440	Surveying II	CVX4342 (P)& Pass in additional 15 credits in X Category, Subject to a minimum of 5 at Level 4 or above.
CVX5241	Hydraulic Engineering II	CVX4240 (P), CVX4241 (P)
CVX5242	Mechanics of Fluids	CVX4240 (P), CVX4241 (P)
CVX5443	Structural Analysis	CVX4545 (P), MHZ4553 (P)
MHZ5554	Engineering Mathematics IV	MHZ3551(P), MHZ3552(P), MHZ4553(CA)
CVM5401	Accounting for Engineers	AGM4307 (P)
	Level 6	
CVX6444	Geotechnics	CVX4343 (P)
CVX6345	Environmental Engineering	CVX3340 (P), CVX4240 (P), CVX4241 (P)
CVX6546	Construction Engineering and Management	CVX4446 (P) and CVX4545 (P)
CVX6180	Research Methodology and Project Identification (Civil Engineering)	None
*DMM6601	Management for Engineers	CVM5401 (CA), 60 credits (P)
CVW6803	Industrial Training (Civil -Undergraduate)	MHZ5554 (P), CVX5440 (P), CVX5241 (P), CVX5242 (P), CVX5443 (P), Eligibility in 21 credits at level 5 or above
	Level 7	•

CVX7640	Structural Design	CVX5443 (P), CVX4545 (P)
CVX7241	Geotechnical Design	CVX6444 (P)
CVX7242	Environmental Engineering Design	CVX6345(CR)
CVY7880	Engineering Research Project (Civil)	Pass in 80 credits including: 50 credits Pass in X category courses, CVX4545(P), CVX6180(P)
CVY7385	Comprehensive Design Project (Civil)	Pass in 80 credits including: 50 credits Pass in X category courses, CVX4545(P), CVX6180(P)

<sup>\*</sup>Not offered in 2021/2022

#### **Elective Courses**

	Courses	Prerequisites
*CVX4347	Irrigation Engineering	CVX3340 (P)
CVX4348	Water and Wastewater Engineering	CVX3340 (P)
CVX4349	Building Engineering	DMX3305(P), EEX3410 (P), CVX4446 (CR)
CVX4350	Quantity Surveying	CVX4342(CR), CVX4446(CR)
**CVY4185	Group Project	MHZ3551(P), MHZ3552 (P), DMX3305 (P), CVX3340 (P), CVX3441 (P), CVX3442 (P), CVX4343 (CR), CVX4545 (CR), CVX44446 (CR)
CVW4802	Industrial Training	MHZ3551(P), MHZ3552(P), EEX3417(P), DMX3401(P), EEX3410(P), DMX3305(P), CVX3340(P), CVX3441(P), CVX3442(P), AGM3203(P), Eligibility in 20 credits at level 4 or above
CVX7343	Bridge Engineering	CVX7640 (CR)
CVX7344	Computational Mechanics using Finite Element Methods	CVX7640 (CR)
CVX7345	Highway Engineering and Design	CVX4343 (P), CVX4446 (P), CVX5440 (P)
CVX7346	Ground Improvement Techniques	CVX4343(P), CVX6444 (P)
CVX7347	Applied Engineering Geology and Rock Mechanics	CVX4344 (P), CVX6444 (P)
CVX7348	Coastal Engineering and Coastal Zone Management	CVX5242 (P), MHZ5554 (P), CVX6345 (CR)
CVX7349	Environmental Modelling and Management	CVX5242 (CA) CVX6345 (CA), CVX7242 (CR)
CVX7350	Remote Sensing and GIS	None

<sup>\*</sup>Not offered in 2020/2021 \*\*Compulsory for Higher Diploma

## **Curriculum for Computer Engineering Specialisation**

## **Compulsory Courses**

	Course	Prerequisites
	Level 3	
EEX3331	Electrical Measurements and Instrumentation	EEX3410 (CR)
EEX3336	Communications and Computer Technology	AGM3203(CR), EEX3351 (CR), EEX3417(CR)
EEX3351	Electronics I	EEX3410 (CR)
EEX3410	Introduction to Electrical Engineering	MHZ3552 (CR)
EEX3417	Software Development for Engineers	AGM3203 (CR)
DMX3401	Fluid Mechanics and Thermodynamics	None
DMX3305	Introduction to Engineering Design Graphics	None
DMX3107	Workshop Practice	None
MHZ3551	Engineering Mathematics I	None
MHZ3552	Engineering Mathematics II	None
AGM3203	Communication Skills	None
	Level 4	į.
EEX4331	Circuit Theory and Design	EEX3410 (CA), MHZ3551 (CA), MHZ3552 (CA)
EEX4332	Electrical Power	EEX3410 (CA), MHZ3551 (CA)
EEX4435	Data Structures and Algorithms	EEX3417(CA), MHZ3551(CA), AGM3203(CA), pass in 15 credits at level 3
EEX4347	Software Engineering Concepts	EEX3417 (CA), EEX3336(CA), AGM3203(CA), pass in 15 credits at level 3
EEX4436	Microprocessors and Interfacing	{[EEX4351(CR),EEX3336(P), EEX3351(P)] or DMX3304(P)}, EEX3417(P), MHZ3551(P), AGM3203(P)
EEX4351	Electronics II	EEX3410(P), EEX3351(CA), MHZ3551(P), MHZ3552(CA), AGM3203(P)
EEY4181	Group Project (Computer Engineering)	Pass in 30 credits
EEW4301	Industrial Training (Electronics)	Pass in 36 credits at level 3, EEX4351(CR)
MHZ4553	Engineering Mathematics III	MHZ3551(CA), MHZ3552(CA)
AGM4307	Economics and Marketing for Engineers	Pass in 18 credits at Level 3
	Level 5	
EEX5434	Data Communications & Networking	EEX3410(P), EEX3336(P), MHZ3551(P), MHZ3552(P), AGM3203(P)
EEX5335	Operating Systems	EEX4435(CA), EEX4436(CA), EEX5536(CR), MHZ5355(CR), 36 credits pass from level 3
EEX5536	Computer Architecture	[EEX3417(P), EEX3336(P), EEX3351(P), MHZ4553 (P), EEX4436(CA), 30 credits pass

EEX5346	Embedded Systems	[EEX3417(P), EEX3336(P), EEX3351(P), EEX4436(CA), EEX4351(CA), [EEX5335(CR) or EEX5564(CR)], MHJ5342(CR)
EEX5351	Digital Electronic Systems	EEX3336(P), EEX3410(P), EEX3417(P), MHZ3551(P), AGM3203(P), EEX4351(P), EEX4436(CA)
EEX5360	Signals and Systems	EEX3336(P), MHZ4553(CR), MHZ3551(P), MHZ3552(P)
EEX5270	Information Security	MHZ3551(P), EEX3417(P), EEX4435(P), 30 credits pass at level 3
MHZ5554	Engineering Mathematics IV	MHZ3551(P), MHZ3552(P), MHZ4553(CA)
MHZ5355	Discrete Mathematics	MHZ3551(P)
MHJ5342	Technology, Society and Environment	45 credits pass
CVM5401	Accounting for Engineers	AGM4307(P)
EEW5501	Industrial Training (Computer)	65 credits pass, EEX4347(P), EEW4301(CR)
	Level	6
EEX6335	Compiler Design	AGM3203(P), EEX4435(P), EEX5536(CA), MHZ3551(P), MHZ5355(P)
EEX6236	Advanced Computer Architecture	MHZ4553 (P), EEX4436(P), EEX5335(CA) EEX5536(CA) and 60 credits pass
EEX6181	Research Methodology and Project Identification (Computer Engineering)	Pass in 60 credits, EEX5335(CA), EEX5536(CA), EEX4435(P)
*DMM6601	Management for Engineers	CVM5401 (CA), 60 credits (P)
EEM6201	Professional Practice	Pass in 36 credits at level 3, Pass in 24 credits at level 4 or above
	Level	7
EEX7436	Processor Design	EEX5351 (CA), EEX5536(CA), EEX3417(P), AGM3203(P), MHZ3551(P), EEX3336(P), EEX4436(P)
EEX7337	System Design in Groups	EEX4435(P), EEX4347(P), EEX4436(P), EEX5270(CA), MHZ5554(P), Pass in 60 credits
EEY7881	Engineering Research Project (Computer Engineering)	Pass in 80 credits including 50 credits Pass in X category, EEX6181(P), EEX7436(CR), EEX6236(CR)

#### **Elective Courses**

	Course	Prerequisites
EEX3266	Information Systems and Data Management	None
EEX3269	Mobile Application Development for Android	None
EEX3262	Introduction to Object Oriented	EEX3417(CR)
	Programming	
EEI3372	Programming in Python	EEX3417(CR)

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EEX4146	Digital System Simulation	EEX3336(P), {EEX3351(P) or DMX3304(P)},
		EEX3417(P), MHZ3551(P), AGM3203(P),
		EEX4351(CR)
EEX4362	Object Oriented Design and Programming	EEX3262(CA), EEX3417(P), MHZ3551(CA)
EEX4366	Data Modelling and Database Systems	EEX3266(CA)
EEX5280	Creative Design	45 credits pass
EEX5466	Advanced Database Systems	EEX3266(P), EEX4366(CA)
EEX5467	Software Testing and Quality Assurance	EEX4347(P), 20 credits pass at level 3
EEX7241	Neural Network & Fuzzy Logic Applications	65 credits pass and EEX3417(P)
*EEX7244	Data Mining	EEX4435(P), MHZ4553(P), 60 credits pass
EEX7340	AI Techniques & Agent Technology	EEX4435(P), EEX4347(P), MHZ5355(P)
EEX7171	Emerging Technologies	60 credits pass

<sup>\*</sup> Not offered in 2021/2022

## **Curriculum for Electrical Engineering Specialisation**

Compulson	ry Courses	
	Course	Prerequisites
	Leve	
EEX3331	Electrical Measurements and Instrumentation	EEX3410 (CR)
EEX3336	Communications and Computer Technology	AGM3203(CR), EEX3351 (CR), EEX3417(CR)
EEX3351	Electronics I	EEX3410 (CR)
EEX3410	Introduction to Electrical Engineering	MHZ3552 (CR)
EEX3417	Software Development for Engineers	AGM3203 (CR)
DMX3401	Fluid Mechanics and Thermodynamics	None
DMX3305	Introduction to Engineering Design Graphics	None
DMX3107	Workshop Practice	None
MHZ3551	Engineering Mathematics I	None
MHZ3552	Engineering Mathematics II	None
AGM3203	Communication Skills	None
	Level	14
EEX4331	Circuit Theory and Design	EEX3410 (CA), MHZ3551 (CA), MHZ3552 (CA)
EEX4542	Power Systems I	EEX3410(P), MHZ3551(P), MHZ3552(CA), DMX3305(P)
EEX4434	Electrical Installations	EEX3410(P), DMX3305(P), [EEX4542(CR) or EEX4332(CR)]
EEX4448	Electrical Machines	EEX3410(P), MHZ3551(P), MHZ3552(CA), EEX4542(CR)
EEX4436	Microprocessors and Interfacing	{[EEX4351(CR),EEX3336(P), EEX3351(P)] or DMX3304(P)}, EEX3417(P), MHZ3551(P), AGM3203(P)
EEX4351	Electronics II	EEX3410(P), EEX3351(CA), MHZ3551(P), MHZ3552(CA), AGM3203(P)
EEY4182	Group Project (Electrical engineering)	Pass in 30 credits
MHZ4553	Engineering Mathematics III	MHZ3551(CA), MHZ3552(CA)
AGM4307	Economics and Marketing for Engineers	Pass in 18 credits in Level 3
	Leve	15
EEX5352	Power Systems II	EEX4448(CA), EEX4542(CA), MHZ4553(CA), Pass in 36 credits at level 3
EEX5338	High Voltage Engineering	EEX4448(CA), EEX4542(CA), Pass in 36 credits at level 3
EEX5348	Electrical Machines and Drives	EEX4448(CA), EEX5453(CR), Pass in 36 credits at level 3
EEX5351	Digital Electronic Systems	EEX3336(P), EEX3410(P), EEX3417(P), MHZ3551(P), AGM3203(P), EEX4351(P), EEX4436(CA)
EEX5453	Power Electronics	EEX4351(CA), EEX4331(CA), [EEX4542(CA) or EEX4332(P)], Pass in 36 credits at level 3
DMX5403	Control Systems Engineering	MHZ5554 (CR), 30 credits in X category courses (P)
MHZ5554	Engineering Mathematics IV	MHZ3551(P), MHZ3552(P), MHZ4553(CA)
CVM5401	Accounting for Engineers	AGM4307(P)

Level 6			
EEX6354	Comprehensive Electrical Engineering Design	EEX4542 (CA), EEX5453 (CR), MHZ3551 (P), MHZ3552 (P), AGM3203 (P), DMX3401 (P)	
EEX6182	Research Methodology and Project Identification (Electrical engineering)	Pass in 60 credits	
EEX6441	Electromagnetism and Wave Propagation	MHZ4553(P), MHZ5554(CR), Pass in 50 credits at levels 3 and 4	
*DMM6601	Management for Engineers	CVM5401 (CA), 60 credits (P)	
	Level 7		
EEX7231	Advanced Circuit Design and Analysis	EEX4331 (P), MHZ4553 (CA), Pass in 60 credits at level 3 and 4	
EEX7432	Power Systems Planning, Operations and Control	DMX5403(CA), EEX5352(CA), EEX4542(P), Pass in 60 credits at level 3 and 4	
EEY7882	Engineering Research Project [Electrical]	Pass in 90 credits including 60 credits Pass in X category courses, EEX6182(CA), EEX7432(CR), EEW6502(CR)	
	Industrial T	raining	
EEW4301	Industrial Training I (Electronics)	Pass in 36 credits at level 3, EEX4351(CR)	
And <b>one</b> of			
EEW4502	Industrial Training II (Electrical power)	Pass in 45 credits, EEX4542(CA), EEX4448(CA)], EEW4301(CR)	
EEW6502	Industrial Training II (Electrical Power - undergraduate)	EEX4542(CA), EEX4448(CA), EEW4301(CR), EEX5352(CA), Pass in 60 credits	

#### **Elective Courses**

	Course	Prerequisites
EEX3262	Introduction to Object Oriented Programming	EEX3417(CR)
EEX3266	Information Systems and Data Management	None
EEX3269	Mobile Application Development for Android	None
EEX5434	Data Communications and Networking	EEX3410(P), EEX3336(P), MHZ3551(P), MHZ3552(P), AGM3203(P)
EEX5346	Embedded Systems	[EEX3417(P), EEX3336(P), EEX3351(P), EEX4436(CA), EEX4351(CA), [EEX5335(CR) or EEX5564(CR)], MHJ5342(CR)
EEX5360	Signals and Systems	EEX3336(P), MHZ4553(CR), MHZ3551(P), MHZ3552(P)
EEX5280	Creative Design	Pass in 45 credits
EEX5563	Computer Architecture and Operating Systems	EEX3336(P), EEX4436(CA), 36 credits pass at level 3
EEX6450	Analog Electronic Systems and	EEX4331(P), DMX5403(CA), EEX4351(P),
	Instrumentation	Pass in 50 credits at levels 3 and 4
EEX6253	Physical and Optoelectronics	MHZ4553(P), EEX4351(P), Pass in 50 credits at levels 3 and 4
TAX6556	Ergonomics	Pass in 45 credits at level 4 or above
EEX7241	Neural Network & Fuzzy Logic Applications	65 credits pass, EEX3417(P)
*EEX7342	Advanced Control Engineering	DMX5403(P), MHZ5554(P), Pass in 80 credits
*EEX7353	Power Electronic Applications and Drives	EEX5453(CA), EEX6354(P), EEX5352(CA), MHZ4553(P), Pass in 60 credits at levels 3 and 4

#### BACHELOR OF TECHNOLOGY HONOURS IN ENGINEERING STUDY PROGRAMME

EEX7171 Emerging Technologies	Pass in 60 credits
DMX7305 Renewable Sources of Energy	MHZ4553(P), {[DMX3401(P) and EEX4542(P)] or [DMX4202(P) and DMX4203(P)]}
DMX7301 Thermal Power Generation	[DMX4202(P) and DMX5205(CA)] or [DMX3401(P) and EEX5348(CA)]

<sup>\*</sup> Not offered in 2021/2022

## **Curriculum for Electronic & Communication Engineering Specialisation**

**Compulsory Courses** 

	Course	Prerequisites
	Leve	13
EEX3331	Electrical measurements and instrumentation	EEX3410 (CR)
EEX3336	Communications and Computer Technology	AGM3203(CR), EEX3351 (CR), EEX3417(CR)
EEX3351	Electronics I	EEX3410 (CR)
EEX3410	Introduction to Electrical Engineering	MHZ3552 (CR)
EEX3417	Software Development for Engineers	AGM3203 (CR)
DMX3401	Fluid Mechanics and Thermodynamics	None
DMX3305	Introduction to Engineering Design Graphics	None
DMX3107	Workshop Practice	None
MHZ3551	Engineering Mathematics I	None
MHZ3552	Engineering Mathematics II	None
AGM3203	Communication Skills	None
EEX3262	Introduction to Object Oriented Programming	EEX3417(CR)
	Leve	14
EEX4331	Circuit Theory and Design	EEX3410 (CA), MHZ3551 (CA), MHZ3552 (CA)
EEX4332	Electrical power	EEX3410 (CA), MHZ3551 (CA)
EEX4330	Communications	EEX3410(P), EEX3336(CA), MHZ3551(P), MHZ3552(P)
EEX4436	Microprocessors and Interfacing	{[EEX4351(CR), EEX3336(P), EEX3351(P)] or DMX3304(P)}, EEX3417(P), MHZ3551(P), AGM3203(P)
EEX4351	Electronics II	EEX3410(P), EEX3351(CA), MHZ3551(P), MHZ3552(CA), AGM3203(P)
MHZ4553	Engineering Mathematics III	MHZ3551(CA), MHZ3552(CA)
AGM4307	Economics and Marketing for Engineers	Pass in 18 credits at Level 3
EEY4183	Group Project (Electronics and Communication)	Pass in 30 credits
EEW4403	Industrial Training I [Electronic and Communication]	Pass in 36 credits at level 3, DMX3107(P), EEX4351(CR), EEX4330 (CR)
	Leve	
EEX5150	Electronic Circuit Design	EEX4331[P], 35 credits pass in level 3
EEX5360	Signals and Systems	EEX3336(P), MHZ4553(CR), MHZ3551(P), MHZ3552(P)
EEX5434	Data Communications & Networking	EEX3410(P), EEX3336 (P), MHZ3551(P), MHZ3552(P), AGM3203(P)
EEX5333	Communication Theory and Systems	EEX3336(P), EEX4330(P), MHZ4553(P), 36 credits pass at level 3
EEX5351	Digital Electronic Systems	EEX3336(P), EEX3410(P), EEX3417(P), MHZ3551(P), AGM3203(P), EEX4351(P), EEX4436(CA)
DMX5403	Control Systems Engineering	MHZ5554 (CR), 30 credits in X category courses (P)
EEX5564	Computer Architecture and Operating Systems	EEX3336(P), EEX4436(CA), 36 credits pass at level 3
MHZ5554	Engineering Mathematics IV	MHZ3551(P), MHZ3552(P), MHZ4553(CA)

CVM5401	Accounting for Engineers	AGM4307(P)
EEW5403	Industrial Training II [Electronic and	Pass in 45 credits, EEX4351(P), EEX4330 (P),
	Communication]	EEW4403(CR),
	Level	
EEX6339	Wireless Communications	EEX5333(CA), MHZ4553 (P), Pass in 50 credits
		at levels 3 and 4
EEX6253	Physical and Optoelectronics	MHZ4553(P), EEX4351(P), Pass in 50 credits at
	1	levels 3 and 4
EEX6450	Analog Electronic Systems and	EEX4331(P), DMX5403(CA), EEX4351(P), Pass
	Instrumentation	in 50 credits at levels 3 and 4
EEX6441	Electromagnetism and Wave Propagation	MHZ4553(P), MHZ5554(CR), Pass in 50 credits
		at levels 3 and 4
*DMM6601	Management for Engineers	CVM5401 (CA), 60 credits (P)
EEX6183	Research methodology and project	Pass in 60 credits
	identification (Electronics and	
	Communication)	
	Level '	7
EEX7355	Comprehensive Electronics Design	EEX4351 (P), EEX5333 (CR), EEX5150(CA),
		MHZ3551 (P), MHZ3552(P), AGM3203 (P)
EEX7333	Microwave Devices and Antennas	EEX6441(P), MHZ4553(P), Pass in 80 credits
EEY7883	Engineering Research Project (Electronics	Pass in 90 credits including 60 credits Pass in X
	and Communication)	category , EEX5333(P), EEX5351(P),
	•	EEX5150(P), EEX6183(CA)

#### **Elective Courses**

	Course	Prerequisites
EEX4434	Electrical Installations	EEX3410(P), DMX3305(P), EEX4542 (CR) or EEX4332 (CR)
EEX3266	Information Systems and Data Management	None
EEX3269	Mobile Application Development for Android	None
EEX5280	Creative Design	45 credits pass
EEX5346	Embedded Systems	EEX3417(P), EEX3336(P), EEX3351(P), EEX4436(CA), EEX4351(CA), [EEX5335(CR) or EEX5564(CR)], MHJ5342(CR)
EEX5453	Power electronics	EEX4351(CA), EEX4331(CA), [EEX4542(CA) or EEX4332(P)], Pass in 36 credits at level 3
EEX7434	Digital Signal Processing	EEX5360(P), Pass in 45 credits
EEX7436	Processor Design	EEX5351 (CA), [EEX5536(CA), EEX3417(P), AGM3203(P), MHZ3551(P), EEX33336(P), EEX4436(P)
EEX7339	Information Theory and Coding	MHZ4553(P), EEX5333(P), Pass in 80 credits
*EEX7343	Optical Communications	EEX6253(CA), EEX5333(P), Pass in 80 credits
*EEX7342	Advanced Control Engineering	DMX5403(P), MHZ5554(P), Pass in 80 credits
*EEX7353	Power Electronic Applications and Drives	Pass in 60 credits at level 3 and 4, MHZ4553(P), EEX5453(CA), EEX6354(P), EEX5352(CA),
DMX7304	Factory Automation	DMX4409(P), DMX5403 (P), DMX7303(CR)
EEX7171	Emerging Technologies	Pass in 60 credits

<sup>\*</sup> Not offered in 2020/2021

## **Curriculum for Mechanical Engineering Specialisation**

#### **Compulsory Courses**

	Course	Prerequisites		
	Level 3			
DMX3401	Fluid Mechanics and Thermodynamics	None		
DMX3302	Engineering Mechanics	MHZ3551(CR), MHZ3552(CR)		
DMX3203	Introduction to Engineering Materials	None		
DMX3304	Applied Electronics	EEX3410(CR)		
DMX3305	Introduction to Engineering Design Graphics	None		
DMX3206	Introduction to Manufacturing Processes	DMX3107(CR)		
DMX3107	Workshop Practice	None		
EEX3410	Introduction to Electrical Engineering	MHZ3552(CR)		
EEX3417	Software Development for Engineers	AGM3203(CR)		
MHZ3551	Engineering Mathematics I	None		
MHZ3552	Engineering Mathematics II	None		
AGM3203	Communication Skills	None		
Level 4				
MHZ4553	Engineering Mathematics III	MHZ3551(CA), MHZ3552(CA)		
DMX4201	Advanced Engineering Design Graphics	DMX3305(P)		
DMX4202	Applied Thermodynamics I	DMX3401(CA)		
DMX4203	Applied Fluid Dynamics I	DMX3401(CA)		
DMX4204	Machine Dynamics	DMX3302(CA), MHZ3551(CA), MHZ3552(CA)		
DMX4205	Strength of Materials I	DMX3302(CA), MHZ3551(CA), MHZ3552(CA)		
DMX4306	Design of Machine Elements	DMX3302(CA), DMX3203(CA), DMX3305 (CA)		
DMX4307	Electrical Machines and Drives	EEX3410 (CA), DMX3304 (CA), MHZ3551(CA), MHZ3552(CA)		
DMX4208	Automobile Technology	DMX3401(CA)		
DMX4212	Manufacturing Engineering	DMX3206(CA), MHZ3551(CA), MHZ3552(CA)		
EEX4436	Microprocessors and Interfacing	{[EEX4351(CR),EEX3336(P), EEX3351(P)] or DMX3304(P)}, EEX3417(P), MHZ3551(P), AGM3203(P)		
DMY4101	Group project (Mechanical Engineering)	AGM3203(CA), DMX3305(CA)		
AGM4307	Economics and Marketing for Engineers	18 credits (P)		
DMW480 1	Industrial Training (Mechanical - Diploma)	38 credits at Level 3 (P), 20 credits in X category courses at Level 4 (CA)		

	Level 5			
DMX5201	Advanced Engineering Mechanics	DMX3302(P), DMX4205(CA), DMX4204(CA), MHZ3551(P), MHZ3552(P)		
DMX5302	Strength of Materials II	DMX3302(P), DMX4205(CA), MHZ3551(P), MHZ3552(P)		
DMX5403	Control Systems Engineering	MHZ5554 (CR), 30 credits in X category courses (P)		
DMX5204	Materials Engineering	DMX3203 (P)		
DMX5205	Applied Thermodynamics II	DMX4202(CA), MHZ4553(CA)		
DMX5206	Applied Fluid dynamics II	DMX4203(CA), MHZ4553(CA)		
DMX5307	Mechanical Engineering Design Project	DMX4306(CA), DMX4204(CA),		
		DMX4205(CA), DMX5403(CR)		
MHZ5554	Engineering Mathematics IV	MHZ3551(P), MHZ3552(P), MHZ4553(CA)		
CVM5401	Accounting for Engineers	AGM4307(P)		
Level 6				
DMX6180	Research Methodology and Project Identification (Mechanical/Mechatronics Engineering)	30 credits at Level 4 or above (P)		
DMX6301	Industrial Engineering	DMX4212(P)		
DMX6302	Energy, Environment and Sustainability	75 Credits (P)		
DMM660 1	Management for Engineers *	CVM5401 (CA), 60 credits (P)		
DMW680 1	Industrial Training (Mechanical - Undergraduate)	DMX5201(P), DMX5302(P), DMX5403(P), DMX5204(P), DMX5205(P), DMX5206(P), DMX5307(CA)		
	Level 7			
DMX7301	Thermal Power Generation	[DMX4202(P) and DMX5205(CA)] or [DMX3401(P) and EEX5348(CA)]		
DMX7402	Analysis of Manufacturing Systems & Processes	DMX4212(P), MHZ5554(CA)		
DMY7880	Engineering Research Project (Mechanical)	DMX6180(CA), 50 credits in X category courses (P)		

<sup>\*</sup>Not offered in 2021/2022

#### **Elective Courses**

	Courses	Prerequisites
DMX5208	Automobile Engineering	DMX4208(P)
DMX5209	Automotive Electronics	DMX3304 (P), DMX4307(CA),
		DMX4208(CA), EEX4436(CA)
DMX5210	Vehicle Dynamics and Design of	DMX4208(P)
	Automotive Components	
DMX5211	Plant Maintenance	DMX4212(CA)
DMX5212	Computer Aided Design and	DMX4201(CA), DMX4212(CA)
	Manufacturing	
DMX6303	Nano Technology	DMX3203(P), DMX3206(P), 60 Credits (P)
DMX6304	Computational Fluid Dynamics	MHZ4553(P), DMX5206(P)
DMX7303	Control of Robotics Manipulators	DMX5201(P), DMX5403(P), MHZ5554 (P)
DMX7304	Factory Automation	DMX4409(P), DMX7303(CR), DMX5403(P)
DMX7305	Renewable Sources of Energy	MHZ4553(P), {[DMX3401(P) and
		EEX4542(P)] or [DMX4202(P) and
		DMX4203(P)]}

## **Curriculum for Mechatronics Engineering Specialisation**

## **Compulsory Courses**

	Course	Prerequisites		
Level 3				
DMX3401	Fluid Mechanics and Thermodynamics	None		
DMX3302	Engineering Mechanics	MHZ3551(CR), MHZ3552(CR)		
DMX3203	Introduction to Engineering Materials	None		
DMX3304	Applied Electronics	EEX3410(CR)		
DMX3305	Introduction to Engineering Design Graphics	None		
DMX3206	Introduction to Manufacturing Processes	DMX3107(CR)		
DMX3107	Workshop Practice	None		
EEX3410	Introduction to Electrical Engineering	MHZ3552(CR)		
EEX3417	Software Development for Engineers	AGM3203(CR)		
MHZ3551	Engineering Mathematics I	None		
MHZ3552	Engineering Mathematics II	None		
AGM3203	Communication Skills	None		
Level 4				
DMX4409	Sensors	EEX3410(CA), DMX3304(CA), MHZ3551(CA), MHZ3552(CA)		
DMX4410	Electrical & Pneumatic Machines	EEX3410(CA), DMX3304(CA), MHZ3551(CA), MHZ3552(CA)		
DMX4204	Machine Dynamics	DMX3302(CA), MHZ3551(CA), MHZ3552(CA)		
DMX4205	Strength of Materials I	DMX3302(CA), MHZ3551(CA), MHZ3552(CA)		
DMX4306	Design of Machine Elements	DMX3302(CA), DMX3203(CA), DMX3305(CA)		
DMX4411	Signal Processing	DMX3304(CA), MHZ3551(CA), MHZ3552(CA)		
EEX4436	Microprocessors and Interfacing	{[EEX4351(CR), EEX3336(P), EEX3351(P)] or DMX3304(P)}, EEX3417(P), MHZ3551(P), AGM3203(P)		
DMY4102	Group project (Mechatronics Engineering)	AGM3203(CA), DMX3305(CA)		
MHZ4553	Engineering Mathematics III	MHZ3551(CA), MHZ3552(CA)		
AGM4307	Economics and Marketing for Engineers	18 credits (P)		
DMW480 2	Industrial Training (Mechatronics - Diploma)	38 credits at Level 3 (P), 20 credits in X category courses at Level 4 (CA)		

	Level 5				
DMX5201	Advanced Engineering Mechanics	DMX3302(P), DMX4205(CA), DMX4204(CA), MHZ3551(P), MHZ3552(P)			
DMX5403	Control Systems Engineering	MHZ5554(CR), 30 credits in X category courses (P)			
DMX5313	Power Electronics and Motor Drives	DMX3304(P), DMX4410(CA)			
DMX5314	Machine Vision	MHZ4553(CR), DMX4409(CR)			
DMX5315	Artificial Intelligence	DMX5403(CR), MHZ5554(CR)			
DMX5316	Mechatronics Product Design	DMX3304(P), DMX4409(CA), DMX4410(CA)			
MHZ5554	Engineering Mathematics IV	MHZ3551(P), MHZ3552(P), MHZ4553(CA)			
CVM5401	Accounting for Engineers	AGM4307(P)			
Level 6					
DMX6180	Research Methodology and Project Identification (Mechanical/Mechatronics Engineering)	30 credits at Level 4 or above (P)			
DMX6305	Modern Control Systems	DMX5403(CA), MHZ5554(CA)			
DMX6306	Micro and Nano Electro Mechanical Systems	DMX3206(P),[DMX4307(P)] or DMX4410(P)] and MHZ4553(P)			
DMM6601	Management for Engineers*	CVM5401(CA), 60 credits(P)			
DMW6802	Industrial Training (Mechatronics - Undergraduate)	DMX5201(P), DMX5403(P), DMX5313(P), DMX5314(CA), DMX5315(CA), DMX5316(CA)			
	Lev	vel 7			
DMX7303	Control of Robotics Manipulators	DMX5201(P), DMX5403(P), MHZ5554(P)			
DMX7304	Factory Automation	DMX4409(P), DMX5403(P), DMX7303(CR)			
DMX7306	Intelligent Control Systems	DMX6305(CR), DMX5315(CA), DMX5403(P)			
DMY7881	Engineering Research Project (Mechatronics Engineering)	DMX6180(CA), 50 credits in X category courses (P)			

<sup>\*</sup>Not offered in 2021/2022

### **Elective Courses**

	Course	Prerequisites
DMX5204	Materials Engineering	DMX3203(P)
DMX5211	Plant Maintenance	DMX4212(CA)
DMX5212	Computer Aided Design and Manufacturing	DMX4201(CA), DMX4212(CA)
DMX6303	Nano Technology	DMX3203(P), DMX3206(P), 60 Credits (P)
DMX6304	Computational Fluid Dynamics	MHZ4553(P), DMX5206(P)
DMX7301	Thermal Power Generation	[DMX4202(P) and DMX5205(CA)] or [DMX3401(P) and EEX5348(CA)]
DMX7305	Renewable Sources of Energy	MHZ4553 (P), {[DMX3401 (P) and EEX4542 (P)] or [DMX4202 (P) and DMX4203 (P)]}
DMX7402	Analysis of Manufacturing Systems & Processes	DMX4212(P), MHZ5554(CA)

### **Curriculum for Textile and Clothing Engineering Specialisation**

### **Compulsory Courses**

	Courses	Prerequisites	
	Level 3		
TAX3331	Garment Analysis and Sewing Machinery	None	
TAX3458	Fibre Science and Technology	None	
TAX3459	Yarn Manufacture I	None	
EEX3410	Introduction to Electrical Engineering	MHZ3552(CR)	
EEX3417	Software Development for Engineers	AGM3203(CR)	
DMX3401	Fluid Mechanics and Thermodynamics	None	
DMX3305	Introduction to Engineering Design Graphics	None	
DMX3107	Workshop Practice	None	
MHZ3551	Engineering Mathematics I	None	
MHZ3552	Engineering Mathematics II	None	
AGM3203	Communication Skills	None	
	Level 4		
TAX4539	Quality Assurance for Textile & Clothing	15 credits(P)	
TAX4540	Garment Manufacture	TAX3331(CA), 15 credits (P)	
TAX4560	Woven Fabric Technology	15 credits(P)	
TAX4361	Knitting Technology	15 credits(P)	
TAY4181	Group Project (Textile & Clothing Engineering)	15 credits(P)	
MHZ4553	Engineering Mathematics III	MHZ3551(CA), MHZ3552(CA)	
AGM4307	Economics and Marketing for Engineers	18 credits(P)	
Level 5			
DMX5403	Control Systems Engineering	MHZ5554 (CR), 30 credits in X category courses (P)	
TAX5551	Textile Colouration	45 credits(P)	
TAX5547	Plant Utilities	45 credits(P)	
TAX5648	Fabric Structure and Analysis	45 credits(P)	
TAX5349	Nonwoven Textiles	45 credits(P), [TAX3458(P) or TAX3530(P)]	
MHZ5554	Engineering Mathematics IV	MHZ3551(P), MHZ3552(P), MHZ4553(CA)	
CVM5401	Accounting for Engineers	AGM4307(P)	
	Level		
TAX6180	Research Methodology and Project Identification (Textile and Clothing Engineering)	Pass 45 credits at level 4 and above	
	Level 6		
TAX6556	Ergonomics	Pass 45 credits at level 4 and above	
DMM6601	Management for Engineers*	CVM5401 (CA), 60 credits (P)	
	Level 7		
TAX7368	Specialty Fabrics	Pass 45 credits at level 4 and above, TAX4361(P), TAX4560(P)	
TAX7464	Yarn & Fabric Mechanics	Pass 45 credits at level 4 and above, TAX4560(P), MHZ3551(P), MHZ3552(P)	

TAX7369	Engineering Aspects of Weaving	Pass 45 credits at level 4 and above, TAX4560(P)
TAY7880	Engineering Research Project (Textile & Clothing Engineering)	Pass in 45 credits at level 4 and above, TAX6180(CA)
TAY7381	Comprehensive Design Project (Group project- Textile & Clothing Engineering)	Pass in 45 credits at level 4 and above, TAX6180(CA)

<sup>\*</sup>Not offered in 2021/2022

Industrial Training (Select any 2 out of 5 training courses)			
TAW4401 Specific training I (Apparel)	[TAX3331(P), TAX4438(CR), Pass in 15 credits] or [TAX3331(CA), TAX4438(CR), Pass in 18 credits]		
TAW5403 Specific training II (Yarn Manufacture)	[TAX3459(P), Pass in 15 credits] or [TAX3459(CA), Pass in 18 credits]		
TAW5404 Specific training II (Weaving)	[TAX4560(P), Pass in 15 credits] or [TAX4560(CA), Pass in 18 credits]		
TAW5405 Specific training II (Chemical processing)	[TAX5551(CR) or TAX4571(P), Pass in 15 credits] or [TAX4571(CA), Pass in 18 credits]		
TAW5406 Specific training II (Knitting)	[TAX4361(P) or TAX4441(P), Pass in 15 credits] or [TAX4361(CA) or TAX4441(CA), Pass in 18 credits]		

### **Elective Courses**

	Courses	Prerequisites
TAX4462	Pattern Development	15 credits(P)
TAX4438	Production Planning and organisation	15 credits(P)
TAJ5353	History and Traditions of Clothing	45 credits (P)
TAX6454	Technical Textiles	Pass 45 credits at level 4 and above
TAX6263	Textile Product Engineering	Pass 45 credits at level 4 and above
TAX6265	Advanced Weaving Preparation and Machinery	Pass 45 credits at level 4 and above, TAX4560(P)
TAX6366	Yarn Manufacture II	Pass in 45 credits at level 4 and above, TAX3459(P)
TAX6367	Advanced Colouration	Pass 45 credits at level 4 and above, [TAX4571(P) or TAX5551(CA)]
TAX6368	Nano Technology for Textiles**	Pass 45 credits at level 4 and above, [TAX5551(CA) or TAX4571 (P)], [TAX3458(P) or TAX3530(P)]

<sup>\*\*</sup>Not offered in 2021/2022

### **Excluded Combinations**

TAX6368 and DMX6303

# Exemptions applicable for Bachelor of Technology Honours in Engineering Study Programme Qualifications in English Language

Qualification	Course exempted
G CE (A/L) – Simple pass in General English, or any recognized qualification in Science or Technology/Engineering, at the level of Diploma or Degree, the medium of instruction being English (verification needed)	VTL2001

### **Qualifications in Mathematics**

Qualification	Level 3	Level 4	Level 5
BSc with Mathematics at the final year BSc with Applied Mathematics and Pure Mathematics at the final year	MHZ3551 MHZ3552		
BSc Special Degree in Mathematics	MHZ3551 MHZ3552	MHZ4553	MHZ5554

### Qualifications in Civil Engineering and Related Disciplines

Qualification	Courses			
	Level 3		Level 4	Level 5
NCIT (Civil)	CVX3441	DMX3107		
NAB (Civil)	EEX3410 DMX3305 AGM3203	DMX3401 DMX3107		
Diploma in Civil Engineering, GITI	CVX3442 CVX3340		CVX4342	
HNDE (Civil)	EEX3410 DMX3305 AGM3203 DMX3401 CVX3340	MHZ3551 MHZ3552 CVX3441 CVX3442 DMX3107	CVX4342 CVW4802	
NDET (Civil)	EEX3410 DMX3305 AGM3203 DMX3401 CVX3340	MHZ3551 MHZ3552 CVX3441 CVX3442 DMX3107	CVX4342 CVW4802	
NDT (Civil) or NDES (Civil)	EEX3410 DMX3305 AGM3203 DMX3401 CVX3340	MHZ3551 MHZ3552 CVX3441 CVX3442 DMX3107	CVX4342 CVW4802	
BSc (Civil Eng.), General Sir John Kothalawala Defence Academy	EEX3410 DMX3305 AGM3203 DMX3401 CVX3340	MHZ3551 MHZ3552 CVX3441 CVX3442 DMX3107	CVX4342 CVX4343 CVX4545 CVX4546 CVX4348	CVX5440
BSc (Surveying Science), Institute of Surveying & Mapping, Diyatalawa	MHZ3551 MHZ3552	EEX3410 CVX4342		CVX5440

# Qualifications in Electrical/Electronic/Communications/ Computer Engineering/ IT and related disciplines

	Courses			
Qualification	Level 3	Level 4	Level 5/6	
NCT (Electrical and Electronics)	EEX3410			
NCIT (Electrical and Electronics)	EEX3410 EEX3336 EEX3331 DMX3107	EEX4331 EEX4332		

Level 3    CEEX3351 & EEX4351) or DMX3304		Courses			
EEX4351] or DMX3304   EEW4401 or Electrical/Electronic   DMX3107   (EEX351 & EEW4403   EEW4331   DMX3304   EEW4403   EEW4403   EEW4331   EEW4332   EEW4336   EEW4337   EEW4331	Qualification	Level 3	Level 4	Level 5/6	
Electrical/Electronic  DMX3107 (EEX3351 & EEX4351) or DMX3304  Diploma in Electronics and Communications, Jaffna College Institute of Technology  DMX3304  Diploma in Computer System Design, (NIBM)  Diploma in Computer System Design, (NIBM)  Diploma in Computer System Design, (NIBM)  EEX3316, EEX3266,  Advanced Technician Diploma in Electrical and Electronic Engineering (Level 5 IVQ)  Higher Diploma in Computer based Information Systems (NIBM)  Higher National Diploma in IT, Advanced  Technological Institute  DT (Electrical) or NDES (Power) or HNDE (Electrical Power)  EEX3310  EEX4362  EEX4364  EEX4366  EEX4435  EEX4437  EEX4435  EEX4437  EEX4437  EEX4437  EEX4438  EEX4437  EEX4438  EEX4331  DMX3305  AGM3203  AGM32		EEX4351) or			
Jaffna College Institute of Technology   EEX3410, EEX3331, (EEX3351   EEX4332   EEX4332		DMX3107 (EEX3351 & EEX4351) or			
EEX3266, EEX4362  Advanced Technician Diploma in Electrical and Electronic Engineering (Level 5 IVQ)  Higher Diploma in Computer based Information Systems (NIBM)  Higher National Diploma in IT, Advanced EEX3336  Technological Institute  NDT (Electrical) or NDES (Power) or HNDE (Electrical Power)  EEX3331  EEX4364  EEX4435  EEX4435  EEX4435  EEX4367  7  EEX3336  EEX4435  EEX4435  EEX4347  NDT (Electrical) or NDES (Power) or HNDE (EEX3310  DMX3305  DMX3305  EEX4332 or (EEX4532 & DMX3401  EEX3331  EEX4448) EEX3331  EEW4403 or (EEW4502)}  HNDE (Electrical Power) New curriculum from 2014  EEX3410 DMX3305  AGM3203 DMX3401  EEX4488  EEX331  EEX4448  EEX3320 CEEX4532 & EEX4480  EEX4331  OMX3107  EEX331  EEX4448  EEX4331  AGM3203 DMX3401  EEX3310  EEX4332 or (EEX4532 & EEX4430)  EEX3417 EEX3331  MHZ3551 MHZ3552  DMX3107 EEX3336  OR (EEW4502)}  National Diploma in Technology (NDT) — Electronics and Telecommunications with Electrical Installations & Wiring Diagrams		EEX3410, EEX3336 EEX3331, (EEX3351 & EEX4351) or			
Electronic Engineering (Level 5 IVQ)  Higher Diploma in Computer based Information Systems (NIBM)  EEX3269  EEX4364  EEX4366  EEX4435  EEX4435  EEI4369  EEY4189  Higher National Diploma in IT, Advanced Technological Institute  NDT (Electrical) or NDES (Power) or HNDE (Electrical Power)  EEX3336  EEX4435  EEX4347  EEX4331  DMX3305  EEX4332 or (EEX4532 & DMX3401  EEX3331  MHZ3551  MHZ3552  DMX3107  EEX4448)  EEX4448)  EEX4448)  EEX3331  HEEW4502)}  HNDE (Electrical Power) New curriculum from 2014  EEX3417 EEX3331  MHZ3551 MHZ3552  DMX3107  EEX4432 or (EEX4532 & EEX4332 or (EEX4532 & EEX4438)  (EEX4332 or (EEX4332 or (EEX4333)  (EEX4331)  EEX4448)  (EEX4332 or (EEX4332 or (EEX4332)  EEX4448)  (EEX4448)  (EEX4432)  (EEX4432)  (EEX44332)  (EEX443331)  (EEX443331)  (EEX443331)  (EEX443331)  (EEX448)	Diploma in Computer System Design, (NIBM)				
Information Systems (NIBM)	<u>=</u>	EEX3410			
Technological Institute		EEX3269	EEX4366 EEX4435 EEI4369	EEX556	
CElectrical Power   DMX3305	•	EEX3336			
AGM3203 DMX3401 EEX3417 EEX3331 MHZ3551 MHZ3552 DMX3107 EEX3336 (EEX4532 & EEX4448) { EEW4403 or (EEW4301) and EEW4502)}  National Diploma in Technology (NDT) – Electronics and Telecommunications with Electrical Installations & Wiring Diagrams		DMX3305 AGM3203 DMX3401 EEX3331 MHZ3551 MHZ3552	EEX4332 or (EEX4532 & EEX4448) {EEW4403 or (EEW4301 and		
Electronics and Telecommunications with Electrical Installations & Wiring Diagrams		AGM3203 DMX3401 EEX3417 EEX3331 MHZ3551 MHZ3552 DMX3107 EEX3336 (EEX3351 & EEX4351)	EEX4332 or (EEX4532 & EEX4448) { EEW4403 or (EEW4301 and		
NDES* (Power) (New curriculum) EEX3410 EEX4331	Electronics and Telecommunications with		EEX4434		
	NDES* (Power) (New curriculum)	EEX3410	EEX4331		

	Courses			
Qualification	Level 3	Level 4	Level 5/6	
NDT** (Electrical) (New curriculum)	DMX3305 AGM3203 DMX3401 EEX3331 EEX3336 MHZ3551 MHZ3552 DMX3107 (EEX3351 & EEX4351) or DMX3304	EEX4332 or (EEX4532 & EEX4448) EEX4434 EEX4436 { EEW4403 or (EEW4301 and EEW4502)}		
NDT (Electronic & telecom.) or NDES (Electronics) or NDES (Telecommunication)	EEX3331 EEX3410 DMX3305 AGM3203 DMX3401 EEX3336 MHZ3551 MHZ3552 DMX3107 (EEX3351 & EEX4351) or DMX3304	EEX4331 EEX4332 EEX4436 {(EEW4301 or EEW4403 ) and EEW5403}		
NDES* (Electronics) or NDES *(Telecommunication) (New curriculum)	EEX3410 EEX3417 DMX3305 AGM3203 DMX3401 EEX3331 EEX3336 MHZ3551 MHZ3552 DMX3107 (EEX3351 & EEX4351) or DMX3304	EEX4331 EEX4332 EEX44330 EEX4436 {(EEW4301 or EEW4403) and EEW5403}		
HNDE (Electronics) – Before 2014	EEX3410 DMX3305 AGM3203 DMX3401 EEX3336 MHZ3551 MHZ3552 DMX3107 EEX3331 (EEX3351 & EEX4351) or DMX3304	EEX4331 EEX4330 {(EEW4301 or EEW4403 ) and EEW5403}		

	Co	Courses		
Qualification	Level 3	Level 4	Level 5/6	
HNDE (Electronics) New curriculum from 2014	EEX3410 DMX3305 AGM3203 DMX3401 MHZ3551 MHZ3552 EEX3336 DMX3107 EEX3331 (EEX3351 & EEX4351) or DMX3304	EEX4331 EEX4332 EEX4330 {(EEW4301 or EEW4403 ) and EEW5403}		
National Diploma in Engineering Technology (NDET)- Electrical/Electronic	EEX3410 DMX3305 AGM3203 DMX3401 EEX3336 DMX3107 (EEX3351 & EEX4351) or DMX3304			

Note: Those who have satisfied only the academic requirements without industrial training components in NDT (Electrical), NDT (Electronic & telecom.), HNDE (Electrical Power) and HNDE (Electronics) can be granted exemptions as listed, but without relevant Industrial training courses at Levels 4 and 5.

\*Effective year 2003 onwards

\*\*Effective year 2008 onwards

## Qualifications in Mechanical/ Automobile/ Manufacturing/ Marine/ Aeronautical/ Nautical/Chemical engineering and related disciplines

Qualification	Courses		
Qualification	Level 3	Level 4	Level 5
German Training School- Full Certificate <b>or</b> Full Certificate of Basic Training Programme conducted by the Training Schools of Central Transport Board (Werahara/Borella)	DMX3107		
National Certificate for Industrial Technicians (NCIT) (Mechanical)	AGM3203 DMX3206 DMX3107 DMX3305 DMX3203 DMX3401	DMX4201	
NDT (Mechanical)	AGM3203 DMX3305 DMX3107 DMX3401 DMX3203 EEX3410 DMX3206 MHZ3551 DMX3302 MHZ3552 DMX3304		
NDT (Chemical)	AGM3203 DMX3305 DMX3107 EEX3410 DMX3203 DMX3401	DMX4201 DMX4204 DMX4205	

Ossali Grandian		Cou	rses	
Qualification	Lev	rel 3	Level 4	Level 5
	DMX3206 DMX3302 DMX3304	MHZ3551 MHZ3552		
NDT (Marine)	AGM3203 DMX3107 DMX3203 DMX3206 DMX3302 DMX3304	DMX3305 EEX3410 DMX3401 MHZ3551 MHZ3552	DMX4201 DMX4204 DMX4205	
NDT (Nautical studies & technology)	AGM3203 DMX3107 DMX3302 DMX3305	DMX3401 EEX3410	DMX4204 DMX4205	
NDES (Mechanical - General)	AGM3203 DMX3107 DMX3203 DMX3206 DMX3302 DMX3304	DMX3305 DMX3401 EEX3410 MHZ3551 MHZ3552	DMX4201 DMX4204 DMX4205 DMX4212 DMW4801 or DMW4802	
HNDE ( Mechanical )-Production Engineering	AGM3203 DMX3107 DMX3203 DMX3206 DMX3302 DMX3304	DMX3305 DMX3401 EEX3410 MHZ3551 MHZ3552	DMX4201 DMX4204 DMX4205 DMX4212 DMW4801 or DMW4802	
HNDE ( Mechanical )-Automobile Engineering	AGM3203 DMX3107 DMX3203 DMX3206 DMX3302 DMX3304	DMX3305 DMX3401 EEX3410 MHZ3551 MHZ3552	DMX4201 DMX4204 DMX4205 DMX4208 DMW4801 or DMW4802	
HNDE ( Mechanical )-Refrigeration and Air conditioning	AGM3203 DMX3107 DMX3203 DMX3206 DMX3302 DMX3304	DMX3305 DMX3401 EEX3410 MHZ3551 MHZ3552	DMX4201 DMX4204 DMX4205 DMW4801 or DMW4802	
NDES (Automobile)	AGM3203 DMX3107 DMX3203 DMX3206 DMX3302 DMX3304	DMX3305 DMX3401 EEX3410 MHZ3551 MHZ3552	DMX4201 DMX4204 DMX4205 DMX4208 DMW4801 or DMW4802	
NDES (Marine)	AGM3203	DMX3305	DMX4201	

Qualification	Courses		
Qualification	Level 3	Level 4	Level 5
	DMX3107 DMX3401 DMX3203 EEX3410 DMX3206 MHZ3551 DMX3302 MHZ3552 DMX3304	DMX4204 DMX4205	
BSc (Defense studies) in Aeronautical Engineering	AGM3203 DMX3401 DMX3107 EEX3410 DMX3304 MHZ3551 DMX3305 MHZ3552		

Note: Those who have satisfied **only the academic requirements** without industrial training components in NDT (Mechanical) and HNDE (Mechanical) could be granted exemptions as listed above, but without the relevant **Industrial training** modules at Levels 4 and 5

### Qualifications in Textile and Clothing Engineering and related discipline

		Courses	
Qualification	Level 3 (and 4)	Level 4 (and 5)	Level 5 (and 6)
Certificate in Textile Technology (One year Fulltime), Textile Training & Services Centre, Ratmalana	TAX3458 TAX3459	TAX4560 TAX5551	
Certificate in Textile Technology (One year Fulltime) and Diploma in Technology (Extension Course), Textile Training & Services Centre, Ratmalana	TAX3458 TAX3459 TAX3331	TAX4560 TAX5551	
Certificate in Textile Dyeing and Printing (Part time) from the Textile Training and Services Centre, Ratmalana			TAX5551
Diploma in Textile and Apparel Technology (Part time) , Sri Lanka Institute of Textile and Apparel (SLITA), Rathmalana			TAX5551
Diploma in Textile and Apparel Technology (Full time) , Sri Lanka Institute of Textile and Apparel (SLITA), Ratmalana	TAX3458 TAX3459 TAX3331	TAX4539 TAX4540 TAX4438 TAX4462	TAX5551 TAX5648
Diploma in Textile Technology from the Textile Training and Services Centre, Ratmalana	TAX3458 TAX3459 TAX3331	TAX4560	TAX5551
Diploma in Clothing Technology from the Clothing Industry Training Institute, Ratmalana	TAX3331	TAX4438 TAX4539 TAX4462 TAW4401	

	Courses		
Qualification	Level 3 (and 4)	Level 4 (and 5)	Level 5 (and 6)
Certificate in Textile Colouration and Finishing (Part time) and Diploma in Textile Colouration and Finishing (Part time) from the Textile Training and Services Centre, Ratmalana	TAX3458		TAX5551
Certificate in Garment Production Management (Part time) from Clothing Industry Training Institute, Ratmalana	TAX3331		
College Diploma in Clothing Technology and Management (Fulltime), Brandix College of Clothing Technology, Ratmalana	TAX3331	TAX4539 TAX4438 TAX4540 TAX4462 TAW4401	TAX5648
NDT (Textile) (Old Curriculum-till 2007)	DMX3305 AGM3203 DMX3401 EEX3410 MHZ3551 MHZ3552 TAX3458 TAX3459 (TAX5648 or TAX3331) DMX3107	TAX4539 TAX4560	TAX5551  Any two of TAW5403, TAW5404, TAW5405, TAW5406
NDT (Textile) (Old Curriculum-till 2007) without completion of training	DMX3305 AGM3203 DMX3401 EEX3410 MHZ3551 MHZ3552 TAX3458 TAX3459 (TAX5648 or TAX3331)	TAX4539 TAX4560	TAX5551
NDT (Clothing) (Old Curriculum-till 2007)	DMX3305 AGM3203 DMX3401 EEX3410 MHZ3551 MHZ3552 TAX3458 TAX3459 DMX3107 (TAX5648 or TAX3331)	TAX4539 TAX4540 TAX4438 TAX4462 Any two of TAW4401 TAW5403 TAW5404 TAW5405 TAW5406	TAX5551
NDT (Clothing) (Old Curriculum-till 2007) without completion of training	DMX3305 AGM3203 DMX3401	TAX4539 TAX4540 TAX4462	TAX5551

	Courses		
Qualification	Level 3 (and 4)	Level 4 (and 5)	Level 5 (and 6)
	EEX3410 MHZ3551 MHZ3552 TAX3458 TAX3459 (TAX5648 or TAX3331)	TAX4438	
NDT (Textile and Clothing Technology) – New Curriculum(after 2007)	DMX3305 AGM3203 DMX3401 EEX3410 MHZ3551 MHZ3552 TAX3458 TAX3459 TAX3331 DMX3302 DMX3107	TAX4539 TAX4540 TAX4560 DMX4204 TAX4438 TAX4462 Any two of TAW4401 TAW5403 TAW5404 TAW5405 TAW5406	TAX5648 TAX5551
NDT(Textile and Clothing Technology)  – New Curriculum(after 2007) without completion of training	DMX3305 AGM3203 DMX3401 EEX3410 MHZ3551 MHZ3552 TAX3458 TAX3459 TAX3331 DMX3302	DMX4204 TAX4539 TAX4540 TAX4438 TAX4560 TAX4462	TAX5648 TAX5551
NDT (Polymer Technology)	DMX3305 AGM3203 DMX3401 DMX3206 DMX3203 DMX3302 EEX3410 MHZ3551 MHZ3552 DMX3107	DMX4204 DMX4201	
Diploma in Clothing Manufacture – CITI, Ratmalana	TAX3331	TAX4539 TAX4438 TAW4401	TAW5401
Diploma in Polymer Technology – CITI, Ratmalana		TAX4539	
TAI3540- Pattern construction and TAI5538 – Advanced pattern construction, OUSL		TAX4462	

# Licentiateship of Textile Institute (LTI) Examination /Associate ship of Textile Institutes (ATI) Technology Group Examination

Subject	Level 3	Level 4	Level 5
Paper 2 in LTI/Paper 2(a) in ATI – Fibre Technology and Textile Science	TAX3458		
Paper 3 in LTI /Paper 2 (b) in ATI – Yarn Technology and Yarn preparation	TAX3459		
Paper 4 in LTI /Paper 2 (c) in ATI- Fabric technology		TAX4560	TAX5648
Paper 5 in LTI /Paper 2 (d) in ATI-Dyeing and Finishing Technology			TAX5551
Paper 6 in LTI – Textile Testing		TAX4539	
Paper 11 in LTI – Garment Technology	TAX3331		

There may be a revision in the Exemptions offered for Qualifications from next academic year, as a re-evaluation of external programmes is scheduled for this year.

# Bachelor of Industrial Studies Honours Degree Study Programme

### Aim of the Study Programme

The aim of the study programme is to provide access, for the right candidates, to a programme with outstanding and up-to-date academic content delivered within a well-planned curriculum with high flexibility in course selection. The programme focuses on theoretical & practical aspects and emerging subject areas in the industry, related to the discipline, and disseminates essential knowledge and skills in the Agriculture, Apparel, Fashion and Textile disciplines utilizing distance learning pedagogy. The study programme also gives due consideration to social and environmental impacts, and open avenues for the students to undertake postgraduate studies and research as career options.

#### **Study Programme Educational Outcomes**

To produce competent graduates, who

- Apply the theoretical and practical knowledge, skills and cutting-edge technology of the relevant discipline for the betterment of industry and/or the relevant filed.
- Are confident in solving issues and problems relevant to the discipline in innovative and creative manner being conscious of the society and the environment.
- Are capable of presenting arguments and ideas in both technical and non-technical environments effectively in oral, visual and written forms to diverse audiences.

# 3.2 Bachelor of Industrial Studies Honours Study Programme

The Bachelor of Industrial Studies Honours Degree programme of the OUSL is carefully designed in accordance to the requirements of the Sri Lanka Qualification Framework (SLQF) especially for persons presently employed in middle level management /technical grades in various industries.

It is also possible for a student to obtain a Higher Diploma in an approved Industrial Studies discipline after successful completion of a required combination of courses and credit requirements.

#### **Duration**

The minimum duration of the Degree programme starting from level 3 is 4 years and the maximum number of years a student can spend to complete the degree programme is twelve (12).

#### **Medium of instruction**

The medium of instruction is English.

#### **Areas of Specialisations**

- Agriculture
- Apparel Production and Management
- Fashion Design and Product Development
- Textile manufacture

#### **Eligibility for Admission**

A person seeking admission to the programme leading to the award of the Degree of Bachelor of Industrial Studies Honours in the specialisations in Apparel Production and Management, or Textile Manufacture or Fashion Design and Product Development shall be required to have,

- Obtained three passes in any stream, at the General Certificate of Education (Advanced Level) Examination, Sri Lanka, in one and the same sitting or,
- Obtained a minimum three (3) credit
   (C) passes in any 3 subjects in
   Cambridge International/Edexcel

- Advanced Level Examination within three years or,
- Completed the Certificate in Industrial Studies in Apparel technology offered by the Open University of Sri Lanka or,
- Completed the Advanced Certificate in Industrial Studies in Apparel Technology offered by the Open University of Sri Lanka or,
- Obtained the Advanced Certificate in Apparel Technology offered by the Open University of Sri Lanka or
- Completed all courses of any foundation Programme offered by The Open University of Sri Lanka or,
- Obtained the Advanced Certificate in Science with courses from any three
   (3) disciplines offered by the Open University of Sri Lanka or,
- Secured an equivalent or higher qualification acceptable to the Senate.

A person seeking admission to the programme leading to the award of the Degree of Bachelor of Industrial Studies Honours in the specialisation in Agriculture shall be required to have,

- Obtained three (03) passes from Biology, Chemistry, Physics or Agriculture at the General Certificate in Education (Advanced Level) Examination, Sri Lanka in one and same sitting, or
- Obtained a minimum three (3) credit
   (C) passes for Biology, Physics and
   Chemistry in Cambridge
   International/Edexcel Advanced
   Level Examination within three years
   or,
- Obtained the Advanced Certificate in Science with courses in the disciplines of Biology, Physics and Chemistry offered by the Open University of Sri Lanka or,
- Obtained an equivalent or higher qualification acceptable to the Senate.

### Requirements for the award of the Degree

In order for a student to qualify for the award of the Degree of Bachelor of Industrial Studies Honours, S/he has to meet the following requirements (within a maximum of 12 academic years).

- (1) Successful completion of all compulsory courses for the selected specialisation
- (2) Fulfil the level-wise and category-wise course credits as given in Table 3

Table 3 - Course credits requirements for the award of Bachelor of Industrial Studies Honours Degree

Category	Minimum credits	Maximum credits
Engineering (X) / Industrial (I)	74 Subject to a minimum of 30 at Level 5 and above of which at least 12 at level 6	88 Subject to a minimum of 30 at Level 5 and above of which at least 12 at level 6
Projects (Y)	8 Minimum of 8 credits at level 6	11 Minimum of 8 credits at level 6
Mathematics (Z)	8	10
General (J)	5	6
Management (M)	10	15
Industrial Training (W)	8	8
Computer literacy (K)	2	2
Total	130 Subject to a minimum of 60 at Level 5 or above, of which at least 30 at Level 6	

# Requirements for the award of the Higher Diploma

In order for a student to qualify for the award of the Higher Diploma in Industrial Studies, s/he has to meet the following requirements within a maximum of 12 academic years.

- (1) Obtain passes for all compulsory courses of levels 3 and 4 for the specialisation, and
- (2) Fulfil Level-wise and Category-wise Credits for the Higher Diploma as given Table 4
- (3) Pass all Level 3 & 4 Compulsory courses

Table 4 - Course credits requirements for the Award of Higher Diploma in Industrial Studies

Category	Minimum credits	Maximum credits
Engineering (X) / Industrial (I)	42 Subject to a minimum of 15 at Level 4 and above	46 Subject to a minimum of 15 at Level 4 and above
Mathematics (Z)	5	9
General (J)	0	4
Management (M)	7	11
Industrial Training (W)	8	8
Computer literacy (K)	2	2
Total	68 Subject to a minimum of 30 at Level 4	

#### **Grade Point Average (GPA)**

The GPA will be computed by considering the courses at levels 4, 5 and 6 totalling to 74 credits. In selecting the courses for 74 credits the following sequence will be followed.

- (1) Compulsory courses at levels 5 and 6
- (2) Elective courses at levels 5 and 6

#### (3) Compulsory courses at level 4

In a situation, where exactly seventy-four (74) credits cannot be obtained, the courses are selected to the nearest value below seventy-four (74), and the remainder credit is taken as a Part Credit of the next course.

The Grade Point Average (GPA) is computed as follows:

$$GPA = \frac{\left\{\sum \quad (Credit\ Rating\ of\ the\ Course)*(GPV) + (Part\ Credit\ of\ the\ Course)*(GPV)\right\}}{74}$$

#### **Limits for Exemptions**

Notwithstanding any exemptions granted for prior qualifications, a student shall acquire, by successful completion in accordance with the Scheme of Assessment, a minimum number of credits as shown below for the awards.

#### For Degree:

Minimum credit requirements a student shall acquire by successful completion in accordance with the Scheme of Assessment for the award of the Honours Degree are as given below.

- Level 6 (considering all Categories): 15
- Level 6 (considering X, I and Y categories): 10
- Levels 5 and 6 (considering all Categories): 30
- Levels 5 and 6 (considering X, I and Y Categories): 19
- Total (considering all Categories and all levels from 3 to 6): 65

#### For Higher Diploma:

Minimum credit requirements a student shall acquire by successful completion in accordance with the Scheme of Assessment for

the award of the Higher Diploma in Industrial Studies are as given below.

- Level 4 (considering all Categories): 15
- Level 4 and above (considering X and I Categories): 8
- Total (considering all Categories and all levels from 3 to 6): 34

A list of qualifications for which exemptions could be claimed is given in Page 55.

#### **Curricula for different specialisations**

The curriculum of the Programme of Study leading to the awards of Bachelor of Industrial Studies Honours in an approved industrial studies discipline and the Higher Diploma has been revised to comply with the Sri Lanka Qualification Framework and is named as the Revised Curriculum.

This Section gives the combination of courses for the following specialisations of the Bachelor of Industrial Studies Honours Degree

- Agriculture
- Apparel Production and Management
- Fashion Design and Product Development
- Textile Manufacture

Students are required to apply in a prescribed form after completing the award requirements to receive the Higher Diploma or the Degree

### **Curriculum for Agriculture Specialisation**

### **Compulsory Courses**

	Courses	Pre-requisites
	Level 3	
AGI3450	Land and Soil Tillage Management	None
AGI3551	Agricultural Biology	None
AGI3552	Crop Production and Technology	None
AGI3553	Plant Protection	None
AGM320 3	Communication Skills	None
AGM335 4	Principles of Economics	None
MHZ345 8	Mathematics for Agriculture	None
TAK323 7	Introduction to Computer Applications	None
	Level 4	
AGI4555	Irrigation and Drainage Engineering	AGX4356 (CR)
AGI4559	Food and Nutrition	None
AGI4460	Animal Husbandry & Production	None
AGI4561	Postharvest Biology and Technology	AGI3551(P)
AGI4362	Environmental Agriculture	AGI3551(P), AGX4356(CR)
AGX4356	Soil Science	None
AGM436 3	Agricultural Marketing	None
MHZ435 7	Applied Statistics	Pass in 18 credits in level3, MHZ3458(P)
	Level 5	
AGI5364	Farm Power and Machinery	AGI3450 (P)
AGI5166	Research Methodology	MHZ3458(P), MHZ4357(P), AGZ5367(CR)
AGX5565	Soil Plant and Water Relationship	AGX4356(P)
AGZ5367	Experimental Design	MHZ3458(P) and MHZ4357(P)
AGJ5368	Indigenous Knowledge of Herbal Products	Pass in 45 credits
	Level 6	
AGI6478	Hydrology and Water Resources	AGI4555(P), AGX6283(CR)
AGM6379	Agricultural Extension	Pass in 45 credits
AGJ6381	Rural Sociology	Pass in 45 credits
AGY6880	Individual Project (Agriculture)	MHZ3458(P), MHZ4357(P), AGZ5367(CR), AGI5166 (P), Pass in 45 credits at level 4 and above.
	Industrial Tra	aining
AGW4401	Specific Training, I	AGI3551(P), AGI3552(P), Pass in 15 credits at level 3 or above
AGW5401	Specific Training II	AGW4401 (P), Pass in 15 credits at level 4 or above

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### **Elective Courses**

	Courses	Prerequisites
AGI5569	Molecular Biology and Biotechnology	AGI3551(P)
AGI5470	Food Microbiology	AGI4559(P)
AGI5471	Animal Biology	None
AGI5572	Fisheries and Aquaculture	None
AGI5373	Agro-Forestry	AGI3551(P), AGX4356(P)
AGI5274	Fruit Crops and Cut Flower Production	AGI3552(P), AGI3551(P)
AGX5415	Horticulture and Landscape Technology	AGI3552(P)
AGX5376	Crop Processing	AGI3552(P), AGI4561(P)
AGX5277	Food Safety and Quality Management Systems	AGI4559(P), AGI4561(P)
AGM5475	Economics and Management	AGM3354(P), MHZ3458(P)
AGI6582	Food Processing	AGI4559(P)
AGI6585	Applications in Biotechnology	AGI5569(P)
AGI6486	Field and Laboratory Techniques in Plant Protection	AGI3553(P)
AGX6283	Ground Water and Resource Management	AGX5565(CA), AGX4356(P)
AGX6284	Impacts of Climate Change on Water Resources	None
AGX6387	Plantation Crop Technology	AGI3552(P) or AGX4404
AGX6490	Soil and Water Conservation	AGX4356(P), AGX5565(CR)
AGX6377	Precision Agriculture	AGX4356 (P), MHZ3458 (P) or MHZ4357 (P)

### **Curriculum for Apparel Production & Management Specialisation**

### **Compulsory Courses**

Course	Prerequisites	
Level 3	.1	
TAX3530 Fibre to Fabric	None	
TAX3331 Garment Analysis and Sewing Machinery	None	
TAI3332 Garment Accessories	None	
TAI3533 Pattern Construction	None	
TAM3234 Basics of Human Resource Management	None	
TAM3535 Management Studies	None	
TAZ3536 Statistics for Industrial Studies	None	
TAK3237 Introduction to Computer Applications	None	
Level 4		
TAX4438 Production Planning and Organization	15 credits(P)	
TAX4539 Quality Assurance for Textile and Clothing	15 credits(P)	
TAX4540 Garment Manufacture	15 credits(P), TAX3331(CA)	
TAX4441 Knitted Garment Technology	15 credits(P)	
TAI4442 Advanced Pattern Construction	15 credits(P), TAI3533(P)	
TAI4243 Foundation Garments	15 credits(P), TAX3530(CA), TAI3533(CA) and TAX4540(CR)	
TAI4344 Industrial Garment Washing and Finishing	15 credits (P)	
TAM4445 Apparel Merchandising	15 credits(P)	
TAW4401 Specific Training I (Apparel)	[TAX3331(P), TAX4438(CR), Pass in 15 credits] or [TAX3331(CA), TAX4438(CR), Pass in 18 credits]	
Level 5		
TAI5246 Current Topics in Textile and Clothing	45 credits(P)	
TAX5547 Plant Utilities	45 credits(P)	
TAX5648 Fabric Structure and Analysis	45 credits(P)	
TAX5349 Nonwoven Textiles	45 credits(P), [TAX3458(P) or TAX3530(P)]	
TAZ5550 Quantitative Techniques	45 credits(P), TAZ3536(P)	
TAW5401 Specific Training II (Apparel)	TAW4401(CR), TAX4540(CA), 15 credits (CA) at level 4 and above	
Level 6		
TAX6455 Fabric Technology	Pass 45 credits at level 4 and above	
TAX6556 Ergonomics	Pass 45 credits at level 4 and above	
TAX6454 Technical Textiles	Pass 45 credits at level 4 and above	
CAX6263 Textile Product Engineering Pass 45 credits in level 4 and above		
TAM6457 Fashion Marketing	Pass 45 credits at level 4 and above	
TAY6882 Research Project (Apparel Production)	Pass 45 credits at level 4 and above, TAI5246(CA)	

### **Elective Courses**

	Courses	Prerequisites
LLJ3245	Introduction to Laws of Sri Lanka	None
MHJ4241	History of Technology	20 credits (P)
TAX5551	Textile Colouration	45 credits(P)
TAI5552	Principles of Fashion Design	45 credits(P)
MHJ5343	Nature of Science	45 credits(P)
MHJ5342	Technology, Society and Environment	45 credits(P)
TAJ5353	History and Traditions of Clothing	45 credits(P)
TAX6367	Advanced Colouration	Pass in 45 credits at level 4 and above, [TAX4571(P) or TAX5551(CA)]
TAX6368	Nano Technology for Textiles*	Pass in 45 credits at level 4 and above, [TAX3458(P) or TAX3530(P)], [TAX5551(CA) or TAX4571(P)]

<sup>\*</sup>Not offered in 2021/2022

### **Excluded Combinations**

TAX3458 and TAX3530 TAI4371 and TAI5552
TAX3370 and TAX5551 TAI4472 and TAI5552

TAX4571 and TAX5551

### **Curriculum for Fashion Design and Product Development Specialisation**

### **Compulsory Courses**

	Courses	Prerequisites		
	Level	3		
TAX3530	Fibre to Fabric	None		
TAX3331	Garment Analysis and Sewing Machinery	None		
TAI3332	Garment Accessories	None		
TAI3533	Pattern Construction	None		
TAM3234	Basics of Human Resource Management	None		
TAM3535	Management Studies	None		
TAZ3536	Statistics for Industrial Studies	None		
TAI3270	Fashion Illustration I	None		
TAK3237	Introduction to Computer Applications	None		
	Level	4		
TAX4539	Quality Assurance for Textile and Clothing	15 credits(P)		
TAX4540	Garment Manufacture	15 credits(P), TAX3331(CA)		
TAI4371	Concepts of Fashion	15 credits(P)		
TAI4472	Concepts of Fashion Designing	15 credits(P)		
TAI4373	Fashion Illustration II	15 credits(P), TAI3270(CA)		
TAI4474	Process of Fashion Designing	15 credits(P), TAI4472(CR)		
TAI4442	Advanced Pattern Construction	15 credits (P), TAI3533(P)		
TAI4243	Foundation Garments	15 credits(P), TAX3530(CA), TAI3533(CA) and TAX4540(CR)		
TAW4402	Specific Training I (Fashion)	TAI4371(CR), TAI4472(CR), TAX3331(P), Pass in 15 credits		
	Level	5		
TAI5375	Design Through Draping	45 credits(P), TAI3533(P)		
TAI5478	Fashion Design Development	45 credits(P), TAI4373(P)		
TAI5579	Theoretical aspects of visual presentation and exhibition design	45credits(P), TAI5478(CR)		
TAZ5550	Quantitative Techniques	45 credits(P), TAZ3536(P)		
TAY5384	Inspiration of Fashion Designing	45 credits(P), TAI4373(CA), TAI4474(CA)		
	Specific training II (Fashion Design & Product Development)	TAW4402(CR), TAX4540(CA), TAI4474(CA), Pass in 15 credits at level 4 or above		
	Level			
	Fashion Marketing	Pass 45 credits at level 4 and above		
	Ergonomics	Pass 45 credits at level 4 and above		
	Creating and exhibiting fashion products	TAY5384(P), TAI5579(CA), Pass in 45 credits at level 4 and 5		
TAI6580	Fashion Show Production	Pass in 45 credits at level 4 & above, TAI4474(P)		

### **Elective Courses**

	Courses	Prerequisites
LLJ3245	Introduction to Laws of Sri Lanka	None
MHJ4241	History of Technology	20 credits(P)
TAX5551	Textile Colouration	45 credits(P)
TAI5376	Computer Aided Pattern Drafting	45 credits(P), TAI3533(P)
TAI5277	Computer Aided Fashion Illustration	45 credits(P), TAI4472(CA), TAI4373 (CA)
MHJ5343	Nature of Science	45 credits(P)
MHJ5342	Technology, Society and Environment	45 credits(P)
TAJ5353	History and Traditions of Clothing	45 credits(P)
TAX6455	Fabric Technology	Pass 45 credits at level 4 and above
TAX6454	Technical Textiles	Pass 45 credits at level 4 and above
TAX6263	Textile Product Engineering	Pass 45 credits at level 4 and above
TAX6367	Advanced Colouration	Pass in 45 credits at level 4 and above, [TAX4571(P) or TAX5551(CA)]
TAX6368	Nano Technology for Textiles*	Pass in 45 credits at level 4 and above, [TAX3458(P) or TAX3530(P)], [TAX5551(CA) or TAX4571(P)]

<sup>\*</sup>Not offered in 2021/2022

### **Excluded Combinations**

TAX3458 and TAX3530 TAI4371 and TAI5552
TAX3370 and TAX5551 TAI4472 and TAI5552
TAX4571 and TAX5551

### **Curriculum for Textile Manufacture Specialisation**

### **Compulsory Courses**

Courses	Prerequisites
Level 3	
TAX3458 Fibre Science & Technology	None
TAX3459 Yarn Manufacture I	None
TAX3370 Textile Preparation	None
TAX3331 Garment Analysis and Sewing Machinery	None
TAI3332 Garment Accessories	None
TAZ3536 Statistics for Industrial Studies	None
TAM3234 Basics of Human Resource Management	None
TAM3535 Management Studies	None
TAK3237 Introduction to Computer Applications	None
Level 4	
TAX4539 Quality Assurance for Textile and Clothing	15 credits(P)
TAX4540 Garment Manufacture	15 credits(P), TAX3331(CA)
TAX4560 Woven Fabric Technology	15 credits(P)
TAX4361 Knitting Technology	15 credits(P)
TAX4571 Textile Colouration and Finishing	15 credits(P), TAX3370(CA)
TAI4344 Industrial Garment Washing and Finishing	15 credits(P)
TAM4445 Apparel Merchandising	15 credits(P)
Level 5	
TAX5648 Fabric Structure and Analysis	45 credits(P)
TAX5349 Nonwoven Textiles	45 credits(P), TAX3458(P) or TAX3530(P)
TAX5547 Plant Utilities	45 credits(P)
TAI5246 Current topics in Textile and Clothing	45 credits(P)
TAI5552 Principles of Fashion Design	45 credits(P)
TAZ5550 Quantitative Techniques	45 credits(P), TAZ3536(P)
Level 6	
TAX6556 Ergonomics	Pass 45 credits at level 4 and above
TAX6263 Textile Product Engineering	Pass 45 credits at level 4 and above
TAY6883 Research Project (Textile Manufacture)	Pass 45 credits at level 4 and above, TAI5246(CA)

### **Elective courses**

	Courses	Prerequisites
LLJ3245	Introduction to Laws of Sri Lanka	None
MHJ4241	History of Technology	20 credits (P)
TAX4438	Production Planning and Organisation	15 credits (P)
MHJ5343	Nature of Science	45 credits(P)
MHJ5342	Technology, Society and Environment	45 credits(P)
TAJ5353	History and Traditions of Clothing	45 credits(P)
TAM6457	Fashion Marketing	Pass 45 credits at level 4 and above
TAX6454	Technical Textiles	Pass 45 credits at level 4 and above
TAX6265	Advanced Weaving Preparation and Machinery	Pass 45 credits at level 4 and above, TAX4560(P)
TAX6366	Yarn Manufacture II	Pass in 45 credits at level 4 and above, TAX3459(P)
TAX6367	Advanced Colouration	Pass in 45 credits at level 4 and above, [TAX4571(P) or TAX5551(CA)]
TAX6368	Nano Technology for Textiles*	Pass in 45 credits at level 4 and above, [TAX3458 (P) or TAX3530(P)], [TAX5551(CA) or TAX4571(P)]

<sup>\*</sup>Not offered in 2021/2022

### **Industrial Training**

	Courses	Prerequisites
TAW4401	Specific training I (Apparel)	[TAX3331(P), TAX4438(CR), Pass in 15 credits]
		or [TAX3331(CA), TAX4438(CR), Pass in 18
		credits]
TAW5403	Specific training II (Yarn Manufacture)	[TAX3459(P), Pass in 15 credits] or
		[TAX3459(CA), Pass in 18 credits]
TAW5404	Specific training II (Weaving)	[TAX4560(P), Pass in 15 credits] or
		[TAX4560(CA), Pass in 18 credits]
TAW5405	Specific training II (Chemical	[TAX5551(CR) or TAX4571(P), Pass in 15 credits]
	processing)	or [TAX4571(CA), Pass in 18 credits]
TAW5406	Specific training II (Knitting)	[TAX4361(P) or TAX4441(P), Pass in 15 credits]
		or [TAX4361(CA) or TAX4441(CA), Pass in 18
		credits]

### **Excluded Combinations**

TAX3458 and TAX3530 TAI4371 and TAI5552
TAX3370 and TAX5551 TAI4472 and TAI5552
TAX4571 and TAX5551

### **Exemptions applicable for Industrial Studies Study Programme**

### **Qualifications in English Language**

Qualification	Course exempted
GCE(A/L) – Simple pass in General English, or any recognised qualification in Science or Technology/Engineering, at the level of Diploma or Degree, the medium of instruction being English (verification needed)	VTL2001

### Qualifications in Textile/Apparel and related disciplines

[Applicable for Honours Degree in Industrial Studies – Apparel Production and Management, Textile Manufacture and Fashion Design and Product Development]

Qualification		Courses exempted				
Qualification	Level 3 (and 4)		Level 4 (and 5)		Level 5 & 6	
Certificate in Textile Technology (One year Fulltime) and Diploma in Technology (Extension Course), Textile Training & Services Centre.			TAX4560			
Certificate in Fabric Technology (Part time) from the Textile Training and Services Centre.	TAX3530					
Certificate in Textile Dyeing and Printing (Part time) from the Textile Training and Services Centre.	[TAX3370 at TAX4571] o TAX5551	r				
Diploma in Textile Technology from the Textile Training and Services Centre.	TAX3458 TAX3459 TAX3370	TAX333 1 TAX353 0	TAX4571 TAX4560			
Certificate in Textile Colouration and Finishing (Part time) and Diploma in Textile Colouration and Finishing (Part time) from the Textile Training and Services Centre.	TAX3458 {TAX3370 a: TAX4571} o TAX5551					
Diploma in Clothing Technology, Clothing Industry Training Institute.	TAX3530 TAI3332	TAI3533 TAX333 1	TAX4438 TAX4539	TAW440 1	TAW5401	
Certificate in Garment Production Management (Part time) from Clothing Industry Training Institute.	TAX3331					
College Diploma in Clothing Technology and Management (Fulltime), Brandix College of Clothing Technology.	TAX3530 TAI3332 TAM3234 TAM3535 TAZ3536	TAX333 1 TAI3533	TAX4438 TAX4539 TAX4540 TAI4442	TAW440 1	TAX5648	
Diploma in Textile and Apparel Technology (Full time), Sri Lanka Institute of Textile and Apparel (SLITA) -(Only for the Apparel Production and Management and Fashion Design & Product Development streams)	TAX3530 TAI3332 TAM3234 TAM3535 TAZ3536	TAX333 1 TAI3533	TAX4539 TAX4540 TAX4438 TAI4442		TAX5648 TAX5551	

	Courses exempted				
Qualification	Level 3 (and 4)		Level 4 (and 5)		Level 5 & 6
Diploma in Textile and Apparel Technology (Full time after 2015), Sri Lanka Institute of Textile and Apparel (SLITA) - (Only for Apparel production and management stream and Fashion Design and Product Development stream)	TAX353 0 TAI3332 TAZ353 6		TAX4539 TAX4438		
Diploma in Textile and Apparel Technology (Full time), Sri Lanka Institute of Textile and Apparel (SLITA) - (Only for Textile manufacture stream	TAX345 8 TAX333 1 TAX345 9 TAX337 0	TAM3234 TAM3535 TAZ3536	TAX4539		TAX5648
Diploma in Textile and Apparel Technology (Full time after 2015), Sri Lanka Institute of Textile and Apparel (SLITA) - (Only for Textile manufacture stream	TAX3458 TAX3459 TAX3370 TAZ3536		TAX4539 TAX4571 TAX4560 TAX4361		
Diploma in Textile and Apparel Technology (Part time), Sri Lanka Institute of Textile and Apparel (SLITA).	TAX3530				TAX5551
Diploma in Lanka Institute of Fashion Technology (LIFT) – (Only for the Fashion Design and Product Development Stream)	TAI3270		TAI4474 TAI4373 TAI4371 TAI4472		TAI5375
NDT (Textile) (Old Curriculum-till 2007)	TAX3530 TAX3370 TAX3459	TAX333 1 TAX353 0 TAK323 7 TAM323 4 TAM353 5	TAX453 9 TAX457 1 TAX456 0	[Any two of TAW4401 TAW5403 TAW5404 TAW5405] TAW5406]	TAX5648 TAX5551
NDT (Textile) (Old Curriculum-till 2007) without completion of training	TAX3530 TAX3370 TAX3459	TAX333 1 TAX353 0 TAK323 7 TAM323 4 TAM353 5	TAX453 9 TAX457 1 TAX456 0		TAX5648 TAX5551
NDT (Clothing) (Old Curriculum-till 2007)	TAX3530 TAX3458 TAX3370 TAX3331 TAM3234 TAM3535	TAX353 0 TAI3332 TAI3533 TAK323	TAX453 9 TAX457 1 TAX454 0 TAI4442 TAX443	[Any two of TAW4401 TAW5401 TAW5403 TAW5404 TAW5405 TAW5406]	TAX5648 TAX5551

NDT (Clothing) (Old Curriculum-till 2007) without completion of training	TAX3530 TAX3370 TAX3331 TAX3458	TAX353 0 TAI3332 TAX333 1 TAI3533 TAK323 7 TAM323 4	TAM353 5TAX45 39 TAX454 0 TAX443 8 TAI4442 TAX457		TAX5648 TAX5551
NDT (Textile and Clothing Technology)  - New Curriculum (after 2007)	TAX3458 TAX3459 TAX3370 TAK3237	TAX353 0 TAI3332 TAX333 1 TAI3533 TAM323 4 TAM353 5	TAX453 9 TAI4442 TAX457 1 TAX454 0 TAX456 0 TAX443	[Any two of TAW4401 TAW5401 TAW5403 TAW5404 TAW5405 TAW5406]	TAX5648 TAX5551
Qualification		Co	urses exen	ıpted	
Quannication	Level 3 (and	d 4)	Level 4	4 (and 5)	Level 5 & 6
NDT (Textile and Clothing Technology)  – New Curriculum (after 2007)  Without completion of training	TAX3458 TAX3459 TAX3370 TAM3234 TAM3535	TAX353 0 TAI3332 TAX333 1 TAI3533 TAK323	TAX4539 TAX4571 TAX4540 TAX4560 TAX4438 TAI4442		TAX5648 TAX5551
Diploma in Clothing Manufacture – CITI	TAX3530 TAX3331 TAI3533		TAX4438 TAX4539 TAW4401		TAW5401
BSc (Eng) Textile and Clothing, University of Moratuwa	TAM3234 TAM3535	TAX3530 TAI3533 TAX3458 TAX3459 TAX3370	TAX4539 TAX4571 TAX4560 TAI4442 AGM4307		CVM5401 DMM6601 TAX5648 [Any two of TAW4401 TAW5403 TAW5404 TAW5405 TAW5406]
Licentiateship of Textile Institute (LTI) Examination /Associateship of Textile Institutes (ATI) Technology Group Examination	See	below for ex	emptions fo	or individual pa	apers
Paper 1 in LTI /Paper 1 (e) in ATI – Textile Technology	TAX3530				
Paper 2 in LTI/Paper 2(a) in ATI – Fibre Technology and Textile Science	TAX3458				
Paper 3 in LTI /Paper 2 (b) in ATI – Yarn Technology and Yarn preparation	TAX3459				
Paper 4 in LTI /Paper 2 (c) in ATI- Fabric technology			TAX456	0	TAX5648
Paper 5 in LTI /Paper 2 (d) in ATI- Dyeing and Finishing Technology	[TAX3370 a TAX4571] c				
Paper 6 in LTI - Textile Testing			TAX453	9	

#### BACHELOR OF INDUSTRIAL STUDIES HONOURS STUDY PROGRAMME

Paper 9 in LTI- Quality Management in Textiles	TAZ3536		
Paper 2 in LTI – Garment Technology	TAX3331		
Certificate in Industrial Studies (OUSL)	See below for exemptions for individual papers		
TTI2631 Yarn manufacture	TAX3459		
TTI2632 Weaving		TAX4560	TAX5648
TTI2633 Textile Chemical processing	[TAX3370 and TAX4571] or TAX5551		
TTI3650 Pattern Making	TAI3533		
Diploma in Technology (Textile Engineering) from the OUSL	TAX345 TAX3458 9 TAX353 0	TAX4539 TAX4560	TAX5551

### Qualifications in Agriculture and related disciplines

[Applicable for Honours Degree in Industrial Studies - Agriculture related disciplines]

Qualifications in Agricultural and related disciplines

Qualification	Courses exempted			
Qualification	Level 3		Level 4	Level 5
Diploma in Agriculture – Schools of	AGI3450	AGM3203	AGI4460	AGW5401
Agriculture or Diploma in Agriculture -	AGI3552	TAK3237	AGX4356	
Aquinas College	AGM3354	AGI3553	AGW4401	
NDT (Agriculture) or	AGI3450	AGM3203	AGI4460	AGW5401
National Diploma in Agriculture (NDA) or	AGI3552	TAK3237	AGX4356	
Higher National Diploma in Agriculture	AGM3354	AGI3553	AGW4401	
(HNDA)- Department of Technical Education				
and Training				
Diploma in Animal Husbandry, Sri Lanka,			AGI4460	AGI5471
School of Animal Husbandry, Department of				
Animal Production and Health, Welisara				
HNDT (Agriculture) - Sri Lanka Institute of	AGI3450	AGM3203	AGI4460	AGW5401
Advanced Technological Education	AGI3552	TAK3237	AGX4356	
	AGM3354	AGI3553	AGW4401	
NDT, HNDT, HNDA and NDA in Agriculture -	Exemptions granted for NDT, HNDT, HNDA and NDA			
without training	(Agriculture) except AGW4401 & AGW5401			

There may be a revision in the Exemptions offered for Qualifications from next academic year, as a re-evaluation of external programmes is scheduled for this year.

# Advanced Certificate in Apparel Technology Study Programme, Stand Alone courses and Postgraduate Study Programmes

### 3.5 Advanced Certificate in Apparel Technology Study Programme

This programme is designed to provide an opportunity to those engaged in the relevant industry to gain an in-depth knowledge in the subject of specialisation. Obtaining six passes at G.C.E.(O/L) examination including Mathematics and the first language is required for admission to the Study Programme.

#### **Duration**

The minimum duration of the Advanced Certificate programme is one year, and the maximum duration is three years.

#### **Medium of Instruction**

The programme is offered in both Sinhala and English media.

# Eligibility for Admission to the Programme of Study

A person seeking admission to the programme leading to the award of the Advanced Certificate in Apparel Technology shall be required to have,

- obtained six (06) passes including mathematics and the first language in the General Certificate of Education (Ordinary Level) Examination, Sri Lanka or.
- secured an equivalent or higher qualification acceptable to the Senate.

## Requirements for the award of the Advanced Certificate

The OUSL awards the Advanced Certificate in Apparel Technology to students who have acquired 30 credits by completing the courses listed in Table 9.

Those who possess appropriate qualifications may seek exemptions from relevant courses of the programme. However, they still require registering and successfully completing courses for minimum of 15 credits for the award of Advanced Certificate in Apparel Technology.

A list of qualifications for which exemptions could be claimed is given in Page 74.

#### Curriculum

The curriculum consists of compulsory courses given in Table 9 below.

Table 9 - Courses for Advanced Certificate in Apparel Technology

Course		Pre-requisites		
Level 2				
TAX258	Introducing Textiles	None		
5	introducing rextiles			
TAI2886	Apparel Technology	None		
TAZ2587	Mathematics and Science for Textile	None		
IALL307	Technology			
TAI2488	Laboratory Practices and Industrial Exposure	None		
TAI2289	Introducing Fashion	None		
TAY269	Advanced Certificate Project	None		
0	Auvanceu Gertincate Froject			

For further information about the Advanced Certificate in Apparel Technology programme, the student you can contact programme coordinator  $Mr.\ L\ S\ A\ Perera\ (0112881310).$ 

### Note:

After completion of the Advanced Certificate in Apparel Technology programme, the students who wish to follow the Bachelor of Industrial Studies Honours degree programme in the subsequent year should apply online and register for the degree programme.

ADVANCED CERTIFICATE IN APPAREL TECHNOLOGY STUDY PROGRAMME, STAND ALONE COURSES AND POSTGRADUATE STUDY PROGRAMMES

#### **Exemptions applicable for Advanced Certificate in Apparel Technology Study Programme**

Qualification	Courses exempted
<ul> <li>G.C.E.(A/L) Sri Lanka – Combined mathematics or</li> <li>G.C.E.(A/L) Sri Lanka – Pure mathematics and Applied mathematics or</li> <li>G.C.E.(A/L) Sri Lanka – Physics</li> </ul>	TAZ2587
Certificate in Fabric Technology (Part time) from the Textile Training and Services Centre.	TAX2585
Certificate in Garment Production Management (Part time) from Clothing Industry Training Institute.	TAI2886
Certificate in Garment Industry Management from Garment Industry Management Institute.	TAI2886
Licentiateship of Textile Institute (LTI) Examination /Associateship of Textile Institutes (ATI) Technology Group Examination - Paper 1 in LTI /Paper 1(e) in ATI (Textile Technology)	TAX2585
Licentiateship of Textile Institute (LTI) Examination - Paper 2 in LTI (Garment Technology)	TAI2886

### 3.6 Stand Alone Courses

Sometimes it may be required by someone to follow a few courses for the benefit of industrial career development. You can register for these courses (maximum of 18 credits) without registering for a particular study programme.

If you later decide to enter a regular programme then you may seek exemptions from the courses you have passed as Stand Alone, subject to the fulfilment of relevant pre-requisites.

Students should have the pre-requisites knowledge in respect of each of the course to register for the courses as Stand Alone.

The tuition fee for each course is three times that of the corresponding course in the regular study programme.

Students registering for regular programmes cannot register for courses as Stand Alone courses at the same time.

# 3.7 Postgraduate Study Programmes and Research Degrees

The Faculty is at present in the process of revising its postgraduate study programmes according to Sri Lanka Qualification Framework and meeting the current trends. Some of the postgraduate programmes that are to be offered shortly are:

Master of Energy Management – One year programme

Master of Science in Industrial Engineering – Two year Programme

Faculty also undertakes postgraduate research degrees leading to the awards of MPhil and PhD degrees. The interested applicants need to contact the heads of department relevant to the proposed study area.

## **Annex 1: Application for Evaluation of Qualifications for Exemptions**

# The Open University of Sri Lanka- Faculty of Engineering Technology Application for Evaluation of Qualifications for Exemptions

Only those who possess qualifications NOT listed in the Student Guidebook 2020/21 need to apply.

#### **IMPORTANT**

Please note that only full qualifications are considered, and part qualifications will not be accepted. You are advised to check your qualifications with relevant departments and apply only if necessary.

#### The following documents must be attached to the Application Form:

- (a) Certified copies of all Educational/Professional Qualifications
- (b) Certified copies of the Syllabi of each subject of the course/programme to be evaluated
- (c) Certified copies of past papers of each subject of the course /programme to be evaluated
- (d) Handbook (Student Guidebook) of the Institution from which each qualification has been obtained

Note: Please note that applicant should provide certified English translations if the originals are in any other language.

The completed application form with relevant documents must be submitted to the Dean, Faculty of Engineering Technology, The Open University of Sri Lanka, Nawala, Nugegoda as early as possible. **Applications received after October 8, 2021 will not be processed**.

#### INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED

If you apply for Evaluation of Qualifications, please remember to ask at the registration counter whether you have been granted additional exemptions, when you come for the registration.

Note: The exemption form can be downloaded from the faculty webpage: <a href="http://www.ou.ac.lk/home/index.php/ousl/faculties-institutes/engineering-technology">http://www.ou.ac.lk/home/index.php/ousl/faculties-institutes/engineering-technology</a>

## Application for Evaluation of Qualifications for Exemptions Academic Year 2021/2022

### Part A

- 1. Name of Student with initials:
- 2. Full Name:
- 3. Home Address:
- 4. Telephone: Home: Mobile:
- 5. Email address:
- 6. Have you checked whether your qualifications are already listed in the Student Guidebook 2020/21? Yes/No

### Part B

1. Please tick the programme/field you hope to request exemptions at OUSL

	Agricultural & Plantation Engineering
	Civil Engineering
	Computer Engineering
Bachelor of Technology Honours in	Electrical Engineering
Engineering	Electronic & Communication Engineering
	Mechanical Engineering
	Mechatronics Engineering
	Textile & Clothing Engineering
Bachelor of Industrial Studies Honours in Engineering	Agriculture
	Apparel Production & Management
	Fashion Design & Product Development
	Textile Manufacture
Bachelor of Software Engineering	Software Engineering
Diploma in Information System s & Technology	Information Systems & Technology

### 2. Entry qualification

G.C.E. (A/L) Examination Results

G.C.E. (A/I	۲)	Subject	Grade	Other Subjects	Grade
Tick the relev	ant	Mathematics			
Local		Physics			
Cambridge		Chemistry			
Edxcel		English			

Any other qualification (please specify)

4. List out the courses/subjects/programmes already qualified and relevant courses <u>in</u> <u>OUSL programme</u>. From which exemptions are requested by you. Indicate the relevant course codes by referring the Student Guide Book

Relevant courses/subjects/programmes qualified		Relevant Courses in OUSL programme from which, exemptions are requested	
Course Code	Course Title	Course Code	Course title

## Part C

Provide the particulars of the Qualification you have already gained and that need to be evaluated: (If you possess more than one qualification to be evaluated, please include additional copies of Part C & Part D of this form together with relevant documents)

Title of the Course/Programme	
Title of the award (i.e. Qualification)	
Name & Address of the Institution which awarded the above-mentioned qualification	
Duration of the Course/Programme	
Year of the award	
Is it Full time/ Part time?	
Entry requirements to follow the course/programme	

### Part D

Details of courses/programme mentioned in Part C

1. Number of hours spent on each subject (Use separate sheet if necessary)

Subject/Course	Voor	Year Time spent (Hours)  Lectures Tutorials Lab Work Traini				
	Teal					

2.	Provide the Laboratory experiments done in each subject to be evaluated (Use separate sheet if necessary)

Signature of Applicant

Date

# For Office Use Only

## Exemptions Granted for the Applicant:

Department	Qualifications considered	Exemptions Granted (State if common for all)	Signature of the Head of the Department	Date

## **Annex 2: Details of Scholarships**

#### **University Bursary**

- a) University Bursary is awarded by the OUSL to the value of 50% of the tuition fees of courses, for which the student registers during a particular academic year.
- b) A student may be awarded a University Bursary in two academic years of different levels of the programme.

#### Eligibility Criteria for Award of the University Bursary

- a) Student should be registered for a programme of study of a minimum duration of 2 years.
- b) Student should have sat and attained a minimum GPA of 2.0 in the final examinations of courses adding up to a total of at least 18 credits at the particular level in the previous year.
- c) No disciplinary action should have been taken against the student.
- d) Gross family income of the student shall be less than Rs. 480, 000/=

#### **University Enhancement Bursary**

University Enhancement Bursary is awarded by the Open University of Sri Lanka to motivate the degree level students to complete the courses they have offered in a particular academic year and complete their degrees at a reasonably short period of time. The value of the scholarship varies based on the number of times the student is successful in meeting the bursary criteria. A student may be awarded a University Enhancement Bursary for a maximum of three times in his/her entire academic career at the OUSL. A student who has been awarded either a Mahapola Scholarship or the University Bursary is also entitled for the University Enhancement Bursary.

#### Eligibility Criteria for Award of University Enhancement Bursary

- a) A student to become eligible for the award of the University Enhancement Bursary s/he should register for a minimum of 27 credits of courses in the first year of registration at the OUSL and successfully complete all the credits s/he registered in the same academic year. However, if a student chooses to register for credits more than 27 credits, s/he shall be required to complete the additional credits s/he has registered to become eligible for the bursary.
- b) In the subsequent year/s the student shall be required to register for a minimum of 27 credits of courses at the OUSL and successfully complete all the credits s/he registered for in the same academic year. However, if a student chooses to register for credits more than 27 credits, s/he shall be required to complete the additional credits s/he has registered for to become eligible for the bursary.
- c) A student who fulfils the requirements given in (a) or (b) for the first time will be eligible for an award of a bursary equivalent to 10% of the tuition fee in the next academic year.
- d) Similarly a student who fulfils the requirements given in (a) or (b) for the second time will be eligible for an award of a bursary equivalent to 20% of the tuition fee in the next academic year.
- e) A student who fulfils the requirements given in (a) or (b) for the third time will be eligible for an award of a bursary equivalent to 30% of the tuition fee in the next academic year.
- f) The bursary amounts awarded to the students as per (c), (d) and (e) above, would be set aside from the tuition fee for the next academic year.

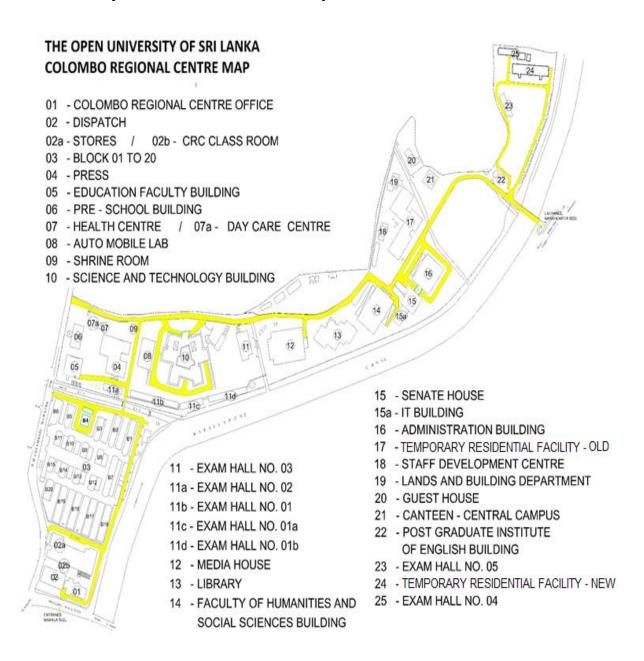
### **Mahapola Scholarships**

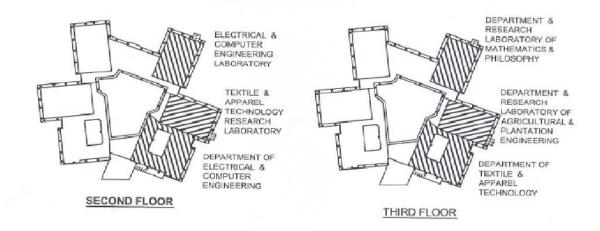
- a) Mahapola scholarships are awarded by Mahapola Higher Education Scholarship Trust Fund
- b) Value of Rs. 8000/= each towards the payment of tuition fees of courses
- c) Scholarship payments will be made in two instalments
- d) The second instalment will be paid only if the conduct and academic performance of the student are satisfactory.

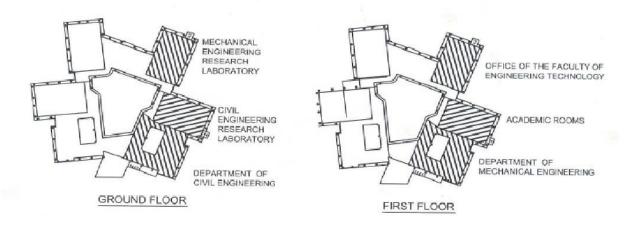
### Eligibility Criteria for Award of the Mahapola Scholarship

- a) Students should have registered for courses at level 4 or above.
- b) Student should not be employed
- c) Student should not have exceeded the age of 30 yrs on the date of selection.
- d) Student should have sat and attained a minimum grade point average (GPA) of 2.0 in the final examination of courses adding up to a total of at least 18 credits in the particular level in the previous academic year.
- e) Parental income ceiling should be equal or less than Rs. 300,000/= with the relevant concessions per annum added to the income ceiling as specified by the UGC.
- f) Students will be required to provide a letter from the Gramasevaka to certify the annual parental income.
- g) No disciplinary action should have been taken against the student.

## Annex 3: Layout of the Central Campus, Nawala







Allocation of Academic Departments in New Science and Technology Building

# **Prepared by the Faculty Registration Committee - 2021/2022**

Dr. I. U. Atthanayake	- Department of Mechanical Engineering
(Chairperson)	
Mr. G. Nandasena (Past Chairperson)	- Department of Mathematics & Philosophy of Engineering
Mr. P. K. J. de Mel	- Department of Agricultural & Plantation Engineering
Mr. D. I. Fernando	- Department of Civil Engineering
Mr. K. A. R. D. Gunaratne	- Department of Electrical & Computer Engineering
Dr. W. A. L. Niwanthi	- Department of Mathematics & Philosophy of Engineering
Mr. H.S.L. Perera	- Department of Mechanical Engineering
Ms. K. G. U. Perera	- Department of Textile & Apparel Technology
Mr. Wijikumar Kularasasingam	- Assistant Registrar /Faculty of Engineering Technology

## **Cover Page Design**

Mr. D. H. Shantha Jayalath

Disclaimer : The Information in this document is based on the Status as of December 2019. Some changes may occur under Faculty Board approval.	