# STUDENTS' PROSPECTUS 2022-2025

Bachelor of Biosystems Technology
Honours in Agricultural Technology and Entrepreneurship

## FACULTY OF TECHNOLOGY

EASTERN UNIVERSITY, SRI LANKA
VANTHARUMOOLAI, CHENKALADY


# Undergraduate Prospectus
# 2022-2025

# Faculty of Technology

**Eastern University, Sri Lanka**
**2024**


## University Vision

World-class knowledge centre with excellent teaching-learning and research for enhancement of community well-being

## University Mission

Producing abled graduates with moral values and enhancing research culture to achieve a sustainable global, national and regional development by creating local and foreign linkages with optimizing the regional resources.

## University Moto

"PER ARDUA AD SCIENTIAM"
"Knowledge through Hard Work"

## Faculty Vision

To be a Centre of Excellence for higher learning and research in Technology to meet challenging needs

## Faculty Mission

To produce men and women of the highest professional Standard contributing towards technology enhancement, dissemination of knowledge and skill and involvement in sustained productivity of Sri Lanka.

## Message from the Vice-Chancellor

Dear Students,

It gives me an immense pleasure to welcome you to Eastern University, Sri Lanka (EUSL). You are indeed blessed to have the opportunity to receive an education at one of the finest faculties, the Faculty of Technology at the EUSL. The mission of the faculty is ***to produce men and women of the highest professional standard contributing towards technology enhancement, dissemination of knowledge and skill and involvement in sustained productivity of Sri Lanka*.**

The Faculty has an inclusive spirit and is dedicated to the highest standards of technological education. It provides an ideal setting for learning and growth through teaching, independent research, industrial training, and fostering student relationships and well-being. To complement the academic offerings, the Faculty provides a range of co-curricular activities. I am confident that the Faculty of Technology meets the evolving needs of our growing student population and the country at large.

This student prospectus has been revised for the second time and includes essential information about the University, student admissions, programme descriptions, examinations and evaluations, course specifications, available facilities, and examination rules and regulations. This information is provided for students admitted to the four-year degree programme (Bachelor of Biosystems Technology Honours in Agricultural Technology and Entrepreneurship).

In due time, the students from the Faculty of Technology will shine brighter than ever in their academic excellence and professional achievements, bringing immense glory to this University and the Nation. You have an opportunity to train for focusing research and development which will develop you become an inventor or innovator in your field of interest. I am sure that your journey at the Faculty of Technology, EUSL, will be a memorable experience filled with growth, knowledge, and transformative opportunities. I wish every success to the students enrolling in the degree program in their academic, professional, and personal endeavors.

**Professor. V. Kanagasingam**
Vice-Chancellor, Eastern University, Sri Lanka

## Message from the Dean

Eastern University, Sri Lanka (EUSL) renders its significance services to the region and the nation, and produces high intellectual and professionally able graduates for more than last 37 years. In aligned with this, **Faculty of Technology** was established at the Eastern University, Sri Lanka in 2017, which is the youngest faculty, to meet the technological expectations of the nation.

Faculty of Technology is offering one degree programme at present, namely, *Bachelor of Biosystems Technology Honours in Agricultural Technology and Entrepreneurship*, which is a four-year degree programme (SLQF level 6), taught in English medium. It focusses on student centered learning (SCL) through outcome-based education (OBE). The faculty strictly following the quality education by ensuring quality assurance mechanisms implemented by the University Grants Commission (UGC) and the EUSL. The faculty is offering various exposures to the students in terms of academic programmes, field and industrial training, independent research and other extra-curricular activities for the development of students' Knowledge, Skills, Attitudes and Mind-set (KSAM model).

This undergraduate prospectus provides all essential information about the university, facilities available at the university, undergraduate study programme offered by the faculty, structure of examinations and evaluations, staff profiles and brief details of the courses offered by the departments and finally the examination procedures, offences and punishments.

On behalf of the faculty, I warmly welcome all the students to the Faculty of Technology and make your journey a success with your unique contribution. Further, I wish you all to develop your career upon on graduation and to contribute to develop the nation at large.

**Prof. T. Mathiventhan**
Dean, Faculty of Technology
Eastern University, Sri Lanka

## Abbreviations and Acronyms

| | |
|---|---|
| BBST | Bachelor of Biosystems Technology |
| BBSTHonours | Bachelor of Biosystems Technology Honours |
| CA | Continuous Assessment |
| CDC | Curriculum Development Committee |
| CGC | Career Guidance Cell |
| CGU | Career Guidance Unit |
| CICL | Centre for Industrial Community Linkage |
| CICT | Centre for Information and Communication Technology |
| DBST | Department of Biosystems Technology |
| DELT | Department of English Language Teaching |
| DICT | Department of Information and Communication Technology |
| DMDS | Department of Multidisciplinary Studies |
| ES | End Semester |
| ESA | End Semester Assessment |
| EUSL | Eastern University, Sri Lanka |
| FBQs | Fall-back Qualifications |
| FHCS | Faculty of Health-Care Sciences |
| FoT | Faculty of Technology |
| GEE | Gender Equity and Equality Cell |
| GP | Grade Point |
| GPA | Grade Point Average |
| GSD | General Service Division |
| ICT | Information and Communication Technology |
| ILOs | Intended Learning Outcomes |
| KSAM | Knowledge, Skills, Attitude and Mind-set |
| MS | Mid-Semester |
| NBIA | National Biotechnology Industry Association |
| NGC | Non-GPA Courses |
| NIE | National Institute of Education |
| NLH | Notional Learning Hours |
| OGPA | Overall Grade Point Average |
| PLOs | Programme Learning Outcomes |
| Q | Quiz |
| QAC | Quality Assurance Cell |

| | |
|---|---|
| SAD | Students Affairs Department |
| SCL | Student-Centered Learning |
| SGPA | Semester Grade Point Average |
| SLQF | Sri Lanka Qualification Framework |
| SSSW | Students Support Services and Welfare |
| SVCMD | Swamy Vipulananda College of Music and Dance |
| SVIAS | Swami Vipulananda Institute of Aesthetic Studies |
| UBL | University Business Linage |
| UMO | University Medical Officer |

## Contents

# 1. Eastern University, Sri Lanka (EUSL)

Vantharumoolai, Chenkalady – 30350
Tel: 065-2240490, 2240580, 2240590
Fax: 065-2240730
E-mail: reception@esn.ac.lkWeb site: www.esn.ac.lk

## 1.1 Eastern University, Sri Lanka (EUSL)

The Batticaloa University College was established on 1st August 1981. This began with two faculties: Faculty of Science and Faculty of Agriculture. Both these faculties affiliated to the University of Peradeniya. The University College was elevated to the status of university under the name of Eastern University, Sri Lanka (EUSL) in 1986. The Eastern University, Sri Lanka, was established on the 1st of October 1986 by a University Order dated 26th September 1986 issuedunder section 2 of the Universities Act No. 16 of 1978.

The EUSL was upgraded with the additional Faculties of Commerce and Management & Cultural Studies in October 1986. The Faculty of Cultural Studies was then expanded to include the Department of Languages, the Department of Social Sciences and the Department of Geography. It was then renamed as the Faculty of Arts and Culture in 1991. The Trincomalee Campus of the Eastern University was established with effect from 15th June 2001 by Gazette notification dated 6th June 2001 with the two Faculties, namely Faculty of Communication & Business Studies and Applied Science.

Swamy Vipulananda College of Music and Dance (SVCMD) was established in Batticaloa 1981 by the Ministry of Regional Affairs and Hindu Culture. However, in 1997 the University Grants Commission permitted the EUSL to enrol diploma holders of the SVCMD for a degree programme in the Department of Fine Arts. In April 2001, SVCMD ceremonially handed over to the Ministry of Higher Education and Information Technology with a request that the name of the college continues to be used. Thereafter, on a directive given by

Her Excellency the President and based on the report of a Committee, the Swami Vipulananda Institute of Aesthetic Studies (SVIAS), Eastern University, Sri Lanka was established by the Ordinance No. 01 of 2005 to be operative from 14th March 2005. Faculty of Health-Care Science (FHCS) was established by Gazette notification on 23rd November 2004. It was envisaged that it would conduct not only the medical course but also courses for the paramedical sciences, nursing, physiotherapy, pharmacy, radiography and medical laboratory technology. Faculty of Technology was established in 2017. The New Faculty of Graduate Studies was established in February 2023.

## 1.2 Faculty of Technology (FoT)

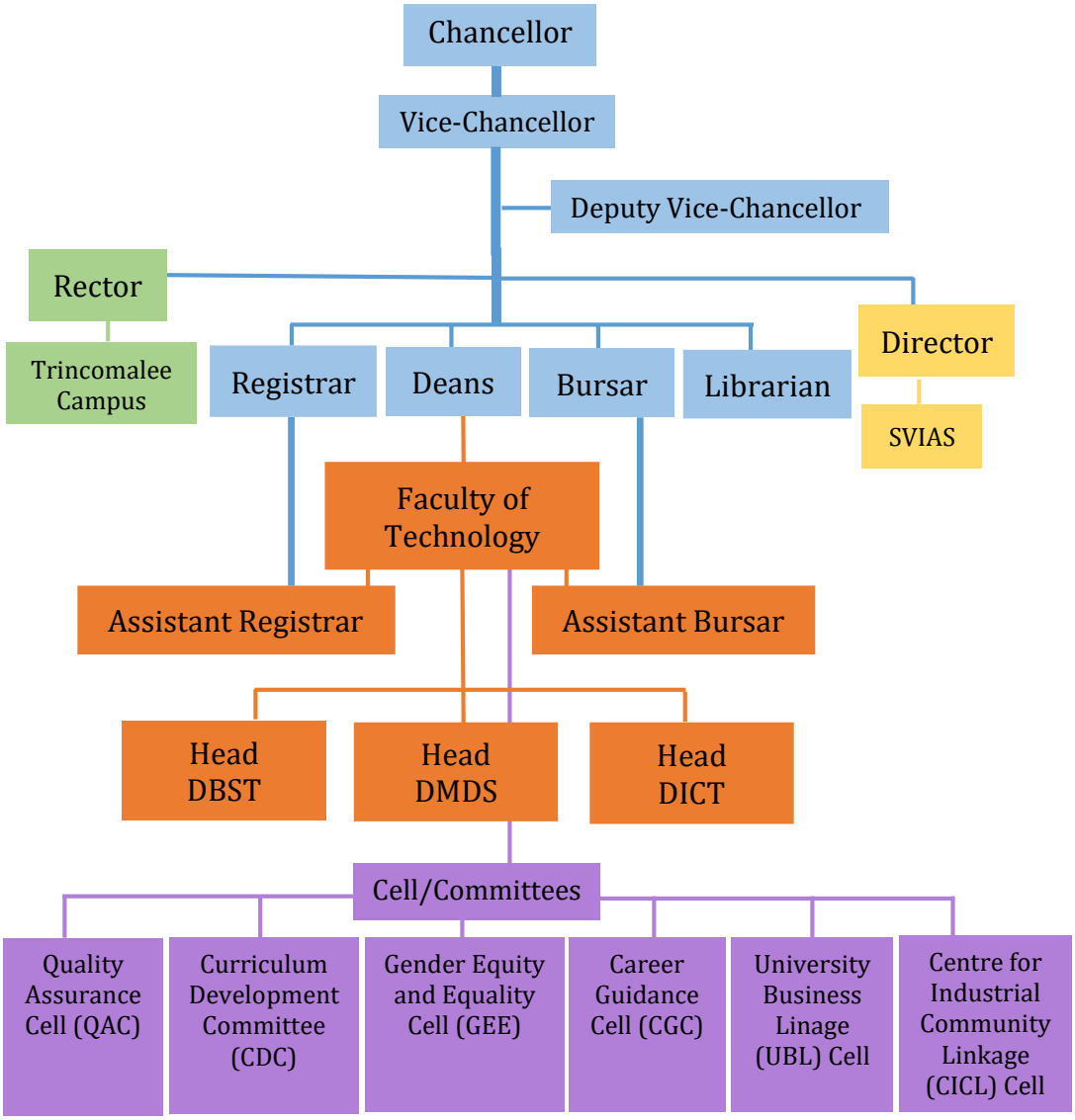
### 1.2.1 Brief History

The Government of Sri Lanka introduced Technology stream to Sri Lankan school system in 2013 as a strategy of harnessing talents of youth to capture the advantage of relevant emerging technologies to drive the economy, by providing an education, which embraces competencies to satisfy the needs of the Nation. Ministry of Education together with the National Institute of Education (NIE) identified the importance of the knowledge on the Technological subjects, decided to introduce the Technological Stream to the Advanced Level. The Technological stream is to be distinctly identifiable as a separate stream at the Advanced Level and comprises three subjects namely *Engineering Technology*, *Biosystems Technology* and *Science for Technology*. The GCE (A/L) examinations under this newly introduced technology stream were held, for the first time, in 2015.

Faculty of Technology was established in the university education system in Sri Lanka to introduce new undergraduate degree programmes, which suited to the technological needs of the country. Establishment of Faculty of Technology at the Eastern University, Sri Lanka (EUSL) was initiated in July 2014. The New Faculty of Technology with two Departments *viz: Department of Biosystems Technology* and *Department of Multidisciplinary Studies* was established by the Gazette Extraordinary (No. 2002/35) under Section 27(1), THE UNIVERSITIES ACT, No. 16 of 1978) which was

published on 18th January, 2017. In addition, the third Department, *Department of Information and Communication Technology* (DICT) was approved as per the Extra Ordinary Gazette 2336/48, June 14 2023.

### 1.2.2 Organizational Structure/Organogram




DBST – Department of Biosystems Technology
DMDS – Department of Multidisciplinary Studies
DICT – Department of Information and Communication Technology
SVIAS – Swami Vipulananda Institute of Aesthetic Studies

### 1.2.3 Office of the Dean

**Dean**

**Professor. T. Mathiventhan**
Professor in Botany
Ph.D (EUSL), M.Sc (Norway),
B.ScHons (EUSL),
M.I.Biol (Sri Lanka)
Email: dean_fot@esn.ac.lk

**Assistant Registrar**

**Mr. A. Hisnathas**
**Email:** ar_fot@esn.ac.lk

**Management Assistants**

Mr. M. Nitharsan
Management Assistant (Gr. II)
Email: nitharsanm@esn.ac.lk

Ms. K. Kokulavani
Management Assistant (Gr. III)
Email: kokulavanik@esn.ac.lk

**Works Aid**
Mr. K. Muneeswaran

### 1.2.4 Departments

**(A) Department of Biosystems Technology (DBST)**

The Department of Biosystems Technology at the Faculty of Technology, Eastern University, Sri Lanka, plays a pivotal role in fostering innovation and addressing critical challenges at the intersection of Biosystems and technology. With a focus on cutting-edge research and education, this department catalyses agricultural technology and entrepreneurship advancements. Through interdisciplinary approaches, students and researchers collaborate to develop solutions that bridge the gap between traditional sciences and modern technological applications.

The department is providing a four-year honours degree programme, namely, *Bachelor of Biosystems Technology in Agriculture Technology and Entrepreneurship* at present, which is conducted in the English medium. The department provides diverse opportunities for the students during their academic programme including field visits, industrial training of six months duration, independent research at the on-campus and off-campus. In addition, the department established newlab with sophisticated instruments for research and further studies.

The department is operating various mode of learning and teaching activities focussing student-centered learning (SCL), through variousquality assurance mechanisms. Academic staff are expertise in molecular biology and biotechnology, food technology, plant sciences and breeding, soil-energy-environment, food processing technology, horticulture, and many more. Students are fortunate to study their undergraduate degree programme at the Department of BST at the Faculty of Technology, Eastern University, Sri Lanka.

**Head of the Department**

Dr. (Mrs.) Dulangana Menike Hunupolagama

E-mail: head_bst@esn.ac.lk

# Academic Staff

**Dr. (Mrs.) Dulangana Menike Hunupolagama**
PhD (UoC, SL), BSc(Hons) (Rajarata University of SL)
**Senior Lecturer (Gr. II)**
**Email:** dulanganah@esn.ac.lk
**Research Interest:** Microbial biofertilizers, Mycology, Commercial aspects of microbial biotechnology.

**Dr. (Mrs.) Nadarajah Suthamathy**
PhD (Norway), MSc (Norway), BSc AgriHons. (EUSL).
**Senior Lecturer (Gr. II)**
**Email:** suthamathyn@esn.ac.lk
**Research Interest:** Agriculture, Fisheries and Aquaculture, Application of economic theory and quantitative methods in natural resources and development economics.

**Dr. Mrs. Vanitha Prasannath**
PhD (Queensland, Australia), MSc. (UPDN),
BSc. (UPDN).
**Senior Lecturer (Gr.II)**
**Email:** vanithap@esn.ac.lk
**Research Interest:** Agri-business management, Agri-entrepreneurship, Agricultural economics.

**Dr. A.L. Mohamed Rifky**
PhD (Uzbekistan), M.Sc (UPDN), B.ASc. (Hons)
(Uva Wellassa University, SL), LL.B (OUSL)
**Senior Lecturer (Gr. II)**
**Email:** rifkyalm@esn.ac.lk
**Research Interest:** Food process and preservation, Dairy technology, Functional foods, Essential oils.

**Mrs. Prishanthini Pushpakanth**
MPhil (EUSL), MSc. (UPDN), BSc (Hons.)(EUSL), PhD in Food Technology (reading, NZ).
**Lecturer (Confirmed) –** *on study leave*
**Email:** prishanthinip@esn.ac.lk
**Research Interest:** Crop protection, Food technology. Biotechnology, Metabolomics.

**Ms. A. Aarthy Mariyaselvam**
MPhil (UPDN, SL), BSc. Agric. Tech and Mgt. (UPDN,SL),
**Lecturer (Probationary)**
**Email:** aarthyma@esn.ac.lk
**Research Interest:** Soil and Environment, Agronomy, Plant nutrition, Soil fertility.

**Mrs. W.H.Dinesha Udayangani Pushpakumari**
MPhil (UoR, SL), BSc Agriculture (UoR, SL), PhD (reading, UoR, SL)
**Lecturer (Prabationary)**
**Email:** njkdinesha@gmail.com
**Research Interest:** Manipulation of flowering time of rice, Seasonal sensitivity of crops.

**Ms. Dasina Pirabu**
MSc (PGIA, UPDN), B. Sc (Hons.)(EUSL), PhD (reading, BEAS, Memorial University, NL, Canada)
**Lecturer (Prabationary) –** *on study leave*
**Email:** dasinaas@esn.ac.lk
**Research Interest:** Animal breeding & nutrition, Boreal ecosystems and earthworm ecology, Aqua feeds and animal feeds.

**Mrs. Mohamed Rasheed Roshana**
MSc. in Agric (EUSL), B.Sc. in Agric (Hons) (EUSL), MPhil in Biosystems Technology, PhD (reading, Malaysia).
**Lecturer (Probationary) –** *on study leave*
**Email:** roshanamr@esn.ac.lk
**Research Interest:** Food processing and preservation, Development of value-addedproducts, Food quality.

**Mrs.Narmhikaa Nithushan**
MSc in Horticulture (UPDN), B.Sc. in Agric (Hons) (EUSL),
L**ecturer (Probationary)**
**Email:** narmhikaan@esn.ac.lk
**Research Interest:** Horticulture, Floriculture, Landscape designing, horticulture and urban planning, Indoor garden technology, Protected agriculture technology.

**Ms. Suthajini Thiruketheeswaranathan**
MSc (UoJ, SL), B.Sc. (Hons) (UoR, SL), PhD (reading, China)
**Lecturer (Probationary) –** *on study leave*
**Email:** suthajinit@esn.ac.lk
**Research Interest:** Bioenergy and biofuel, Lifecycle assessment, Water treatment, Fuel cell and electrode modification.

**Mrs. Vassanthini Reshanth**
MSc (UoK, SL), B.Sc in Agric (Hons.) (EUSL),
**Lecturer (Probationary)**
**Email:** vassanthinir@esn.ac.lk
**Research Interest:** Genetic engineering, Tissue culture, Plant biotechnology.

**Ms. P. Hisanithy**
BBST (Hons) in Agri. Tech. and Entre. (EUSL)
**Lecturer (Probationary)**
**Email:** hisanithyp@esn.ac.lk
**Research Interest:** Food Science and Technology, Nano Technology related to Food Science and Technology, Precision Agriculture, Energy resource management, Environmental Management.

## (B) Department of Multi-Disciplinary Studies

Department of Multidisciplinary Studies (DMDS) is also another vibrant department at the Faculty of Technology. It is mainly a service provider for the BBST programme by providing teaching assistance, supporting students to develop information communication facilities, research assistance, handling of farm machineries and many more.

Staff at the department have wider experiences and research capacities in different field who trained locally and in abroad. They areexpert in environment monitoring and assessment, information and communication technology, engineering fields focusing water, energy,etc.

Students are undertaking many undergraduate projects, under the guidance of staff at this department with innovative ideas, and brings their concepts into reality through developing innovative outputs, especially under the course Design Technology. The department is welcoming the students with more creative and innovative ideas to meet the thirst of the technological advancement for future innovations.

**Head of the Department**

Professor. M. Sugirtharan

E-mail: head_bst@esn.ac.lk

## Academic Staff

**Professor. M. Sugirtharan**
Ph.D. (UPDN, SL), M.Sc (India), B.Sc (Agric) - Hons(EUSL)
Professor in Agric. Engineering
**Email:** sugirtharanm@esn.ac.lk,
**Research Interest:** Irrigation and water management, Water quality, Water resource management, Climate change, Soil and water conservation.

**Dr. N. Pratheesh**

Ph.D. (CS), M.Sc. (IT), BSc. (EUSL), MCSSL
**Senior Lecturer (Gr. I)**
**Email:** pratheeshn@esn.ac.lk
**Research Interest:** Software Engineering, e-Waste, Collaborative Learning, Learning Analytics, Knowledge Management, Higher Education through Information and Communication Technology, IoT.

**Eng. A. Janarth**
MEng (UPDN), BSc (Hons) in Eng (UOJ), AMIE(SL), AE ECSL, PhD (reading, RMIT, Australia/University of Ruhuna)
**Lecturer (Probationary) –** *on study leave*
**Email:** janartha@esn.lk
**Research Interest:** Sustainable engineering and development, Environment and water engineering, Civil construction and engineering management, Engineering mathematics, SUDs, Porous concrete.

### 1.2.5 Composition of the Faculty Board

Faculty Board of Technology, EUSL is the academic authority of the Faculty of Technology. The major functions of the faculty board are concerned with overall regulations of teaching, course structure, examinations and research within the faculty, subject to the control of the Senate of the university. The faculty board is basically a support agency of the Senate and its academic role, is very important as most of the recommendations of the Senate are based on reports originating from the Faculty Board. A Faculty Board headed by the Dean of that faculty and shall consist of the following members; the professors, associate professors, senior lecturers, lecturers, two representative from probationary lecturers, two students' representative and three external members appointed by the faculty.

**Ex-officio members**

| | |
|---|---|
| Professor. T. Mathiventhan | Dean/Faculty of Technology |
| Dr. (Mrs). D. M. Hunupolagama | Head/BST |
| Professor. M. Sugirtharan | Head/MDS |

**Members**

| | |
|---|---|
| Dr. N Pratheesh | Senior Lecturer (Gr. I) |
| Dr. (Mrs). S. Santhirakanthan | Senior Lecturer (Gr. II) |
| Dr. (Mrs). V. Prasannath | Senior Lecturer (Gr. II) |
| Ms. M. A. Aarthy | Lecturer (Probationary) |
| Eng. A Janarth | Lecturer (Probationary) |

**Students' Representatives**

Two Students

**Appointed Members**

| | |
|---|---|
| Mr. E. Devadarshan | Managing Director, Riviera Resort, Batticaloa |
| Mr. T. David Nidharshan | Coordinator-East, Dilmah Conseration Dilmah Ceylon Tea Company |
| Eng. S. Kalatharan | Senior Engineer, RDA, Batticaloa |

**Secretary to the Board**

| | |
|---|---|
| Mr. A. Hisnathas | AR/Faculty of Technology |

### 1.2.6 Publications

#### (i) Student Magazine

The faculty student union publishes a student magazine annually named as *Techno East*. Various types of articles and students creative outputs are decorating the magazine.

#### (ii) Faculty Journal

The faculty is initiated to publish a journal namely *Journal of Techno Science*, which is planning to publish twice a year.

#### (iii) Research/Conference publication

Faculty publishes book of abstracts, which include the presented research articles at the research sessions and conferences organized by the Faculty of Technology.

# 2. Admission of Students to the Faculty of Technology

## 2.1 Eligibility for registration

An applicant may be considered for admission to the university to follow the Degree programme, if he/she:

1. Has attained the prescribed minimum standards at the G.C.E Ordinary Level (G.C.E. O/L) and
2. Should have followed the Biosystems Technology stream in the G.C.E (A/L) at schools in a manner, as determined by the University Grants Commission of Sri Lanka, and
3. Must satisfy the general university admission requirements as laid down by the University Grants Commission of Sri Lanka.

## 2.2 Registration, Re-registration and Studentship

Students should register to each academic year to become eligible for continuing their academic programme and the examinations, of the respective year of study. Applications for registration/re-registration should be made before commencement of the academic programme of a respective academic year. At the same time application to eligible to sit for the examination will be entertained **two weeks** before the semester ends.

If a student fail to register to the programme of study as prescribed above, their studentship for the relevant study shall not be taken into consideration. Registration for each academic year should be made through the MIS (Management Information System) and submitted on or before the deadline.

## 2.3 Student Identity Card and Record Book

All registered students will be given a Student Identity Card and Student Record Book. The students are advised to produce his/her identity card when requested by any officials of the university and while attending to officials matters in the university. The Records of

the examinations are maintained by the Senior Assistant Registrar/Examinations or Assistant Registrar of the Faculty in the student Record Book.

A candidate should have the student record book/student identity card during the examination. If a candidate loses student record book/student identity card he/she shall obtain a duplicate of student record book/student identity card as the case may be from the Registrar or relevant Senior Asst. Registrar/Asst. Registrar.

## 2.4 Subject Registration

All the course units are mandatory to the students. Therefore, once they registered to the academic year they are entitled to register for all the courses at the particular academic year. No need for a separate subject registration at the moment.

## 2.5 Cancellation and Postponement of the programme

### 2.5.1 Cancellation

Cancellation of registration for a study programme can be done any time upon a written request of the student. The request shall be recommended by the faculty board and approved by the Senate. The decision shall be informed to the University Grants Commission where the student did registration for a degree programme.

### 2.5.2 Postponement (UGC Student Handbook- 2022/2023, section 4.6)

- If any candidate selected for admission to a course of study of a university expects to obtain a postponement of his/her admission, he/she may be granted such postponement provided that the university concerned is satisfied with the reasons adduced by the candidate.
- In every such case, the student should register at the UGC for the course of study of the university/higher educational institute to which he/she has been selected in the first instance, and an application be made to the Registrar of the respective university indicating the specific grounds on which the postponement is sought before the commencement of the academic year.
- The **maximum period** for which such postponement is given will

be one academic year.

- When a postponement is given, the candidate will be admitted to the same course of study of the university/higher educational institute for which he/she was selected earlier. Any candidate obtaining a postponement of admission will not be eligible to seek admission to any other course of study of a university/higher educational institute on the basis of the results of a G.C.E. (A/L) Examination held in a later year, after the G.C.E. (A/L) Examination held for that particular admission year.

## 2.6 Students Guidance

### 2.6.1 Student Counselling

Student counselling is a valuable service that supports students in their personal, academic, and emotional growth. It further supports the students to navigate various challenges and promote their overall well-being. Each faculty has its students' counsellors from their academic community and it is operating under a Senior Student Counsellor of the University. Further, Faculty of Health-Care Sciences operating a counselling centre, that provides counselling services whenever necessary for the faculties.

Student counselling service focusses on individual (one-on-one sessions where students discuss personal issues, academic struggles, or emotional concerns, etc.) and group counselling (group sessions on specific topics to foster peer support, e.g., stress management, self-esteem, etc.), organizing and conducting workshop and seminars (educational sessions on study skills, time management, and mental health, etc.), career guidance programmes (helping students explore career paths, choose majors, and plan for the future) and crisis intervention (Immediate support during emergencies or critical situations). All these supports shall enhance the emotional well-being, academic success, career exploration, social skills and personal growth of the students.

### 2.6.2 Students Support Services and Welfare (SSSW)

The SSSW is a coordinating body that closely working under the Vice-Chancellor. This will coordinate all the student welfare matters

that are handling by different departments in the university such as Students Affairs Department (SAD), General Service Division (GSD), Hostel facilities, students facilities, health centre, etc.

### 2.6.3 Academic mentors

Student mentoring programme at the Faculty of Technology, aimed to encourage students to connect with academic staff members on a professional basis to build up strong, trusting relationships in order to support, motivate and guide them towards their future goals. The purpose of the mentoring programme is to support and encourage the students to manage their academic activities effectively while assisting them in resolving their personal burdens in order to maximize their potential for academic work, wellbeing, and overall performance throughout the university life.

The faculty allocated certain number of students (mentees) under each mentor, who is guiding the students in their entire academic life at the faculty and the university as well.

# 3. Description of Programme

## 3.1 Introduction

The *Bachelor of Biosystems Technology Honors (BBSTHonors) in Agricultural Technology and Entrepreneurship* is a full-time, applied and practical oriented degree programme, aimed at creating a new generation of Entrepreneurs in Sri Lanka. BBSTHonors degree is a full time, four years' professional degree programme offered at SLQF Level 6. The medium of instruction is in **English**.

The proposed 4 years professional degree programme in BBSTHonors aims to disseminate knowledge and develop skills among students by giving more emphasis on practical aspects, industrial training, ability to design, problem solving, improving analytical skillsand application at various level along with seeking opportunities to become an entrepreneur.

The objective of the programme is to develop multi-skilled professionals with competences to coordinate, stimulate and guide in the use of Biosystems Technologyfor improving the rural livelihood with a broader view of government policies to

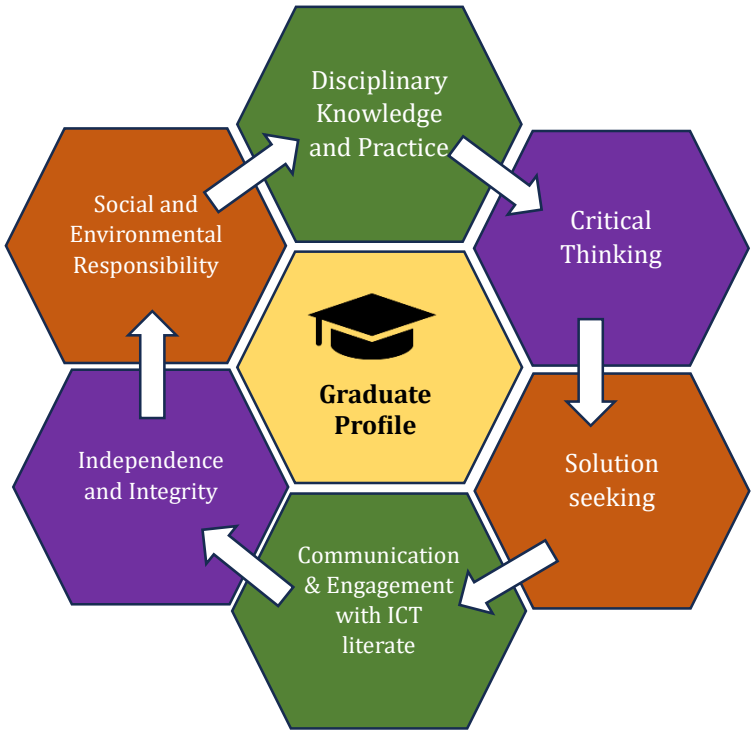
- Create opportunities for self-employment through Entrepreneurship in Agricultural Technology based Agro-industries.
- Conserve and utilize natural resources sustainably for eco-friendly environment.
- Technology transfer to the community

## 3.2 Admission of Students

All applicants for admission to the BBST (Agricultural Technology and Entrepreneurship) degree programme in the Faculty of Technology, EUSL should have followed the Biosystems Technology stream in the GCE (A/L) at schools and must satisfy the general University admission requirements as laid down by the University Grants Commission of Sri Lanka.

## 3.3 Graduate Profile

Our faculty graduate profile makes clear to staff, current and potential students, employers, the community, accrediting agency (NBIA) and other academic institutions. Therefore, the overall graduate profile of the BBSTHonours programme has been designed taking into consideration six competencies that the faculty expects from a graduate student once the programme is completed. The key competencies identified in each graduate profile of each of the three-study programme is mapped with the SLQF competencies and KSAM (Knowledge, Skills, Attitude and Mindset).




1. **Disciplinary Knowledge and Practice**: Graduates are expected to understand the thinking, research, theory and practice in their field of study and appreciate the role of their discipline in its contexts.
2. **Critical Thinking**: Graduates are expected to be able to contest knowledge and practice, critically consider ideas, research and think reflectively and reflexively.

3. **Solution Seeking**: Graduates are expected to be able to apply theory, analysis, research and creative skills to solve problems and make reasoned decisions. They are expected to systematically address complex problems and to be inventive in their solution seeking.
4. **Communication and Engagement with ICT literate**: Graduates are expected to be able to receive and interpret information, express ideas and share knowledge with diverse audiences in a range of media and formats. They are expected to be able to establish a rapport and build collaborative relationships with individuals and groups.
5. **Independence and Integrity**: Graduates are expected to be able to learn and work autonomously and ethically. They are expected to be lifelong learners, to show resilience, proactivity and an ability to make principled decisions in academic and professional spheres.
6. **Social and Environmental Responsibilities**: Graduates are expected to be respectful of cultural and other forms of diversity and to embrace difference. Our graduates are expected to recognise a role for themselves in creating a sustainable future and be able to consider the social, cultural, environmental and economic consequences of national and international issues.

## 3.4 Programme Outcomes Aligned to Graduate Profile

The programme has designed in a way to reflect 11 learning outcomes that aligned with the Graduate profile of the programme and the learning outcomes expected by the SLQF level 6.

| Desired Graduate Attributes (Graduate Profile) | Category of learning outcomes (SLQF) | K-SAM | Programme Learning Outcomes (PLOs) |
|---|---|---|---|
| 1.Disciplinary knowledge and practice | 1. Subject/ Theoretical knowledge | Knowledge | 1. Ability to *conduct*, *analyze* and *interpret* experiments and *apply* the findings to improve different |

| | | | |
|---|---|---|---|
| | 2. Practical knowledge and application | | types of (technological) processes.<br>2. Ability to *achieve* proficiency in the knowledge, techniques, skills, and modern tools that are related to biosystems technology. |
| 2. Communication and engagement with ICT literate.<br><br>3. Social and Environmental Responsibilities | 3. Communication | Skills | 3. *Communicate effectively* with people of different levels (professionals) and work areas.<br>4. Ability to work *effectively* in teams to achieve specific goals.<br>5. *Understand* professional responsibilities and ethical environmental standards and how to exercise them in roles of environmental leaders, policy makers and technical managers.<br>6. *Engage* in activities that lead to impact of social improvement. |
| | 4. Teamwork and Leadership | | |
| | 5. Creativity and Problem Solving | | |
| | 6. Managerial and Entrepreneurship | | |
| | 7. Information Usage and Management | | |
| | 8. Networking and Social Skills | | |

| | | | |
|---|---|---|---|
| 4. Critical thinking<br><br>5. Solution seeking | 9. Adaptability and Flexibility<br>10. Attitudes, Values and Professionalism<br>11. Vision for Life | Attitudes, Values, Professionalism and Vision for life | 7. *Transfer* acquired knowledge to meet changes and challenges in different fields.<br>8. *Adopt* an inter-disciplinary approach to tackle complex real-world problems.<br>9. *Formulate* effective and innovative solutions to environmental problems by integrating and applying concepts, skills and modern tools from technology, management and sustainable development. |
| 6. Independence and Integrity | 12. Updating Self / Lifelong Learning | Mind-set and Paradigm | 10. Ability to *develop* systems, components, or processes using creativity, ingenuity, and managerial abilities.<br>11. *Recognize* the importance of and maintain self-motivation for lifelong learning, and commit to professional, ethical, and social responsibilities. |

### 3.5 Credit Value

The volume of learning is described in term of *credits* and the courses offered in the degree programme are designed in credit units. The student workload of each course is measured by Notional Learning Hours (NLH). The Notional learning hours include direct academic contact hours and time spent in independent learning (IL). Each course is taught and assessed during the same semester and at the end of each semester. A student should complete a minimum of **120** credits (6000 NLH) during the four academic years of the degree programme.

A. One credit course is equivalent to 50 NLHs: 15 hours of lectures and 35 hours of IL and assessments(15/00/35) **or** 30 hours of practical and 20 hours of IL and assessments (00/30/20).
B. Two credits course is equivalent to 100 NLHs: 30 hours of lectures and 70 hours of IL and assessments (30/00/70) **or** 60 hours of practical and 40 hours of IL and assessments(00/60/40) **or** 15 hours of lectures, 30 hours of practical and 55 hours of ILand assessments (15/30/55)
C. **Industrial training:** one credit is equated to one month of scheduled work at the industries.
D. **Research Project:** one credit is equated to 100 NLHs.

**Credit allocation for Semesters**

| Semester | Credits |
|---|---|
| Semester 1 | 16 + 2 (NGC) |
| Semester 2 | 16 + 3 (NGC) |
| Semester 3 | 17 + 3 (NGC) |
| Semester 4 | 16 + 2 (NGC) |
| Semester 5 | 18+ 2(NGC) |
| Semester 6 | 18 |
| Semester 7 | 11 |
| Semester 8 | 08 |
| **Total Credits** | **120 + 12 (NGC[1])** |

[1] NGC denotes Non-GPA Courses

### 3.6 Introduction to Course Units

A course unit is a selectively organized section of academic activity that may comprise either theory or practical or a blend of both. There are few course units that comprise research/industrial training/internship/group project activity in the programme. Content, teaching-learning strategies and assessment of a course unit are carefully structured to facilitate the achievement of Intended Learning Outcomes (ILOs) of a course unit, and course units are assessed on the basis of the students' attainment

**Code for course unit:** An alphanumeric code is used to identify a course unit.

E.g., BST 23012, Environmental Biotechnology

- First **three letters** are denoting the name of the department. BST denotes the courses offered by the Department of Biosystems Technology and MDS denotes the courses offered by the Department of MultidisciplinaryStudies.
- The **first** digit represents the year of the programme,
- The **second** digit represents the semester,
- The **third and fourth** digits represent the serial number of the course offered by the department in a semester and
- The **fifth** digit represents the credit weight of the course

### 3.7 Course Structure

The four-year degree programme comprises eight semesters. One semester consists of 15 weeks of academic programmes and examination period. Courses offered are divided into Foundation Courses, Core Courses and Auxiliary Courses.

#### Foundation Courses

Foundation courses are dedicated to provide the undergraduates with the necessary knowledge in Basic Sciences and Basic Agriculture together with Biosystems Technology orientedcourses

#### Core Courses

Core Courses are aimed to provide knowledge in the area of Agricultural Technology and Entrepreneurship. These core courses

are designed to equip the undergraduates with knowledge and skills necessary to conceptualize and implement Agricultural Technology as well as Entrepreneurship related strategies in industries.

**Auxiliary Courses**

Auxiliary courses throughout the study period to impart skills in English and Social Harmony. Giving due recognition to the dynamics of the modern world, the undergraduates are armed with competencies in Career Development too.

**Others**

In addition to the above courses, students will be attending Industrial Training Programme in their seventh Semester. Students are mandatory to attend at least one semester at the FoT after the completion of the Industrial Training. They are expected to conduct their final year Research Projects in the eighth Semester. The research project may span over seventh and eighth semester.

## 3.8 Academic Progression

The study progression is through a series of academic years. The BBSTHonors degree programme covers four academic years. The faculty will notify the commencement of academic year with the approval of the Faculty Board and the Senate. An academic year consists of two semesters with the approximate period of calendar.

| Semester | Schedule | Duration (weeks) |
|---|---|---|
| One | Orientation | 02 |
| | First Semester | 15 |
| | Review period | 02 |
| | Examination | 04 |
| | Semester vacation | 01 |
| Two | Second Semester | 15 |
| | Review period | 02 |
| | Examination | 04 |
| | Semester vacation | 01 |
| Common vacation (April and December) | | 04 |
| | **Total** | **50** |

**Note**: In the case of Industrial Training, the semester will cover of 24 weeks (6 months). Students shall not be given semester vacation and review period for examination. They will submit Industrial Training report and face viva-voce at the end of the Industrial Training. During the Industrial Training period, some of the courses shall be conducted via on-line mode.

### Semester Barrier

A student who has obtained an Overall Grade Point Average (OGPA) of 2.00 at the end of 3rd Semester (i.e., semesters 1, 2 and 3) will be permitted to register for the 5th Semester. Grades obtained for English Language will not be a barrier.

### 3.9 Curriculum Map

| **Course Structure in the Curriculum** | **Graduate Profile** | | | | | |
|---|---|---|---|---|---|---|
| | GA1 | GA2 | GA3 | GA4 | GA5 | GA6 |
| | Disciplinary knowledge and practice | Communication and engagement with ICT literate | Social and Environmental Responsibilities | Critical thinking | Solution seeking | Independence and Integrity |
| | Knowledge | Skills | | Attitudes, Values, Professionalism and Vision for life | | Mind-set and Paradigm |
| Foundation Courses | H | M | L | L | L | L |
| Core Courses | H | H | M | M | H | M |
| Auxiliary Courses | H | M | L | M | L | L |
| Industrial Training | H | H | H | M | M | M |
| Research Project | H | M | M | H | M | H |

**Note**: The table above provides an overview of mapping of the curricula of different types of courses of the degree programme to the Graduate Profile (GP) of the Faculty of Technology. Notations H, M and L provide a rough measure of contributions of the course units to the Graduate Attributes (GA) as High, Medium and Low respectively.

### 3.10 Curriculum Matrix

**Degree**: Bachelor of Biosystems Technology Honors in Agricultural Technology and Entrepreneurship (BBSTHonors in Agr.Tech & Entr.)

| Year of study | Semester | No. of credits (DBST) | | | No. of credits (DMDS) | | | Total Credits | Eligibility |
|---|---|---|---|---|---|---|---|---|---|
| | | FC | CC | Total Credits | FC | AC** | Total Credits | | |
| 1st Year | 1 | 09 | - | 09 | 07 | 02 | 09 | 18 | |
| | 2 | 14 | - | 14 | 02 | 03 | 05 | 19 | |
| 2nd Year | 1 | 10 | 04 | 14 | 03 | 03 | 06 | 20 | |
| | 2 | 08 | 08 | 16 | - | 02 | 02 | 18 | |
| 3rd Year | 1 | 13 | 03 | 16 | 02 | 02 | 04 | 20 | Overall semester GPA for first three semesters (1:1, 1:2 and 2:1) ≥2.00 |
| | 2 | - | 18 | 18 | - | - | - | 18 | |
| 4th Year* | 1 | - | 11 | 11 | - | - | - | 11 | |
| | 2 | - | 08 | 08 | - | - | - | 08 | |
| | | 54 | 52 | **106** | 14 | 12 | **26** | **132** | 120 GPA + 12 Non-GPA |
| BBSTHonors in Agr.Tech & Entr. (SLQF 6) (academic programme **within 6 academic years**) | | | | | | | | | • OGPA≥2.00; SGPA≥2.00;<br>• No "E" grade;<br>• ≥ C for all Auxiliary Courses,<br>• ≤ three grades at the levels of 'C- or D+ or D' in a semester. |
| Award of Class (SLQF 6) (academic programme **4 academic years**) | | | | | | | | | • OGPA≥2.00; SGPA≥2.00;<br>• No 'E or C- or D+ or D' in a semester;<br>• ≥ C for all Auxiliary Courses. |

| **Fall Back Qualifications (FBQs)** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Diploma in Agr.Tech & Entr. (SLQF Level 3) | | | | | | | | • Minimum of 30 credits out of 120;<br>• No "E" grade in the above 30 credits; OGPA≥2.00 in the said 30 credits;<br>• ≤ 6 academic years. |
| Higher Diploma in Agr.Tech & Entr. (SLQF Level 4) | | | | | | | | • Minimum of 60 credits out of 120;<br>• No "E" grade in the above 60 credits; OGPA≥2.00 in the said 60 credits;<br>• ≤ 6 academic years |
| BBST in Agr.Tech & Entr. (SLQF Level 5) | | | | | | | | • Minimum of 90 credits out of 120;<br>• 60 credits are compulsory out of the 120 credits;<br>• No "E" grade in the above 90 credits;<br>• OGPA≥2.00 in the said 90 credits;<br>• Should complete the Industrial Training;<br>• Should obtain a "≥D+" for all auxiliary courses for batches prior to 2022/2023; whereas should obtain a "D" or above for all auxiliary courses for batches from 2022/2023 onwards;<br>• ≤ 6 academic years. |

*Includes 6 months Industrial Training at the 4:1 Semester and Research project at the 4:2 Semester.

**All Auxiliary Courses are Non-GPA and Compulsory, amount of 12 credits volume of learning.

FC-Foundation Courses; CC-Core Courses, AC-Auxiliary Courses; SLQF- Sri Lanka Qualification Framework

SGPA – Semester Grade Point Average; OGPA – Overall Grade Point Average

# 4. Examination and Evaluation

## 4.1 Examination

Each course will be evaluated by continuous assessments and end semester assessment basis within the semester. Each academic year consists of two semesters and each semester comprises 15 weeks. There will be eight end semester examinations during the four academic years for the BBST Honours (Bachelor of Biosystems Technology-BBST) degree programme.

### 4.1.1 Types of Examination

A course unit shall be evaluated by means of Continuous Assessment (CA) and End Semester Assessment (ESA)/Summative Assessment.

**Continuous Assessment (CA)**

CA for Theory course unit is consisting of *Quiz and Mid-Semester Examination* and for Practical Course unit, it is consisting of Assignments*/ Reports/Spot Tests/In–Course Assessments* at the dates and times determined by the department offering the course unit. The Quiz and Mid- Semester Examination shall be conducted at the end of the 5$^{th}$ and 10$^{th}$ week of the academic semester respectively. The Grades earned by a student in various components of the CA, of course units, shall be displayed to the students.

**End Semester Assessment (ESA)** ESA shall be conducted at the end of each semester in which the teaching of the course unit is completed. The date and time of the ESA shall be decided by the Dean's Office in consultation with the Heads of Department. A scrutiny board for each examination shall be scheduled and chaired by the Dean, prior to the said examination.

### 4.1.2 Eligibility for examination

Students should register to each academic year to become eligible for applying for the examinations, of the respective year of study.

### 4.1.3 Application Procedure

Applications for examinations will be entertained two weeks before

the semester ends. Every application should be made on the prescribed form obtained from the Dean's office of the faculty or via the MIS system and submitted on or before the deadline.

## 4.2 Evaluation

### 4.2.1 Evaluation of a Theory Course

The theory component of the course will be assessed by CA and ESA. The examination time allocations depend on the course credits. CA (Quiz and Mid Semester Examination) will be confined as given below.

| **Examination** | **≤2 credit Units** (hr) | **>2 credit Units** (hr) | **Marks** (%) |
|---|---|---|---|
| Quiz (Q) | ½ | ½ | 10 |
| Mid-Semester (MS) | 1 | 1 | 25 |
| End Semester (ES) | 1-2 | 3 | 65 |

The Final Marks $\mathbf{M_1}$ for the theory course is defined as follows:

$$\mathbf{M_1 = Q \times 10\% + MS \times 25\% + ES \times 65\ \%}$$

Where;
**Q** is the marks obtained in Quiz and
**MS** is the marks obtained in the mid-semester examination.
**ES** is the marks obtained in the ESA of Theory Course Unit,

- The quiz examination will not be repeated. The student will be given zero marks, if he/she absent for the quiz.
- It is compulsory for the students to sit the mid-semester examination for all the courses.
- If a student absences for the mid-semester exam, then the result for that subject will be given as "**IC** (incomplete)". Once the student successfully completes the mid-semester exam only the results will be released.

### 4.2.2 Evaluation of Practical Course

The practical component of the course will be assessed by CA and ESA. The duration of the examinations will vary according to the number of units covered in the course. Oral examinations shall be a component

of the practical assessment for certain courses. The Final Marks will be evaluated as given below.

| Examination | Marks (%) |
|---|---|
| Continuous Assessment (CA) | 40 |
| End Semester (ES) | 60 |

The Final Marks $\mathbf{M_2}$ for the Practical Course will be evaluated as follows

$$\mathbf{M_2 = CA_x\ 40\% + ES\ x\ 60\%}$$

where;
$\mathbf{A_2}$ is the average marks of the best two out of three CA
**ES** is the marks obtained in the ESA

### 4.2.3 Evaluation of blended (Theory and Practical) course

The Final Marks are evaluated using the individual marks obtained in the theory and practical examination. The Final Mark $\mathbf{M_3}$ for the Course with Theory and Practical Components is evaluated as follows;

$$\mathbf{M_3 = \frac{C_t\ x\ M_1\ +\ C_p\ x\ M_2}{C_t\ +\ C_p}}$$

where,
$\mathbf{C_t}$ credits of the theory,
$\mathbf{C_p}$ credits of the practical,
$\mathbf{M_1}$ marks for theory course and
$\mathbf{M_2}$ marks for practical course

- The student should pass the theory and practical components of a course unit in the **same sitting** in order to pass the blended course.
- A student who fails in a blended course should repeat both the theory and practical examinations when held next.

### 4.2.4 Evaluation of Project

The project work may span over the 7th and 8th semesters, but it will be assessed end of the 8th Semester (Final Year). Faculty of Technology

published a guideline, "Guidelines for Final Year Research". Students are advised to strictly follow the guidelines and the regulations to successfully complete the Research Project. It will be assessed continuously and the marks will be allocated as follows:

- Proposal Presentation 10%
- Student progress 20%
- Project dissertation 50%
- Project Presentation /viva –voce 20%

The project presentation and the dissertation of the Research Project will be assessed by a panel of examiners appointed by the Faculty Board. **Four copies** of the final hard bound reports, certified by the supervisor, should be submitted to the Head of the Department within two weeks' time from the date of presentation, for the release of results.

### 4.2.5 Evaluation of Industrial Training

Faculty of Technology published a guideline, "Guidelines for Industrial Training". Students are advised to strictly follow the guidelines and the regulations to successfully complete the training.

(i) The final evaluation of the industrial training will be evaluated based on the following criteria-
   - Daily Diary and evaluation from supervisor 30%
   - Final Report 30%
   - Oral Presentation/ Viva-Voce 40%

(ii) The members of the evaluation panel for the final oral presentation/viva-voce will be appointed by the head of the department with the approval of the Faculty Board. The panel contains
   - Two senior Lecturers from the Department
   - One senior level Industrialist from Industry.

(iii) The minimum grade to pass industrial training is **"C".**

### 4.2.6 Evaluation of Non-GPA Course (NGC)

The Non-GPA course will be evaluated on a satisfactory (**'S'**)/ unsatisfactory (**'US'**) basis and will not contribute to the computation of Overall Grade Point Average (OGPA). However, obtaining a 'Satisfactory' Level (C grade) for a Non-GPA Course is mandatory to be eligible for the award of the degree. When a student gets a mark equal or above to 'C' will be denoted as satisfactory (S).

### 4.2.7 Evaluation of English Language Modules

Minimum "C" in English Language Module is a requirement to earn the degree. Course will be evaluated on a satisfactory (**'S'**)/ unsatisfactory (**'US'**) basis and will not contribute to the computation of overall Grade Point Average (OGPA). When a student gets a mark equal or above to 'C' will be denoted as satisfactory (S).

### 4.2.8 Grade and Grade Point

The total marks scored (CA and ESA) by the student for a course unit will be graded based on the scheme, which is approved by the Faculty Board of Technology. Each grade shall correspond to a particular Grade Point (GP) value as in the following table, in accordance to the UGC.

| Grade | Grade Point | Attainment Descriptor |
|---|---|---|
| A+ | 4.00 | Excellent |
| A | 4.00 | |
| A- | 3.70 | |
| B+ | 3.30 | Good |
| B | 3.00 | |
| B- | 2.70 | |
| C+ | 2.30 | Pass |
| C | 2.00 | |
| C- | 1.70 | Weak Pass |
| D | 1.30 | Conditional Pass |
| E | 0.00 | Fail |

**Note**: In order to earn grade D or above, student must score more than the minimum prescribed marks for both Continuous Assessment (CA) and End Semester Assessment (ESA). If the assessment is only by CA, minimum prescribed mark for CA will apply.

**Percentage marks ranges**

| Marks for reference (%) | Grades | Grade Point |
|---|---|---|
| 85 and above | A+ | 4.00 |
| 75 to 84 | A | 4.00 |
| 70 to 74 | A- | 3.70 |
| 65 to 69 | B+ | 3.30 |
| 60 to 64 | B | 3.00 |
| 55 to 59 | B- | 2.70 |
| 50 to 54 | C+ | 2.30 |
| 45 to 49 | C | 2.00 |
| 40 to 44 | C⁻ | 1.70 |
| 35 to 39 | D | 1.30 |
| 0 to 34 | E | 0.00 |

**Note**: Percentage marks ranges given above are for the guidance of the Examiner. Marks ranges for a particular module may be decided by the Moderator, in consultation with the Examiner, based on the marks distribution and taking the above reference marks ranges into consideration. Marks ranges adopted for a particular module must be declared to the Board of Examiners.

## References to indicate the status when a module is not completed

Following of similar references may be used to indicate the status when a student has not completed a module. This is for record keeping of the university and for the information of the students.

| References | GP | Description |
|---|---|---|
| E (CA and ESA) | 0.0 | Both CA and ESA marks are below the prescribed minimum, Incomplete $I_{CA \text{ and } ESA}$. |
| E (CA) | 0.0 | CA marks is below the prescribed minimum, Incomplete CA ($I_{CA}$) |
| E (ESA) | 0.0 | ESA marks is below the prescribed minimum, Incomplete ESA ($I_{ESA}$) |
| N | - | Academic concession |
| W | - | Withdrawn |

### 4.2.9 Grade Point Average (GPA)

**(a) SGPA** (Semester Grade Point Average)

It will be based on the summation of Grade Points earned for all GPA modules registered (except those awarded with academic concession or withdrawn) in a semester weighted according to number of credits as per the following formula,

$$SGPA = \frac{\sum_{i=1}^{n} Ci\,GPi}{\sum_{i=1}^{n} Ci}$$

where,

***Ci*** is the number of credits for the $i^{th}$ module in a given semester,

***GPi***, is the grade points earned for that module, and

***n*** is the number of GPA modules in that semester**.**

**Note**: It must be noted that weightage for CA may vary depending on the module and therefore, fixed weightages must not be brought into the SGPA calculation equation. Industrial Training should be allocated GPA credits.

### (b) Overall Grade Point Average (OGPA)

**OGPA** describes a student's standing in terms of grade points earned for all GPA modules registered up to a given point of time (except those awarded with academic concession or withdrawn) weighted according to number of credits as per the following formula,

$$OGPA = \frac{\sum_{i=1}^{n} Ci\,GPi}{\sum_{i=1}^{n} Ci}$$

where,

***Ci*** is the number of credits for the $i^{th}$ module in the academic programme

***GPi*** is the grade points earned for that module and

***n*** is the total number of registered GPA modules in the academic programme.

**Note**: The weightage for each semester is taken as uniform for the calculation of OGPA. All semesters must be successfully completed for the award of the degree.

## 4.3 Repetition of a Course Unit

(i) A student who does not have the minimum of 80% attendance for both theory and practical classes **will not be eligible** to sit the end semester examination and shall be given "Not Allowed" (NA).

(ii) Students are allowed to *repeat* the examinations of any course **only three times**. A mercy attempt shall be considered for a subject at his/her **fifth attempt** (fourth repeat) subjected to the approval of the Senate. This will be applicable within a period of maximum of eight years.

(iii) Student shall repeat the course unit when offered next. The maximum grade given for repeat attempt will be a grade of "**C**".

(iv) Continuous assessment marks will be incorporated for the computation of final grade for students who sit an ESA/summative examination,

- As a proper candidate
- As the first repeat candidate (i.e., 2nd attempt).

(v) For the 2nd repeat (3rd attempt), only the summative examination marks shall contribute to the final grade of that course unit.

(vi) To become eligible to get a class, a student who obtains any grade less than '**C**' has to improve the grade up to maximum of '**C**' grade before completing the degree programme in their usual academic year, i.e. within four academic years.

### Absence

(i) Students should support the absence from lectures, practical and examinations due to (a) illness, by a valid medical certificate[1] issued by the government hospitals and recommended by University Medical Officer (UMO); (b) any other reasons that

[1] A valid medical certificate means, a medical certificate issued by the following persons: University Medical Officer, District Medical Officer, Consultant specialist in the relevant field, Head of a Government Base Hospital, Medical Superintendent of an Ayurvedic/Government Hospital and Ayurvedic Physician registered in Ayurvedic Medical Council.

should be recommended by the Faculty Board and approved by the Senate.

(ii) They will be allowed to sit for end semester examination with the recommendation of the Faculty Board and Senate, if overall attendance is more than 80 %.

(iii) When a student fails to appear for the examination due to illness should inform the Dean of the Faculty within **7 days** from the date of examination and a Medical Certificate should follow within **14 days** to reach the Dean, Faculty of Technology.

**Representation to the university**

Students should obtain the prior permission by submitting a letter to the Dean of the Faculty to support his/her absence due to Inter-Faculty, Inter-University or International participation on behalf of the faculty or university.

**Academic progression/semester barrier**

A student who has obtained an Overall Grade Point Average (OGPA) of 2.00 at the end of 3rd Semester (i.e., cumulative GPA of semesters 1, 2 and 3) will be permitted to register for the 5th Semester. Grades obtained for English Language will not be a barrier.

## 4.4 Award of Degree and Class

The Board of examiners chaired by the Vice-Chancellor shall meet to consider the performance of the candidates and recommend the following awards to the Senate.

### 4.4.1 Award of Degree

A student deemed to have satisfied the requirement for the award of Bachelor of Biosystems Technology Honours in Agricultural Technology and Entrepreneurship, if he/she has obtained

1. Overall Grade Point Average (OGPA) of minimum of 2.00
2. Completed a semester successfully by achieving a Semester Grade Point Average (SGPA) of 2.00 or above and has **no 'E' grade** and **no more than three grades** at the levels of '**C-** or **D'** in that semester.
3. Grade **C** or above in all Auxiliary course units.

### 4.4.2 Award of Class

Classes will be awarded at the completion of the degree programme. To be eligible for a class,

1. Should successfully complete the degree programme **within four** academic years, except for the situation accepted by the Faculty Board and approved by the Senate.
2. Completed a semester successfully by achieving a Semester Grade Point Average (SGPA) of 2.00 or above and has **no E, C-** and **D** in that semester.
3. Grade '**C**' or above in all Auxiliary course units.
4. Obtained the required OGPA as follows

| Class | Minimum OGPA |
|---|---|
| First Class | 3.70 and above |
| Second Class (Upper Division) | 3.30 – 3.69 |
| Second Class (Lower Division) | 3.00 – 3.29 |
| Pass | 2.00 – 2.99 |

## 4.5 Award of Other Qualifications: Fall Back Qualifications

Fall-back Qualification (FBQ) referred as awarding a qualification given to the students who registered to follow a particular degree program and completed the **minimum period of study that required for the expected qualification**, but are unable to fulfil all the requirement for awarding the said degree, due to various reasons that they encountered during their studentship period.

### 4.5.1 General Criteria

(i) Should be able to get fall back options only after the student has followed the degree programme (BBSTHonors) during normal duration of the course i.e., 04 academic years, which he/she registered for.

(ii) May be awarded only after completion of the maximum period of study, i.e., **06 academic years** of the study programme (BBSTHonors), for which the student has been registered.

(iii) The student should apply for either a Diploma or Higher Diploma or Bachelor of Biosystems Technology in *Agricultural Technology and Entrepreneurship*.

(iv) Should not be expelled from university on disciplinary grounds.

### 4.5.2 Diploma (SLQF 3)

Diploma in Biosystems Technology in Agricultural Technology and Entrepreneurship.

Eligibility Requirements for SLQF Level 3

(i) Should complete a minimum of 30 credits out of 120.
(ii) Should be no "E" grade in the above 30 credits.
(iii) Cumulative GPA for the above 30 credits should be ≥2.00

### 4.5.3 Higher Diploma (SLQF 4)

Higher Diploma in Biosystems Technology in Agricultural Technology and Entrepreneurship.

Eligibility Requirements for SLQF Level 4

(i) Should complete a minimum of 60 credits out of 120.
(ii) Should be no "E" grade in the above 60 credits.
(iii) Cumulative GPA for the above 60 credits should be ≥ 2.00

### 4.5.4 Bachelor (SLQF 5)

Bachelor of Biosystems Technology in Agricultural Technology and Entrepreneurship.

Eligibility Requirements for SLQF Level 5

(i) Should complete a minimum of 90 credits out of 120 credits.
(ii) 60 credits are compulsory out of the 120 credits.
(iii) Should be no "E" grade in the above 90 credits.
(iv) Should complete the industrial training.
(v) Should obtain a "D" or above for all auxiliary courses.
(vi) Cumulative GPA for the above 90 credits should be ≥ 2.00

## 4.6 Effective Date of the Degree

The effective date of degree shall be the date of the last examination or viva-voce examination of the independent research project (8th semester), whichever comes last to fulfil the requirements.

But in the case of repeat candidates, if the repeat exam comes after the viva-voce examination of the 8th semester, the last date of the said examination will be considered as the effective date.

## 4.7 Maximum Period for the Completion of the Degree

The maximum period "for the completion" of all requirements for the award of the degree is to be a maximum of **6 academic years**.

# 5. Course Specifications

## 5.1 Department of Biosystems Technology

### 5.1.1 First Year of Study

| Course code | CourseTitle | Course structure | Credit/s | Hours* (L/P/IL) |
|---|---|---|---|---|
| **Semester – 1** | | | | |
| BST 11012 | General Biology | FC | 02 | (15/30/55) |
| BST 11022 | Introduction to Farming Systems | FC | 02 | (15/30/55) |
| BST 11032 | Introduction to Livestock Production | FC | 02 | (15/30/55) |
| BST 11042 | Fundamentals of Food and Nutrition | FC | 02 | (15/30/55) |
| BST 11051 | Introduction to Economics | FC | 01 | (15/00/35) |
| **Semester – 2** | | | | |
| BST 12012 | Animal Production Systems | FC | 02 | (15/30/55) |
| BST 12022 | Principles of Crop Production | FC | 02 | (15/30/55) |
| BST 12032 | Crop Protection Techniques | FC | 02 | (15/30/55) |
| BST 12042 | Fundamentals of Molecular Biology | FC | 02 | (15/30/55) |
| BST 12052 | Green Technology | FC | 02 | (30/00/70) |
| BST 12062 | Landscaping Technology | FC | 02 | (15/30/55) |
| BST 12072 | Introduction to Entrepreneurship | FC | 02 | (15/30/55) |
| | **Total** | | **23** | |

* Hours are distinguished as (Lecture/Practical/Independent Learning) that cover over time taken for assessments. FC-Foundation Courses,

**BST 11012, General Biology** (15/30/45)

**Course Content**: Cell structure and function; Cellular transport; Bioenergetics; Metabolism; Enzymes; Energy and ATP, other energy carriers; Cellular respiration; Fermentation and anaerobic

respiration; Aerobic respiration; Photosynthesis; Origin of life and evolution; Plant Diversity; Animal Diversity.

***Practical***: Light microscope, its functions and specimen observation using light microscope; Identification of cell parts of plant, animal, and bacteria using microphotograph; Identification of different types of animal tissues using light microscope; Observing the cross section and transverse section of primary stem, root of monocot and dicot.

**BST 11022, Introduction to Farming Systems** (15/30/55)

**Course Content**: Introduction to farming systems; Systems concept/theory; Basic characteristics of farming; Classification of farming systems; Integrated farming systems; Cropping systems and pattern; Sustainable farming; Organic farming; Management of integrated farming system.

***Practical***: Nursery management techniques; Identification of weed types and its management; Identification of pasture and Fodder/cover crops; Preparation of enriched farm yard manure-silage/compost/ vermicomposting; Identification of insecticide/ pesticides/fungicides, Field visit to study resource allocation, utilization and economics; Preparation of IFS model.

**BST 11032, Introduction to Livestock Production** (15/30/55)

**Course content**: Introduction to livestock and their classification; Status of Sri Lankan livestock industry; Breed identification: Cattle, buffalo, sheep, goat, rabbit and swine, poultry; housing system for livestock; Feed management for different stages of livestock; Special care and management practices; Health care management; Importance of livestock in nations economy and poverty reduction.

***Practical***: Identification of livestock breeds; lntroduction of general livestock housing system; Livestock feed identification; identification of livestock management of tools; Field visit.

**BST 11042, Fundamentals of Food and Nutrition** (15/30/55)

**Course Content**: Nutrients: Classification, Digestion and Metabolism, Nutritional aspects; Food: groups, pyramid, types, poisoning and Allergy; Toxicants in foods; Losses of food and nutrients during

processing and cooking; Balanced Diet, Breast and Formula feeding; Nutritional needs of various age groups, Nutritional disorders; Assessment of nutritional status; Basics in Diet Therapy.
***Practical***: Food pyramid; Digestive system of humans; Assessment of nutritional status of human; Functional foods; Meal planning.

**BST 11051, Introduction to Economics** (15/00/35)
**Course content**: Theory of production: Factor – product relations, factor – factor relations; Theory of cost; Consumer choice and preferences; Theory of demand, Demand Elasticity; Theory of Markets: perfectively and imperfective competitive markets; National Income Accounting; Consumption Savings and income determination; Theory of Money: demand and supply of money, market equilibrium; Employment, Unemployment, Inflation

**BST 12012, Animal Production Systems** (15/30/55)
**Course content**: General view of animal production in Sri Lanka; Extensive, intensive, semi-intensive production systems; Input and output of animal productions; Feed; Nutritional requirements of Ruminants and non- ruminants; Intensive care management of animals; Major breeds for animal production; Selection of animal types for specific purposes; Breeding techniques; Pest, diseases, prevention & control.
***Practical***: Housing system of livestock; poultry management; Incubation and Hatching; brooder management; Artificial insemination; Egg quality; feed formulation

**BST 12022, Principles of Crop Production** (15/30/55)
**Course Content**: Introduction to crop production; Basic concepts in agronomy, growth and development of crops; Agro-climate and agro-ecological zones in Sri Lanka; Classification of crops; Tillage; Plant nutrients; Irrigation; Weed management; Sustainable agriculture.
***Practical***: Evolution of climatic zones of Sri Lanka; Classification of crops; Land preparation; Nursery management; Compost making; Soil conservation; Irrigation systems; Identification of weeds.

**BST 12032, Crop Protection Techniques** (15/30/55)
**Course Contents:** Introduction of plant pathology, insect pests, plant diseases; Modern techniques in disease diagnosis; General approach to plant disease management and control; Management and control options of selected pests; Designing of eco-friendly and sustainable insect pest management programs.
***Practical*:** Insects pests of economically important crops; Field diseases of economically important crops; Postharvest diseases of fruits and vegetables.

**BST 12042, Fundamentals of Molecular Biology** (15/30/55)
**Course Content**: Chromosomes, chromatin, DNA; Structure of DNA and RNA; Structure and function of a gene; Concept behind central dogma; DNA replication process; Transcription process; Post transcriptional modifications; Introns splicing; Translation process; Post translational modifications; Proteins folding and stabilization.
***Practical***: Identification of molecular biotechnological equipment; Study and making models of DNA and RNA structure; DNA replication process; Mechanism of mutations.

**BST 12052, Green Technology** (30/00/70)
**Course contents**: Basic concepts of green technology and environmental sustainability; Important environmental issues for most pressing energy, waste, pollution, and resource problems; Fundamental science and engineering principles of various green technologies: soil, water, waste and energy sectors; Application of green technologies: pollution prevention and control; Social, economic and political aspects: green technology applications.

**BST 120622, Landscaping Technology** (15/30/45)
**Course Contents**: Importance, History, Principles and elements of landscaping; urban landscape planning.
***Practical***: Selection of suitable soft and hard landscape materials; Landscape designing; Establishment and maintenance of soft landscape materials.

**BST 12072, Introduction to Entrepreneurship** (15/30/55)

**Course content**: Introduction: entrepreneurs, entrepreneurial environment, barriers to entrepreneurship; Entrepreneurial responses to change; Entrepreneurial qualities; Building entrepreneurial skills: learning entrepreneurship, farm business life cycle, approaches to building capacities; Extension support for developing entrepreneurial capacity: training and extension support, access to finance and markets, supporting partnership and networking, creating culture of entrepreneurship.

***Practical*:** Identifying and learning how and why some entrepreneurs are success in their business; Building entrepreneurial skills: learning entrepreneurship; Supporting and creating of entrepreneurship.

### 5.1.2 Second Year of Study

| Course code | CourseTitle | Course structure | Credit/s | Hours* (L/P/IL) |
|---|---|---|---|---|
| **Semester – 3** | | | | |
| BST 23012 | Introduction to Aquaculture | FC | 02 | (15/30/55) |
| BST 23022 | Molecular Biological Techniques | CC | 02 | (15/30/55) |
| BST 23032 | Principles of Food Preservation Technology | FC | 02 | (15/30/55) |
| BST 23042 | Soil and Soil Reclamation Techniques | FC | 02 | (15/30/55) |
| BST 23052 | Fruit and Vegetable Production Technology | FC | 02 | (15/30/55) |
| BST 23062 | Water Management Technology | FC | 02 | (15/30/55) |
| BST 23072 | Agribusiness Management | CC | 02 | (30/00/70) |
| **Semester – 4** | | | | |
| BST 24012 | Waste Treatment Technologies | FC | 02 | (15/30/55) |
| BST 24022 | Bio Energy Systems | FC | 02 | (15/30/55) |
| BST 24032 | Nanotechnology and its Applications | CC | 02 | (15/30/55) |
| BST 24042 | Postharvest Technology of AgriculturalCommodities | CC | 02 | (15/30/55) |
| BST 24052 | Production Technology of Bio-ControlAgents | CC | 02 | (15/30/55) |
| BST 24062 | Productive Insects, Fungi and Algae Technology | CC | 02 | (15/30/55) |
| BST 24072 | Economic Development and Growth | FC | 02 | (30/00/70) |
| BST 24082 | Human Resources Management | FC | 02 | (30/00/70) |
| | **Total** | | **30** | |

* Hours are distinguished as (Lecture/Practical/Independent Learning) that cover over time taken for assessments.
FC-Foundation Courses, CC – Core Courses

**BST 23012, Introduction to Aquaculture** (15/30/55)
**Course Contents:** Definition and its multidisciplinary nature; History of aquaculture, its present organization and status; Objectives; Production of ornamental fishes; Comparative efficiency of aquaculture as means of protein production; Different kinds of aquaculture systems; Pond culture; Running water culture; Culture in recirculation systems; Levels and patterns of aquaculture industry: extensive, semi-intensive and intensive cultures; small-scale and large-scale aquaculture.
***Practical***: Identification of aquatic organisms; identification of internal and external anatomy of aquatic organisms; fish measurement; gut analysis of different types of fish; other culture practices; production methods; field visits.

**BST 23022, Molecular Biological Techniques** (15/30/55)
**Course Contents:** Introduction to biotechnology; Techniques in biotechnology; Recombinant DNA technology; Transcriptomic analysis: Genomic and cDNA libraries, screening methods for genomic libraries; Gene sequencing; DNA fingerprinting; Microbial biotechnology applications in agriculture; Introduction to bioinformatics; Biosafety guidelines.
***Practical*:** DNA extraction, PCR, Gel electrophoresis, Blotting techniques, recombinant DNA techniques

**BST 23032, Principles of Food Preservation Technology** (15/30/55)
**Course Content**: Sources of raw materials and their processing potential; Principles of food processing and preservation technology; Processes of unit operations; Physical and chemical preservation methods; Controlled and modified atmosphere storage; New emerging food preservation techniques; Food additives and Foodborne illness; Food sanitation and quality control; Responsibility of food scientists; Globalization and food processing.
***Practical***: Preservation of foods by using different methods; Minimal processing of fruits and vegetables; Traditional and modern methods of food processing and preservation for different food categories;

Product development; Concept of sensory evaluation; Packaging, value addition of Foods and market forces.

**BST 23042, Soil and Soil Reclamation Techniques** (15/30/55)
**Course content**: Types of soil degradation: soil erosion, salinization, acidification, fertility depletion, soil compaction, subsidence, desertification; Soil contamination and pollution; Natural and anthropogenic causes of soil degradation; Impact on the environment, society and economy; Assessment of soil degradation; Soil quality and health protection, conservation and restoration techniques and technologies.
***Practical***: Assessment of soil degradation; Soil quality protection, and restoration techniques and technologies.

**BST 23052, Fruit and Vegetable Production Technology** (15/30/55)
**Course content**: Scope and production of fruit culture in Sri Lanka; Classification of fruit crops; Nursery management and plant propagation; Orchard planning, Land preparation, Planting and soil management practices; Nutrition of fruit plants and orchard manuring practices; Moisture relations of fruit plants; Vegetable: Classification, farming system, production techniques, Processing; Off season Vegetable production; Poly-house technology for vegetable production.
***Practical***: Techniques of orchard establishment and management, vegetable production and management techniques, plant propagation, off season vegetable production, polyhouse technology.

**BST 23062, Water Management Technologies** (15/30/55)
**Course Contents**: Basics of soil–water relationship; Soil moisture availability; Crop water requirement; Estimation of field irrigation requirements; Irrigation scheduling; Irrigation efficiencies; Irrigation methods: design, operation and maintenance; Drainage techniques; Leaching requirement; Saline water irrigation; Wastewater irrigation; Storm water harvesting; Groundwater recharge.

***Practical***: Determination of soil moisture content; Field capacity; Soil water holding capacity; Soil density; Soil porosity; Water infiltration rate; Micro irrigation systems; Irrigation scheduling; Irrigation models; Wastewater treatment.

**BST 23072, Agribusiness Management** (30/00/70)
**Course content:** The role and organization of Agribusiness: Agribusiness in perspective, managing the agribusiness, the organization of Agribusiness; Agribusiness scope and economic importance: Agricultural input sector, marketing farm products; Tools for controlling agribusiness: tools for management decisions in Agribusiness; Operating the Agribusiness: Production planning, controlling production process in Agribusiness; Human Resource Management: Personnel Management, Managing human resources in Agribusiness.

**BST 24012, Waste Treatment Technologies** (15/30/55)
**Course Contents**: Introduction to solid, liquid and gaseous wastes; Types and classification of wastes; Industries and waste generation; Waste and environmental pollution; Treatment methods for solid wastes: waste recycling, landfill operation and production of landfill gas; Liquid wastes: generation, treatment system, reactors and its operation; Air pollution and prevention techniques.
***Practical***: Practical demonstration related with solid waste characterization; physical, Chemical, and biological characterization of wastewater.

**BST 24022, Bioenergy Systems** (15/30/55)
**Course Content**: Theoretical and practical portion cover the following sections: Introduction of Bio energy; Biomass Conversion Methods; Physical & thermochemical Conversion; Biomass Gasification; Bio-Methanation; Biogas for Power Generation; Biodiesel; Bio Power Plants and applications and their potential in future energy supply; Bio energy economics, policies and future R & D
***Practical***: Practical components of the above contents; Apply knowledge of bioenergy to develop and conduct a project.

**BST 24032, Nanotechnology and its Applications** (15/30/55)
**Course content**: Introduction; Types of Nanomaterials; Nanofabrication: Top down and bottom-up approaches; Nano-characterisation: Scattering, imaging and spectroscopic techniques; Carbon Nanotechnology; Nature's nanotechnology. Potential nanotechnology applications in various fields; Nano-biotechnology; Nanotechnology in Energy Conversion and Storage.
***Practical***: Nanofabrication, Scattering, imaging and spectroscopic techniques.

**BST 24042, Postharvest Technology of Agricultural Commodities** (15/30/55)
**Course Content**: Pre and Postharvest physiology of fresh produce; Maturity Indices; Postharvest handling and quality assurance of perishables; Control of post-harvest ripening of fruits; Postharvest Technology of Cut Flowers; Post-harvest handling of Fish and Meat; Postharvest practices of rice; Wheat milling; Oil seed processing.
***Practical***: Harvesting Practices; Determination of Maturity Indices; Post-harvest techniques of tuber, root and bulb crops; Post-harvest techniques of cereals, legumes, nuts and spices; Threshing and cleaning of paddy; Calculations of paddy drying; Psychrometric chart and its uses; Milling of paddy and defining the quality of milled rice.

**BST 24052, Production Techniques of Bio Control Agents** (15/30/55)
**Course Contents:** History, principles and scope of biological control; Important groups of parasitoids, predators and pathogens; Principles of classical biological control-importation, augmentation and conservation; Importation of natural enemies-Quarantine regulations; Biotechnology in biological control.
***Practical***: Mass production of quality biocontrol agents- techniques, formulations, economics, field release/application and evaluation; Successful biological control projects; analysis, trends and future possibilities of biological control

**BST 24062, Productive Insects, Fungi and Algae Technology** (15/30/55)

**Course Contents**: Importance of Apiculture and its future prospects; Introduction to sericulture, shellac insects, production and management; Mushroom cultivation in Sri Lanka; Algae Technology: Classification of algae and Cyanobacteria, Production and its uses; Commercial Products from algae and Cyanobacteria; Seaweeds and their uses; Production of biofuels from algae.

***Practical***: Production and management of selected insects; mushroom cultivation in Sri Lanka; Algae Technology.

**BST 24072, Economic Development and Growth** (30/00/70)

**Course content**: Economic growth and development; Income differences, poverty, inequality and income distribution: Physical capital; Savings and investment; Population; Human capital; Productivity, Industrialization and technology; Trade and protectionism; Government policies, property rights, institution, finance; Economic development of Asian economies.

**BST 24082, Human Resources Management** (30/00/70)

**Course content**: Introduction to Human Resource Management (HRM); Personnel management verses HRM; Consequences best and poor HRM practices; Key result areas of HRM and HRM practices; Employee Resourcing: HR planning, Job analysis, Job description and Job specification, Recruitment and selection, placement and induction; Performance Management; Compensation management; Employee Training and Development; Employee Relations; Industrial Law; Human Resource Information Systems.

### 5.1.3 Third Year of Study

| Course code | CourseTitle | Course structure | Credit/s | Hours* (L/P/IL) |
|---|---|---|---|---|
| **Semester – 5** | | | | |
| BST 35012 | Climate Resilience Agriculture | FC | 02 | (15/30/55) |
| BST 35023 | Crop Production Technologies | FC | 03 | (00/90/60) |
| BST 35032 | Energy Resources and Technology | FC | 02 | (15/30/55) |
| BST 35042 | Environmental Biotechnology | FC | 02 | (15/30/55) |
| BST 35052 | Farm Structure, Instrumentation and its Applications | FC | 02 | (15/30/55) |
| BST 35062 | Geospatial Technology | FC | 02 | (15/30/55) |
| BST 35072 | Processing Technology of Crop Commodities | CC | 02 | (15/30/55) |
| BST 35081 | Intellectual Property Rights | CC | 01 | (15/00/35) |
| **Semester – 6** | | | | |
| BST 36012 | Bioprocessing Technology | CC | 02 | (15/30/55) |
| BST 36022 | In-Vitro Culture Techniques | CC | 02 | (15/30/55) |
| BST 36032 | Production Technology of Plant Based Products | CC | 02 | (15/30/55) |
| BST 36042 | Dairy Technology | CC | 02 | (15/30/55) |
| BST 36052 | Industrial Microbiology | CC | 02 | (15/30/55) |
| BST 36062 | Processing Technology of Animal Commodities | CC | 02 | (15/30/55) |
| BST 36072 | Food Protection Systems | CC | 02 | (30/00/70) |
| BST 36081 | Agro-Industrial Development | CC | 01 | (15/00/35) |
| BST 36091 | Business Plan Development | CC | 01 | (15/00/35) |
| BST 36102 | Marketing for Small and Medium Enterprises | CC | 02 | (30/00/70) |
| | **Total** | | **34** | |

* Hours are distinguished as (Lecture/Practical/Independent Learning) that cover over time taken for assessments.
FC-Foundation Courses, CC – Core Courses

**BST 35012, Climate Resilience Agriculture** (15/30/55)
**Course content**: Impact of climate change on cropping systems, livestock systems, aquaculture and fisheries and forests.
***Practical***: Adoption of different practices to combat climate change in agriculture.

**BST 35023, Crop Production Technologies (Field Practical Training** (00/90/60)
**Course Content**: Land clearing, land preparation, soil conservation, nursery management, field planting, plant nutrient management, pest and disease management, weed management, irrigation, evaluation of plant growth, harvesting, calculation of cost of production.

**BST 35032, Energy Resources and Technology** (15/30/55)
**Course Content**: Introduction of global energy demand; Conventional energy and renewable energy; Hydropower energy plant; Solar energy and its applications; Geothermal energy; Wind energy plant; Tidal energy.
***Practical***: Provides practical knowledge through field visits.

**BST 35042, Environmental Biotechnology** (15/30/55)
**Course Contents:** Basic environmental parameters; Environmental management; Ecosystem principles; Bioremediation; Utilization of Biomass: Types of waste and their sources, Treatment, and utilization of different industries' wastes; Biotechnology of Environmental Pollutants and their control; Biomining and Bioleaching.
***Practical***: Practical components of the above contents; mini project

**BST 35052, Farm Structure, Instrumentation and its Applications** (15/30/55)
**Course content**: Farmstead planning and layout; Integrated study of farm housing; Environmental control and structural requirements of crops and livestock; Design of structural members and farm structures; Introduction to instrumentation in agricultural technology; Review: basic field and flux phenomena and relationship, D.C. and A.C.; transducers' Factors, instrument selection; Components

and control of instrumentation; Signal processing, data recording and presentation; Modes of automatic control; Special instruments for engineering, environmental control and machine deign.
***Practical***: Bernoulli's equation and momentum formula; flow in pipes and channels, flow and pressure measurements. Dimensional analysis and similitude studies.

**BST 35062, Geospatial Technology** (15/30/55)
**Course content**: Topics explored include introduction to geospatial technologies and tools, including Geographic Information Systems (GIS), remote sensing, cartography, and Global Positioning Systems (GPS), geographic information, remote sensing platforms, aerial image processing and interpretation, data collection using global positioning systems, spatial data structures, and cartographic design.
***Practical***: Geographic Information Systems, remote sensing, cartography, RS, aerial image processing and interpretation, spatial data structures, and cartographic design

**BST 35072, Processing Technology of Crop Commodities** (15/30/55)
**Course Content**: Structures and chemistry of cereals; Rice and wheat processing; Bakery technology; Extrusion products; Processing of maize, barley and rye; Processing: Millets, copra, palm kernels, coconut cream and desiccated coconut, pulses, cashew nuts, peanuts and soya bean, edible oils and spices.
***Practical***: Development of bakery products, determination of quality parameters of developed products.

**BST 35081, Intellectual Property Rights** (15/00/35)
**Course content**: Understand the significance of the concepts of 'public domain' and 'commons'; Roles of 'open source', 'open content' and 'open standards' in those developments; Intellectual Properties (IPs): Types, right of ownership and scope of protection, value creation and value extraction, Legal Aspect, Management & Strategy, Valuation; Technology Strategy & Patent Analysis; Patent Dispute Management & Strategy; Competition & IP Strategy; IP Strategy &

Open Business Model, Royalty & Damage; Case Studies: product and technology development.

**BST 36012, Bioprocessing Technology** (15/30/55)
**Course Contents:** Introduction and raw materials for bioprocessing; Upstream, processing and downstream processing; Fermentation and types of fermentation; Media formulation and sterilization of equipment; Separation of biomass; Biopharmaceuticals, Nutraceuticals and Biomaterial Compounds.
***Practical***: General principles of Bioreactor design and their operation; Bio-products and biofuels production; Production of antibiotics; Vitamins and Bioethanol.

**BST 36022, In-Vitro Culture Techniques** (15/30/55)
**Course Contents:** Introduction to plant tissues culture; Advantages and disadvantages of plant propagation under *in vitro* conditions; Nutrient medium; Role of plant growth regulators in plant tissue culture; Types of tissue cultures; Expression of somatic embryogenesis; Protoplast isolation and culture; Haploid production; Artificial seed production; Application of plant tissue culture in crop improvement.
***Practical***: Laboratory facilities for plant tissue culture; Sterilization methods used in plant tissue culture; Preparation of culture medium; Establishment of cultures; Synthetic/Artificial seed preparation.

**BST 36032, Production Technology of Plant-Based Products** (15/30/55)
**Course Contents**: Latex technology: rubber latex harvesting, compounding vulcanization, shaping and related processes, tires and other rubber products, papaya latex production and processing of papain; Aroma technology and production of pharmaceuticals from medicinal plants; Fibre treatment processes: extraction, chemical and physical properties, manufacturing, and quality specifications.
***Practical***: Latex: harvesting techniques, latex properties, compounding, production of techniques of rubber products; Preparation of dried papain; Fibre: physical properties, extraction of

coir fibre, production of techniques of coir products; Extraction of essential oil, formulation of flavours and fragrances.

**BST 36042, Dairy Technology** (15/30/55)
**Course Content**: Importance of understanding of chemical and physical properties of milk; General introduction to milk and dairy products; Classification of dairy products; Microbiology of milk; Fermented dairy products; Functional dairy products; General aspects of milk processing.
***Practical***: Determination chemical and physical properties of milk; Microbiology of milk; Development of different types of dairy products.

**BST 36052, Industrial Microbiology** (15/30/55)
**Course Contents**: Introduction in Microbiology; Classification of Microorganisms in the application field; Microorganisms in Agriculture field; Microorganisms in Wastes and Pollutants treatments; Microorganisms in Food Industry; Microbial production of metabolites as inputs in other processes; Microbial production of commodities of medical importance; Microorganisms in Genetic improvements.
***Practical:*** Practical component of the above topics.

**BST 36062, Processing Technology of Animal Commodities** (15/30/55)
**Course content**: Fish**:** Processing, preservation, spoilage, postharvest handling; Product development; Fish Protein Concentrate; Chitin, Shark fin rays, Products from krill; Food regulations relating to fish products; Utilization of seaweeds; Meat**:** Introduction, quality of poultry meat; Slaughter house management and slaughtering farm animals; Meat composition, colour and flavour; Poultry and its products: Composition and nutritive value; Egg products: processing, storing; Contamination; Brief overview of Mutton, Pork and Beef Industry.
***Practical***: Post-harvest handling; Preservation of Fish; Product development; Value added products; Fermented fishery products;

Chitin, Shark fin rays; Diversified fish products from krill; Egg products: processing, storing; Meat Processing; Preservation; Value addition.

**BST 36072, Food Protection Systems** (30/00/70)
**Course Content:** Adulterants and Chemical Contaminants; Food Poisoning; International and national food standards; National food laws, regulations, guidelines and specifications, regulatory systems; Quality assurance, GMP, HACCP, ISO, and laboratory accreditation; Transport, cleaning, and storage of raw materials; Storage pests, fumigation and disinfection; Protection of food from pests; Sensory Evaluation of Foods; Food Packaging; Quality Retention at marketing; Study report on problems in food protection measures of the food industry.

**BST 36081, Agro-Industrial Development** (15/00/35)
**Course content**: Importance, evolution, factors involved in the development, factors affecting utilization of agricultural products; Consumer product development: Types, functions, quality and networks in the local and international markets; Specification of quality raw material, Products and process control of consumer products; Markets of consumer products; Behaviours and requirements of consumers: product quality, status and situation of consumers and products; Convenient foods, fast foods and franchised products; Agro-industry management; Application of operation research techniques to solve the problems in agro-industry.

**BST 36091, Business Plan Development** (15/00/35)
**Course content**: Introduction: overview and outline of the business plan, pricing, distribution, sales strategy, and revenue potential; Competition: Competitor, success factor, distinctive competence, competitive strategies, barriers to entry, value chain; Development plans for technical products, market, organization, schedule, budgets and controls; Operations and management: Organization, operation expenses, capital requirements, cost of goods model, Business promotion strategies.

**BST 36102, Marketing for Small and Medium Enterprises** (30/00/70)

**Course content**: Micro and macro approaches to agricultural marketing; Marketing definitions, channel, economic integration, market environment, price discovery, marketing efficiency; Government intervention in marketing system; Government policies: regulatory and facilitative policies, S-C-P model; Farmer organizations, marketing orders and agreements, cooperative marketing; Derived demand for agric-products, marketing margins; Market strategies.

### 5.1.4 Fourth Year of Study

| Course code | CourseTitle | Course structure | Credit/s | Hours* (L/P/IL) |
|---|---|---|---|---|
| **Semester – 7** | | | | |
| BST 47012 | Life Cycle Assessment | CC | 02 | (30/00/70) |
| BST 47022 | Water-Energy-Food Nexus | CC | 02 | (30/00/70) |
| BST 47031 | International Trade | CC | 01 | (15/00/35) |
| BST 47042 | Industrial Training/ In-PlantTraining | CC | 06 | 6 months |
| **Semester – 8** | | | | |
| BST 48012 | Research Methodology | CC | 02 | (30/00/70) |
| BST 48026 | Research Project | CC | 06 | (600 NLH) |
| | **Total** | | **19** | |

* Hours are distinguished as (Lecture/Practical/Independent Learning) that cover over time taken for assessments. CC – Core Courses

**47012, Life Cycle Assessment** (30/00/70)
**Course content**: Introduction of life cycle assessment; Benefit of LCA approach; Structure of LCA: goal, scope and functional unit; Life cycle inventory; Computational structure of life cycle inventory; Impact assessment; Life cycle interpretation; Introduction of LCA software; Relationship of LCA to other assessment techniques.

**BST 47022, Water-Energy-Food Nexus** (30/00/70)
**Course Content**: The need for the nexus approach; Evolution of the nexus as a policy and development; The nexus contribution to better water management and its limitations; Dynamic, cross-sectoral analysis; Investigating an emerging paradigm; Urban nexus and integrated approach for SDGs; Modelling WEF Nexus; Water-Energy-Food (WEF) Nexus and sustainable Development.

**47032, International Trade** (30/00/70)
**Course content**: Economic perspective: trade and economic growth/development, theory of comparative advantage, effects of impediments to trade; Trade and Sri Lankan economy: Direction of trade, trading partners, Trade policies, Balance of trade, Exchange Rates; Institutions of International Trade; Overview of International Business: International Business operations: Reasons, Country evaluation and selection, Collaborative arrangements, Control Strategies.

**47042, Industrial Training/In-Plant training** (6 months)
**Course content**: An industrial training produces the culmination of the industrial work and provides opportunities for students to plan, complete, interpret, and report industrial experience in a formal structure that lends a relatively uniform appearance to work completed in the industry. The work should be evaluated with a written description of the study in the form of Industrial Training Report. A viva-voce will also conducted to evaluate the training.

**BST 48012, Research Methodology** (30/00/70)
**Course content:** Introduction; Research and research process; Importance of research; Research ethics and integrity; Qualitative and quantitative research; Analysis and interpretation of data; Writing the proposal and reports; Finding and reviewing the literature; Structure and components of research report.

**48026, Research Project** (600 NLHs)
**Course content**: Students should undertake a research project. After completion of the project, project dissertation will be evaluated at the examination along with a viva-voce presentation. Students will be evaluated based on the Proposal Presentation, student progress, Project dissertation, Project Presentation /viva –voce.

## 5.2 Department of Multidisciplinary Studies

### 5.2.1 First Year of Study

| Course code | CourseTitle | Course structure | Credit/s | Hours* (L/P/IL) |
|---|---|---|---|---|
| **Semester – 1** | | | | |
| MDS 11012 | Fundamentals of Chemistry | FC | 02 | (15/30/55) |
| MDS 11022 | Fundamentals of Physics | FC | 02 | (15/30/55) |
| MDS 11031 | Basic Mathematics | FC | 01 | (15/00/35) |
| MDS 11042 | Fundamentals of Information and Communication Technology | FC | 02 | (15/30/55) |
| MDS 11051 | English for Technology-1 (Basic English Grammar/ Language Structure) | AC | 01 | (15/00/35) |
| MDS 11061 | Social Harmony | AC | 01 | (15/00/35) |
| **Semester – 2** | | | | |
| MDS 12011 | Basic Statistics | FC | 01 | (15/00/35) |
| MDS 12021 | Macroscopic Physics | FC | 01 | (15/00/35) |
| MDS 12032 | English for Technology-II (English-Level I: Reading and Listening Skills) | AC | 02 | (30/00/70) |
| MDS 12041 | Career Development-I | AC | 01 | (00/30/20) |
| | **Auxiliary (NGC)** | | **05** | |
| | **Total** | | **14** | |

* Hours are distinguished as (Lecture/Practical/Independent Learning) that cover over time taken for assessments.
FC-Foundation Courses, CC – Core Courses, AC – Auxiliary Courses
**Auxiliary** courses (AC) are Non-GPA courses (NGC).

**MDS 11012, Fundamentals of Chemistry** (15/30/55)
**Course content**: Basic concepts; Atoms and atomic masses; Electronic Configuration of the Atoms; Chemical bonding; Formula calculations; Chemical reactions; Net ionic equations; Molarity' Gases,

solids, Liquids, Energies of physical and chemical changes; Solutions, Oxidation numbers; Chemical equilibrium; Acid-base theory; Organic chemistry; Inorganic Analysis: Quantitative and Qualitative Analysis
***Practical***: Acid-Base titrations; Determination of the molarity; Inorganic Analysis: Quantitative and Qualitative Analysis; Standard solution preparation, dilution and pH value determination.

**MDS 11022, Fundamentals of Physics** (15/30/55)
**Course content**: Physical World and Measurement, Kinematics, Laws of Motion, Work, Energy and Power, Motion of System of Particles and Rigid Body, Properties of Bulk Matter, Thermodynamics, Oscillations and Waves, Current Electricity, Optics.
***Practical*:** Vernier Caliper, Micrometer Screw Gauge, Spherometer, Simple Pendulum, Surface Tension of Water, Resonance Tube, Modulus, Archimedes' Principle, Ohm's Law.

**MDS 11031, Basic Mathematics** (15/00/35)
**Course content**: Basic shapes, calculations of surface area, Equation of straight lines, circle and parabola, Common mathematical series, matrices, limits of functions, differentiation, integration, numerical methods, Application of differentiation and integration in Agriculture.

**MDS 11042, Fundamentals of Information and Communication Technology** (15/30/55)
**Course content**: Overview of computer systems, architecture and organization; other essential network and interface systems; Interaction between components; Coverage of digital systems and binary representations of data; Introduce basic logic gates and binary and hexadecimal representation; Hardware in practice.
***Practical***: study of purchasing a modern personal/laptop computer; Overview of computer software: Process of executing a program, Linkage of computer hardware to software, Basics of Operating Systems; Internet and E-mail; Networking for effective communication.

**MDS 11051, English for Technology-1 (Basic English Grammar/ Language Structure)** (15/00/35)

**Course content**: Find Words - head words, compound words, derived words, inflexions, prefixes and suffixes, phrasal verbs, idioms and phrases; exercises for practice. Understanding Grammar - parts of speech; syntax - verbs and nouns, phrasal verbs, adjectives, adverbs; exercises. Usage - formal and informal, written and spoken words, usage notes exercises. Pronunciation -Identifying sounds, accent and stress; exercise. Reference skills - making notes, making mind maps, taking notes.

**MDS 11061, Social Harmony** (15/00/35)

**Course content**: Scope & Nature of Social harmony- What is social harmony, defining social harmony, Related terms and different connotation for Social harmony; Multi Culture and Pluralism; Co-existence and ethnic harmony; Elements for Social disharmony- Conflict and conflict resolution- What is Peace-Definition, Peace making Process, Reconciliation; Role of Education in achieving social harmony; Human Values; Role of civil Society in peace making.

**MDS 12011, Basic Statistics** (15/00/35)

**Course content**: Basic principles of sampling; Measures of central tendency and dispersion; Frequency distribution; Probability distributions and probability density distribution; Density function; Normal distributions: t and F; Concept of hypothesis testing: one sample and two sample cases; Introduction to analysis of variance; Studying linear relationships: simple linear regression and correlation.

**MDS 12021, Macroscopic Physics** (15/00/35)

**Course content**: Solids: Concept of Elasticity, Elastic Stress and Strain; Types of Stress and Strain, Hook's law and the Elastic Modulus, Young's Modulus, Bulk Modulus, Rigidity Modulus or Shear Modulus; Fluid Mechanics: Buoyancy Force, Archimede's Principle, Fluid flow, Steady (Stream Line or Laminar) Flow and Turbulent Flow; Newton's Formula and Coefficient of Viscosity; Steady flow of Liquid through

horizontal uniform tube; Poiseuille's formula, Bernoulli's Principle and its applications, Reynold's Number, Stoke's Law, Terminal Velocity of a falling sphere.

**MDS 12032, English for Technology-II (English-Level I: Reading and Listening Skills)** (30/00/70)

**Course content**: Use of textbooks and training materials, supplementary materials in the field of major study; Develop the necessary skills in reading and listening; Using related materials in class, linked to the topic areas studied; Topic-based self-access resources and dictionaries; Training to listen different tongues in the English-speaking world in a given situation.

**MDS 12041, Career Development-I** (00/30/20)

**Course content**: Introduction to Career Development; Personal responsibility for self-development; Current and emerging trends in the local and overseas job markets for graduates; Forces driving the new economy and ways to capitalize on available opportunities; Making the best of opportunities to university students for career development; Effective transition from school to the university; Self-evaluation of students' awareness, attitudes and attributes; Effective study skills and motivated goal-directed learning; Personal organization and life management; Programming for future success.

### 5.2.2 Second Year of Study

| Course code | CourseTitle | Course structure | Credit/s | Hours* (L/P/IL) |
|---|---|---|---|---|
| **Semester – 3** | | | | |
| MDS 23012 | Design Technology | FC | 02 | (15/30/55) |
| MDS 23021 | Workshop Technology | FC | 01 | (00/30/20) |
| MDS 23032 | English for Technology-III (English-Level II: Writing and Speaking Skills ) | AC | 02 | (30/00/70) |
| MDS 23041 | Career Development-II | AC | 01 | (00/30/20) |
| **Semester – 4** | | | | |
| MDS 24012 | English for Technology-III (Level III: Scientific writing and Presentation Skills) | AC | 02 | (30/00/70) |
| | **Auxiliary (NGC)** | | **05** | |
| | **Total** | | **08** | |

* Hours are distinguished as (Lecture/Practical/Independent Learning)that cover over time taken for assessments.
FC-Foundation Courses, CC – Core Courses, AC – Auxiliary Courses
**Auxiliary** courses (AC) are Non-GPA courses (NGC).

**MDS 23012, Design Technology** (15/30/55)

**Course content**: Examines design theory and practice; Factors affecting designing and design projects; Design and production processes; Impact of a range of design and technology activities in the development projects; Techniques in creative and collaborative approaches in designing and producing; User-center design (UCD), Uses design processes in the development and production of design solutions; Design solutions: Effective and safety resources; Evaluates the processes and outcomes of designing and producing.

***Practical*:** User-center design (UCD), Design solutions: design processes in development and production; Effective and safety resource using in the development and production; Evaluates the processes and outcomes of designing and producing.

**MDS 23021, Workshop Technology** (00/30/20)
**Course content**: Introduction to WT; General safety considerations; Hand Working Operations; Measuring and gauging; Drills and drilling processes; Machine tools; Material properties; Sheet metal works; Forging practice and metal Joining.

**MDS 23032, English for Technology-III (English-Level II: Writing and Speaking Skills)** (30/00/70)
**Course content:** Paraphrasing; Making quotations; Referring to sources; Expressing reasons and explanations/cause and effect; Describing a sequence of events/time relations; Punctuation–I; Writing introductions and conclusions.

**MDS 23041, Career Development – II** (00/30/20)
**Course content**: Understanding organizations and how they function**;** Understanding leadership and its role in modem organizations**;** Understanding effective team work**; C**oncept of emotional intelligence**.**

**MDS 24012, English for Technology-III (Level III: Scientific writing and Presentation Skills)** (30/00/70)
**Course content**: Describing a place, descriptive essay, formal letters, Deliver a speech, Debate, Seeking information, Use idiomatic expressions, research article and construct questions and finding out the answers, letter writing, Dialog.

### 5.2.3 Third Year of Study

| Course code | CourseTitle | Course structure | Credit/s | Hours* (L/P/IL) |
|---|---|---|---|---|
| **Semester – 5** | | | | |
| MDS 35012 | Information Transfer | FC | 02 | (15/30/55) |
| MDS 35022 | Career Development III | AC | 02 | (30/00/70) |
| | **Auxiliary (NGC)** | | **02** | |
| | **Total** | | **04** | |

* Hours are distinguished as (Lecture/Practical/Independent Learning)that cover over time taken for assessments.
FC-Foundation Courses, AC – Auxiliary Courses
**Auxiliary** courses (AC) are Non-GPA courses (NGC).

**MDS 35012, Information Transfer** (15/30/55)
**Course content:** Introduction to communication and communication system; Review of the communication process; Information Communication Technology (ICT): Definition, basic concepts, formal and informal communication, fact gathering techniques, data and information, recording and analysing the data and information; Content creation and management tools: features and uses of computers, cameras, smartphones, audio and video recorders, blogs, RSS Dropbox/Sugar sync.; Online and multimedia Journalism; Citizen and Participatory Journalism; Social Media
***Practical*:** Fact gathering techniques, data and information, recording and analysing the data and information, Content creation and management tools, Content creation and management tools: features and uses of computers, cameras, smartphones, audio and video recorders, blogs, RSS Dropbox/Sugar sync.

**MDS 35012, Career Development-III** (30/00/70)
**Course content**: Course will create awareness on prevailing trends in the world of work and lay the foundation and entering the "world of work".

# 6. Additional Facilities

## 6.1 The Library

The library network of the Eastern University comprises the Main Library and the branch library for the Faculty of Health-Care Sciences, Trincomalee Campus and the Institute library of SVIAS. There is a diverse collection of information resources in the libraries, especially in terms of the breadth and depth of coverage.

The collection is multi-disciplinary, composing a variety of subjects related to the Departments and the full range of services is provided including loans, inter-library loans, references, and advisory services. The collection books are arranged using Dewey Decimal Classification (DDC) system. Anglo American Catalog using rules and regulations are used to catalog the collection. In addition to the books, the library collects project reports of the students and staff, research papers, conference proceedings, audio-visual materials, past papers *etc.* The library collects its resources in three sections namely References, Lending, and Periodical. At present, the library is actively involved in developing the e-information provisions (http://lib.esn.ac.lk).

**Rules and Regulations**

- No Bags, Files, Briefcases, Parcels, Hats or Umbrellas are to be brought into the library. They may be kept on the shelves at the entrance to the library.
- No valuable article or cash should be kept in the shelves at the entrance. The library will NOT hold itself responsible for any losses.
- Silence is to be observed in the library.
- Smoking, the consumption of food and drink, and the use of matches or open lights are forbidden in all parts of the library.
- No reader may reserve a seat in the library. Joint work is not permitted inside the library.
- Books not accessible on the shelves should be requested for at the circulation desk.

- Readers should not replace books on the shelves but should leave them on a table.
- When taking any books or papers out of the library such materials must be produced for inspection by Library Staff, if required.
- Any Reader stealing or knowingly removing Library Materials will be liable to a suspension from borrowing. He/she is also liable to be reported to the Vice-Chancellor for disciplinary action.
- No book may be taken out of Sri Lanka without the permission of the Librarian.
- No reader shall misuse, damage or without permission remove any equipment of furniture belonging to the library.
- Any disorderly of improper conduct or breach of the regulations will render the reader or borrower concerned liable to suspension from the use of the library.
- Permission to use the library is given on condition that regulations of the library will be strictly observed. Readers are presumed to know them and to have undertaken to observe them.

### 6.2 Department of English Language Teaching (DELT)

The DELT was set up for the specific purpose of imparting English to the undergraduates who enter the University with varying levels of proficiency in English with a view to improving their knowledge of English to enable them to follow the courses and read the literature in English in their chosen disciplines. The ELTU is therefore endeavoured to impart sufficient knowledge in English in order that the students would be able to read, comprehend and collect facts from textbooks in English and other sources like electronic media, the internet in their subjects of study.

The ELTU also conducts an intensive course during which, the effort is directed towards improving general proficiency in English and the aspects taught include grammar and different language skills such as reading, writing, and speech. The latter part of the intensive course is geared towards the development of skills to comprehend and reproduce subject material related to their field of study. A special

selection of books on a variety of topics is made available and inducement is provided to instil the reading habit among students.

### 6.3 Centre for Information and Communication Technology (CICT)

The CICT is catering to the needs, not only the University but the Eastern Region as well. It provides adequate opportunities for students to acquire ICT skills and provide ICT related technical assistance to the university. The CICT is offering Computer Literacy and Application courses and conducting practical classes. CICT provides computer laboratory facilities for courses conducted by all faculties in the main campus and also provides access for students for computer usage (internet browsing, LMS, library resources, etc.). Students are provided with personal email account.

The Unit is conducting extension courses in Computer Science for school leavers and Government Officers and others. A campus wide fibre optical backbone has been established to connect all Faculties, Library and Administrative building and Servers have been installed to provide various facilities including Internet access to the University Community.

### 6.4 Career Guidance Unit (CGU)

The Career Guidance Unit (CGU) was established in the Eastern University, Sri Lanka in 2004and it is addressed through core curriculum as well as through tailor-made programmes.

- To develop relations between the University and Employment Sector in a mutually beneficial way.
- To help undergraduates to choose and proceed with an optimal career based on the student's ability, desire, and available opportunities.
- To help undergraduates obtain an orientation to the employment sector and develop Transferable skills such as Effective Communication skills, Leadership skills, Teamwork skills and Managerial skills so that they will become productive and efficient members of the workforce.

- To liaise with private and public sector organizations to find out about existing job opportunities, bring them to the notice of graduates and direct the most suitable applicants to the organization.

Career Guidance Unit of Faculty and the University organize several programmes to provide an opportunity for the prospective employees to meet the employers and to explore potential career opportunities.

### 6.5 Students Hostels

Several hostels are available. A warden is in-charge of each hostel and in addition, there are residential and part time sub-wardens to attend to hostel matters of students. The students are advised to meet the wardens and the sub-wardens in all matters related to the activities in the hostels.

### 6.6 University Health Centre

A university health service is available to staff and students of the university to receive immediate medical assistance. Students who fall sick report to the Health Centre for treatment and they will be given a reference number to future references.

### 6.7 Physical Education (Sports facilities)

All sports activities are managed by the PEU, which is guided by the Sports Advisory Board. The PEU is responsible for the organization and administration of Physical Education and recreational programmes of the University. Therefore, the students are encouraged to make the best use of the facilities and participate in sport activities. Inter-Faculty tournaments, Inter-University tournaments are conducted every year. The Mini-Olympics Competitions are held every three years. University Colours are awarded to sportsmen and sportswomen performing well at recognized tournaments and meets approved by the Sports Advisory Board. A gymnasium is available for indoor games.

### 6.8 Financial Assistance

The Mahapola scholarship programme and Bursary scheme are the two major sources that provide financial assistance to the university students.

### 6.9 Banking Facilities

Branches of People's Bank and Bank of Ceylon are in operation with ATM services within the university premises. Students can receive their Mahapola and Bursary instalments through these banks. Students are advised to make transactions to the university through these banks.

### 6.10 Cafeteria Services

Canteens are in operation to meet the need of the students where the students shall obtain meals at reasonable prices.

### 6.11 Students' Counselling

A student Counselling Services organized in universities to help new students with this transition into the University system and to provide guidance throughout the University life. Student Counsellors of the faculty can be consulted to help solve any problems such as campus life, academic, administrative, financial or personal. Each Faculty has one or more Student Counsellors. There is a Senior Student Counsellor who is in overall charge of all students counselling activities.

### 6.12 Students' Identity

All registered students will be given an Identity Card and Student Record Book. The students are advised to produce his/her identity card when requested by any officials of the university and while attending to officials matters in the university. The Records of the examinations are maintained by the Senior Assistant Registrar/Examinations or Assistant Registrar of the Faculty in the student Record Book.

### 6.13 Gender Equity and Equality Cell (GEE Cell)

EUSL is committed to the promotion of gender equity and equality and women's empowerment where all students, academic, administrative and supportive staff, female and male, enjoy equal opportunities,

human rights, and free from all forms of discrimination ad harassments. As such members of the university community have the responsibility of ensuring that it is free from gender inequity and Sexual and Gender Based Violence (SGBV). The university developed a grievance mechanism to address the issues of the community of the EUSL.

### 6.14 Post Office

The post office, for the use of staff and students of the university, is situated within the university premises. It opens from 8 am to 4 pm.

### 6.15 Religious Entities

All ethnic groups of staff and students have the access for their religious worships places within the university premises. The EUSL has Hindu and Buddhist temples, Mosque and Church.

# 7. Examination Rules, Offences, Punishments and Legal Procedures

Regulations made by the Senate of the Eastern University, Sri Lanka under section 29, 45 and 46 of the Universities Act No.16 of 1978 as amended by the Universities (Amendment) Act No. 7 of 1985, are applicable for all the Examinations conducted by the Faculty of Technology, Eastern University. Following regulations are cited as the Examination Procedures, offences and Punishment Regulation No. 1 of 1989, effective from July 1989. In addition to that the Senate of the EUSL approved a "Manual of Procedure on Conducting Examinations, Eastern University, Sri Lanka", which in detail indicating the Examination Rules and Regulation (Chapter XI), Examination Offences and Punishments (Chapter XIII).

## 7.1 Examination Rules

1. **Attendance**: A candidate is expected to be outside the Examination Hall at least 15 minutes before the commencement of each paper, but shall not enter the Hall until she/he is requested to do so by the Supervisor.
2. **Seating**: On admission to the Hall, a candidate shall occupy the seat allotted to him/her and shall not change it except on the specific instructions of the Supervisor.
3. **Admission to Hall**: A candidate shall not be admitted to the Examination Hall after the expiry of 30 minutes from the commencement of the Examination. A candidate shall not be allowed to leave the hall until 30 minutes has lapsed from the commencement of the Examination or during the last 15 minutes of the paper.
4. **Student Record Book/Student Identity Card**: A candidate should have his/her student record book/student identity card and the admission card with him/her in the examination hall on every occasion he/she presents himself/herself for a paper. His/her candidature is liable to be cancelled if he/she does not

produce the student record book/student identity card and admission card when requested to do so. If he/she fails to bring his/her student record book/ student identity card and the admission card, he/she shall sign a 'declaration in respect of the paper for which he/she had not produced the student record book/student identity card or admission card in the form provided for it, and produce the student record book/ student identity card and/or admission card on the next occasion when he/she appears for the examination.

If it is the last paper or the only paper he/she is sitting, he/she shall produce the student record book/student identity card to the Registrar or the relevant Senior Asst. Registrar/Assistant Registrar within the next three working days. If a candidate loses his/her student record book/student identity card or admission card during the examination period, he/she shall obtain a duplicate of student record book/student identity card/admission card as the case may be from the Registrar or relevant Senior Asst. Registrar/Asst. Registrar for production at the Examination Hall.

5. **Items should not Bring into the Examination Hall**: A candidate shall not have on his/her person or in his/her clothes or on the admission card, time table, student record book/student identity card, any notes signs or formulae *etc.* except items that are permitted. Books, notes parcels, handbags etc. which a candidate has brought with him/her should be kept at a place indicated by the Supervisor/ Invigilator.
6. **Declaration of Articles in Possession**: A candidate may be required by the Supervisor to declare any item, in his/her possession or person.
7. **Articles Candidates May Bring**: A candidate shall bring his/her own pens, ink, mathematical instruments, erasers, pencils or any other approved equipment or stationery which he/she has been instructed to bring. The use of a calculator will be permitted only for papers that contain a rubric to that effect.
8. **Examination Stationary and University Properties**: Examination stationery (i.e. writing paper, graph paper, drawing papers, ledger paper, etc.) will be supplied at the Examination Hall

as and when necessary. No sheet of paper or answer book supplied to a candidate may be town, crumpled, folded or otherwise mutilated. No papers other than those supplied to him/her by the Supervisor/Invigilator shall be used by the candidates. All material supplied, whether used or unused, shall be left behind on the desk and not removed from the examination hall.

9. **Index Number**: Every candidate shall enter his/her index number on each answer book and on every continuation paper. He /She shall also enter all necessary particulars as required.

   A candidate who inserts on scripts an index number other than his/her own is liable to be considered as having attempted to cheat.

   A script that bears no Index number or has an Index number which cannot be identified is liable to be rejected.

   No candidate shall write his/her name or any other identifying mark on the answer script.

10. **Conduct**: Every candidate shall conduct himself/herself in the Examination Hall and its precincts as not to cause disturbance or inconvenience to the supervisor or his staff or other candidates. In entering and leaving the hall, he/she shall conduct himself/herself as quietly as possible. A candidate is liable to be excluded from the Examination Hall for disorderly conduct.

11. **Copying**: No candidate shall copy or attempt to copy from any book or paper or notes or similar material or from the scripts of another candidate. A candidate shall neither help another candidate nor obtain help from another candidate or any other person. A candidate shall not conduct himself/herself so negligently that an opportunity is given to any other candidate to read anything written by him/her or to watch any practical examination performed by him/her. No candidate shall use any other unfair means or obtain or render improper assistance at the examination. If any candidate was found to have copied from another candidate by an examiner at the time of marking, he/she would be treated as having committed a punishable offence.

12. **Cheating**: No candidate shall submit a practical book or field book or dissertation/thesis or project study or answer script which has been prepared wholly or partly by anyone other than the candidate himself/herself.
13. **Maintenance of Silence**: Absolute silence shall be maintained in the Examination Hall and its precincts. A candidate is not permitted for any reason what so ever to communicate or to have any dealing with any person other than the Supervisor/invigilator. The attention of the Supervisor/Invigilator shall be drawn by the candidate by missing his/her hand from where he/she is seated.
14. **Impersonation**: No person shall impersonate a candidate at the examination, nor shall any candidate allow himself/herself to be impersonated by another person.
15. **Unauthorized Assistance**: Any candidate receiving unauthorized assistance from any person shall be deemed to have committed an examination offence.
16. **Under Supervisor's Authority**: Candidates are under the authority of the Supervisor and shall assist him/her by carrying out his/her instruction and those of the invigilators during the examination and immediately before and after it.
17. **Rough Work to be cancelled:** All calculations and rough work shall be done only on paper supplied for the examination, and shall be cancelled and attached to the answer script. Such work should not be done on any other material. Any candidate who disregards these instructions runs the risk of being considered as having written notes or outline of answers with the intention of copying.
18. **Unwanted Parts of Answers to be Crossed Out**: Any answer part of an answer which is not to be considered for the purpose of assessment, shall be neatly crossed out. If the same question has been attempted in more than one place the answer or answers that are not to be considered shall be neatly crossed out.
19. **Stopping Work**: Candidates shall stop work promptly when ordered by the Supervisor/Invigilator to do so.
20. **Handing Over the Answer Scripts**: Every candidate shall hand over the answer script personally to the Supervisor/Invigilator, or remain in his/her seat until it is collected. On no account shall a

candidate hand over his/her answer script to an attendant, a minor employee or another candidate.

21. **Leaving the Hall**: During the course of answering a question paper, candidate shall be permitted to leave the Examination Hall temporarily, in case of an emergency. The Supervisor/Invigilator may grant him/her permission to do so but the candidate will be under his/her surveillance.
22. **Contact Persons with Respect to Examination Matters**: No candidate shall contact any person other than the Vice-Chancellor, Dean, Head of the Department, the Registrar or the relevant Senior Assistant Registrar/Asst. Registrar regarding any matter.
23. **Absence from Examination**: When a candidate is unable to present himself/herself for any part/section of an examination, he/she shall notify or cause to be notified this fact to the Dean of the Faculty and relevant Senior Asst. Registrar or Asst. Registrar immediately. This should be confirmed in writing with supporting documents by registered post within two weeks.
24. **Cancellation/Postponement**: If circumstances arise which in the opinion of the Supervisor render the cancellation or postponement of the examination necessary, he/shall stop the examination, collect the scripts already written and then report the matter as soon as possible to the Vice – Chancellor/Registrar.
25. **Making of Statements:** The Supervisor/Invigilator is empowered to require any candidate to make a statement in writing on any matter which may have arisen during the course of the examination and such statements shall be signed by the candidate. No candidate shall refuse to make such a statement or to sign it. If such a candidate refuses to make a statement or refuses to sign it, the Supervisor/Invigilator shall make his/her own statement and report the matter to the Vice-Chancellor/Registrar.
26. **Withdrawal**: Every candidate who registers for an examination shall be deemed to have sat the examination unless he/she withdraws from the examination before the commencement of the examination. He/she should submit a medical certificate in support of his/her absence, prior to the commencement of the examination. If such a document cannot be submitted before the

commencement of the examination, a candidate shall inform of his/her inability to attend the examination to the Dean of the Faculty within 7 days after the commencement of the examination. The medical certificate shall confirm to the Senate regulations.

27. **Eligibility for Honours:** A student who withdraws or absents himself/herself from any degree examination shall not be eligible for honours at a subsequent examination unless the Senate/Council decides otherwise.
28. **Eligibility to Continue to Sit:** No student shall sit an examination, if he/she has exhausted the number of attempts that he/she is allowed to sit that particular examination, unless he/she has been granted special permission to do so by the Senate.
29. **Exceptional circumstances:** Under exceptional circumstances the Supervisor in consultation with the Vice-Chancellor/Registrar or Dean of the Faculty (concerned may use his discretion in the enforce).

## 7.2 Examination Offences and Punishments

1. **Possession of Unauthorized Documents**: Any candidate who violates Examination Rule 5 shall be deemed guilty of the offence of possession of unauthorized documents and his/her candidature for that examination shall be cancelled and he/she shall be prohibited from sitting any examination of this University for a period of **Two** academic years.
2. **Copying**: Any candidate who violates Examination Rule 7 or 8 shall be deemed guilty of the offence of copying and therefore his/her candidature shall be cancelled from that examination and he/she shall be prohibited from sitting any examination of this University for a period of **three** academic years.
3. **Cheating**: Any candidate who violates examination Rule 8 shall be deemed guilty of the offence of having cheated at the examination and his/her candidature for that examination shall be cancelled and to be prohibited from sitting any examining of this University for a period varying from **3-5** academic years.
4. **Removal of Stationery**: Any candidate who is detected removing examination stationery and other material provided for the

examination (Rule 10) shall be deemed guilty of an examination offence and his/her candidature for that examination shall be cancelled and he/she shall be liable to be prohibited from sitting any examination of this University for a period of **Two** academic years.

5. **Disorderly Conduct**: Any candidate who violates any one or more of the rules in 6,15,16,17,18 and 19 shall be deemed guilty of the offence of disorderly conduct and his/her candidature shall be cancelled from that examination and he/she shall be prohibited from sitting any examination of this University for a period of **Two** academic years.
6. **Impersonation**: Any candidate who violates examination Rule 19 shall be guilty of the offence of impersonation and his/her candidature for that examination shall be cancelled and he/she shall be prohibited from sitting any examination of this University. Impersonator/s may also be liable to any punishment under the Criminal Law. In the event the impersonator is found to be a graduate of this University, his/her degree shall be withdrawn.
7. **Unauthorized Assistance**: Any candidate who violates Examination Rule 20 shall be guilty of an examination offence and his/her candidature for that examination shall be cancelled and he/she shall be prohibited from sitting any examination of this University for a period of **1-3** academic years.
8. **Aiding and Abetting**: Any candidate found aiding and abetting in the commission of any of the above examination offences shall be deemed to have committed that offence and shall be punished in respect of the offence in accordance, with the provisions of the relevant section.
9. **Other Offences**: Any other offence which is not covered in the above sections alleged to have been committed by a candidate and reported to the relevant authority by a Supervisor or Examiner shall be inquired into and appropriate action was taken.

## 7.3 Legal Procedures for Violation of Examination Rules

1. There shall be an Examinations Disciplinary Committee of not less than 03 members of whom at least one member is from outside the Faculty, appointed for each case by the dean of the respective Faculty to inquire into of make recommendation (including punishments) on examination offences report to it.
2. In all cases of violation of examination rules detected by the Supervisor he/she shall take action and forward his/her report to the Registrar.
3. In cases of disorderly conduct the Supervisor shall in the first instance warn the candidate to be of good behaviour. Disorderly conduct shall be considered grave, only if such conduct in the opinion of the Supervisor is considered as causing a disturbance in the conduct of the Examination. Where the candidate persists in unruly or disorderly conduct and the Supervisor is of opinion that it was creating a disturbance in the conduct of the examination shall exclude the candidate from the examination hall and issue him/her a letter with the copy to the relevant Dean/Senior Assistant Registrar/Assistant Registrar, cancelling his/her candidature from the examination.
4. In all other cases of examination offences detected, the Supervisor shall send a report to the relevant Dean along with any materials taken into custody. Materials taken into custody shall be authenticated by placing the signatures of the candidate and the Supervisor/Invigilator and the date, time and place of detection. The supervisor's report should be countersigned by one of the invigilator.
5. The Dean after preliminary inquiry shall place all reports of examination offences submitted by the Supervisors for action of the relevant Examination Disciplinary Committee for further action.
6. Supervisor, Examiner, Head of Department, or any other official of the University who detects an examination offence, shall report the matter in writing to the Dean, who shall after preliminary inquiry submit his findings to the relevant Examination

Disciplinary Committee for further action.

7. The punishments recommended by the Examination Disciplinary Committee shall be submitted to the relevant Faculty Board for the decision shall be refers to the Senate for ratification.

## 7.4 Appeals Board

There shall be an Appeal Board, consisting of three members, appointed by the Vice-Chancellor to consider appeals regarding the decision referred to in Section 7.3.7 above. Any student on whom a punishment has been imposed may, within a period of 2 weeks from the date of communication to him/her of such punishment, appeal against such punishment to the Vice-Chancellor. The Appeals Board shall have the power to review the decision referred in Section 7.3.7 above regarding the punishment imposed and may either affirm, vary as deem necessary or set aside the decision regarding the punishment.

# 8. Awards

The Faculty of Technology is offering the following Memorial Award,

## 8.1 Advocate Tharmalingam Mylvaganam Memorial Award: Gold Medal Award

Overall Best performance in the Bachelor of Biosystems Technology in Agricultural Technology and Entrepreneurship, Faculty of Technology, Eastern University, Sri Lanka.

**Eligibility:**

**General criteria**

a) The applicant should be an undergraduate student who registered to follow BBST in Agricultural Technology and Entrepreneurship degree programme offered by the Faculty of Technology, EUSL.
b) Should successfully complete the degree programme within four academic years, except for the situation accepted by the Faculty Board and approved by the Senate.

**Academic criteria**

a) Overall Grade Point Average (OGPA) of 3.70 or above.
b) Completed a semester successfully by achieving a Semester Grade Point Average (SGPA) of 3.30 or above and has no 'E' grade and no "C- or D+ or D" in that semester.
c) Grade "C" or above in all Auxiliary courses.
d) Minimum "C" in English Language and Non-GPA courses is mandatory to be eligible for the award.
e) Student with the highest OGPA among the eligible students will be selected.

**Awarding**

The Faculty Board of Faculty of Technology, EUSL recommend the eligible candidate, based on the above criteria 2.1 and 2.2, to the Senate. The Senate shall approve the eligible candidate for the said award.

**Ineligibility**

a) Any student who obtains an improved grade/grades subsequently by repeating course/ courses.
b) A student who has been subjected to any disciplinary action during his/her university career.

### 8.2 Dean's List Award

Students with high academic performance in each academic programme in each academic year shall be included in the Dean's List. Dean's Awards shall be awarded to the overall best-performing students of each academic programme at the end of each academic semester.

**Eligibility criteria for inclusion in the Dean's List**

i. The applicant should be an undergraduate student who registered to follow any degree programme offered by the Faculty.
ii. The applicant shall have completed all the academic requirements of the each semester, under consideration, including all the compulsory courses.
iii. Obtain grades of C or better for all the course units registered in the relevant semester.
iv. Obtain a level of SGPA of 3.70 or better in each semester of the relevant academic year.
v. Obtain grades of A or better in course units aggregating to at least half the number of total credits for the course units considered of that semester.
vi. No repeat attempt will be considered at the particular semester.

**Ineligible students for Dean's List**

i. Any student who obtains an improved grade/ grades subsequently by repeating course/ courses,
ii. A student who has been subjected to any disciplinary action during his/her university career.

### 8.3 Faculty Award

The Faculty Award shall be awarded to the overall best performing students of each academic programme in the Faculty of Technology, at the end of each academic year.

The best FIVE outstanding students of the academic programme shall be selected based on the guidelines.

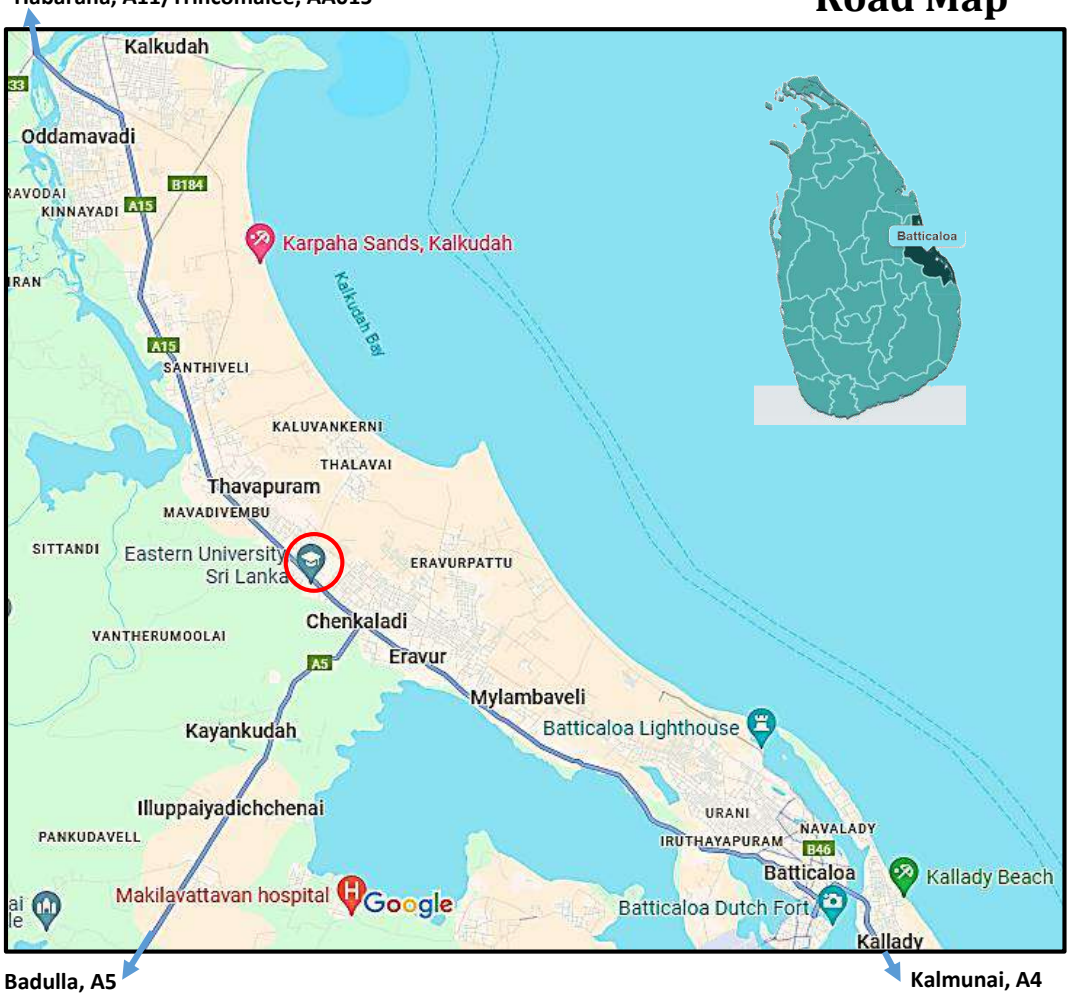
**Eligibility criteria for Faculty Award**

i. The applicant should be an undergraduate student registered to follow any degree programme offered by the Faculty of Technology, EUSL.
ii. The applicant shall have completed all the academic requirement of the considered year, including all the compulsory courses.
iii. The applicant shall have a GPA of 3.30 or above in **each semester**.

**Ineligible students for Faculty Award**

i. Any student who obtains an improved grade/grades subsequently by repeating course/courses,
ii. A student on whom subjected to any disciplinary action, during his/her university career, by the Vice-Chancellor or Deputy Vice-Chancellor for any misconduct,
iii. Any applicant having **less than 70%** of the total marks of the application will not be considered for evaluation.

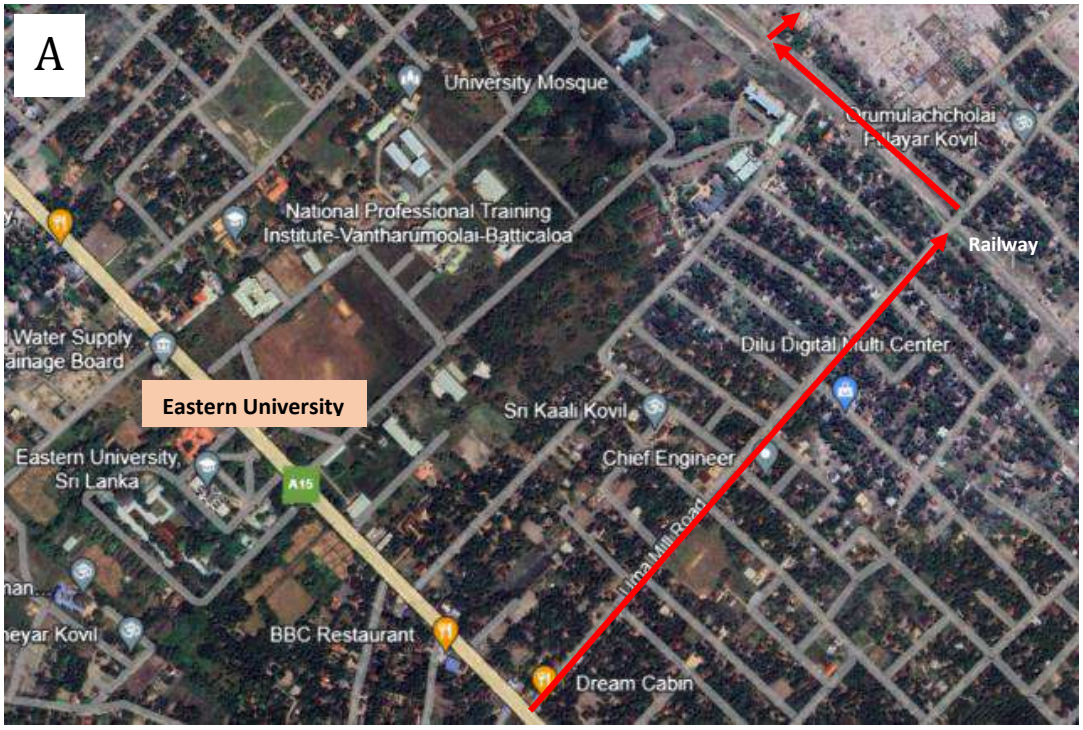
# Road Map




## Distance from Batticaloa to Main Sri Lanka Cities

| City | Distance | | City | Distance |
|---|---|---|---|---|
| Ampara | 69 km | | Mannar | 298 km |
| Anuradhapura | 156 km | | Kandy | 125 km |
| Badulla | 107 km | | Kurunegala | 149 km |
| Colombo | 221 km | | Matara | 321 km |
| Galle | 247 km | | Ratnapura | 183 km |
| Jaffna | 286 km | | Trincomalee | 108 km |

# Site Map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Orumulachcholai
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National Professional Training
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Railway
Water Supply
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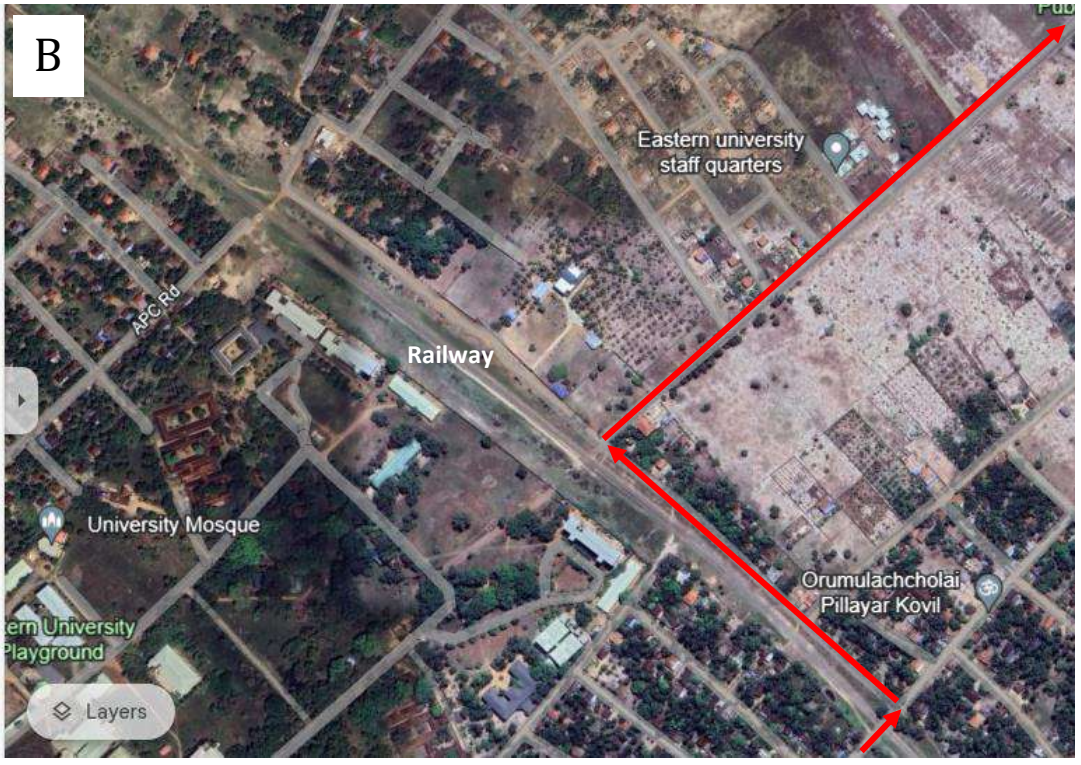
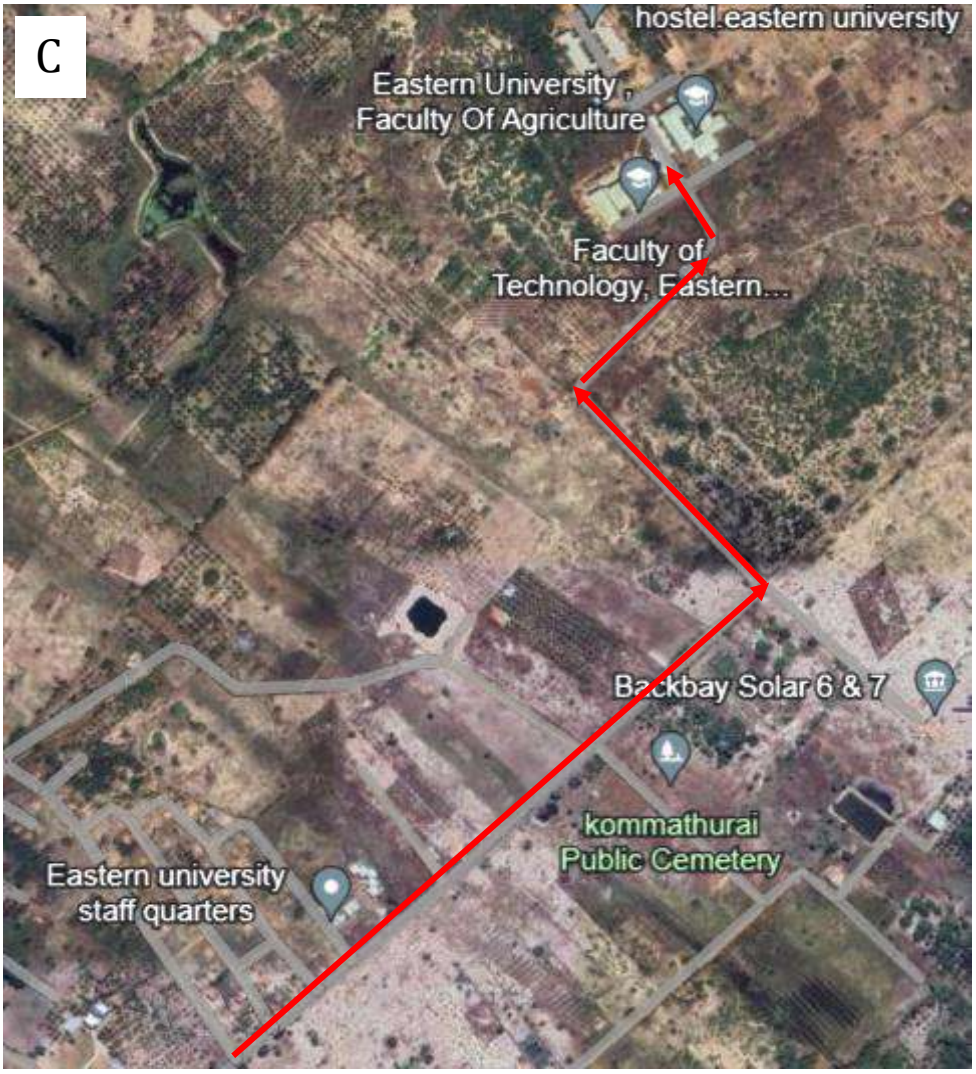
Eastern University
Dilu Digital Multi Center
Sri Kaali Kovil
Eastern University
Sri Lanka
A15
Chief Engineer
Uma Mill Road
BBC Restaurant
Dream Cabin


B
Eastern university
staff quarters
APC Rd
Railway
University Mosque
Orumulachcholai
Pillayar Kovil
Layers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hostel eastern university
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Technology, Eastern...
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Eastern university
staff quarters