CURRICULUM

Bachelor of Biosystems Technology Honours (BBST Hons)

Faculty of Technology
Sabaragamuwa University of Sri Lanka
P.O. Box 02, 70140, Belihuloya

January, 2019

DEPARTMENT OF BIOSYSTEMS TECHNOLOGY

Vision

To be an internationally recognized center of excellence in the teaching and research of science and technological subjects.

Mission

The Faculty of Technology is committed to produce graduates with sound knowledge in science and technology through teaching and learning, research, and internship. These graduates will be highly employable, dynamic, and potential inventors who can actively participate for the socioeconomic, scientific and technological advancement of the nation.

Aims and Objectives

The Department of Biosystems Technology aims at producing graduates suited for productive professional careers in the industries related to Biosystem Technology at national and global levels. It is intended to integrate biology and technology of production systems and multi-disciplinary amalgamation for sustainable production of bio-energy, pharmaceuticals, and biotechnology products with minimal environmental impacts to guarantee the sustainable development of the country. The department offers a common core module during the first and second years and three major modules, namely Bio-energy, Biotechnology and Drug Discovery, form third year onwards under the Bachelor of Bioststems Technology Honours Degree programme. The subjects in the three major modules have been designed to produce highly specialized graduates with knowledge and skills in relevant majoring areas.

Specific educational objectives of the Department of Biosystems Technology are as follows.

1. Develop the competence of students in methods of analysis involving use of mathematics, physics, chemistry, biology, biotechnology, microbiology, alternative energy generation systems and computing needed for the professional practice in the field of Biosystems Technology.

2. Develop skills of students that are required to contribute to the design processes in Biosystems technology, including the ability to innovate, develop new systems and products while collaborating with the industry.

3. Inculcate the abilities of addressing issues of ethical considerations and safety in operations, environmental impact, and social and economic impact in professional practice.

4. Inculcate the ability to be a successful leader of multi-disciplinary teams that efficiently manage multiple activities in projects running concurrently that are applicable to Bio systems Technology.

5. Develop entrepreneurial abilities in order to promote venture creations in applied areas in Biosystems Technology.

Program Learning Outcomes (PLO)

On successful completion of this program student should be able to:

1. Apply acquired science and technological knowledge and skills to create innovative solutions to pertinent real world problems.

2. Create or improve equipment, processes, and systems for sustainable utilization bio-resources.

3. Effectively perform as entrepreneurs, researches, technicians or communicators in numerous contexts applicable to Biosystems technology.

4. Pursue lifelong personal and professional developments in the relevant field.

5. Demonstrate excellent interpersonal, professional and ethical practices among diverse disciplines in local and global context.

GENERAL INFORMATION OF THE PROGRAMME

1. **Title of the Degree:** Bachelor of Biosystems Technology Honours (BBST Hons)
2. **Time duration:** 4-years
3. **Number of Credits:** 120
4. **SLQF level:** 6
5. **Medium of Instruction:** English
6. **Student Intake:** 75 x 4 years = 300
7. **Department:** Department of Biosystems Technology
8. **Name of the Faculty:** Faculty of Technology
9. **Name of the University:** Sabaragamuwa University of Sri Lanka
10. **Qualifications to Follow the Degree Programme:** Candidates who have sat the 'A' level subjects Science for Technology and Biosystems Technology and passed the G. C. E. Advanced Level (A/L) examination, are eligible to follow the degree programme.
11. **Salient Features of the Degree Programme:** It is intended to deliver a globally recognized, objective-based, student-centered, industry-oriented degree programme that will produce professionals with abilities for creativity, innovation, product development and with entrepreneurial skills suited for careers in the industrial market in biosystems technology. The areas covered in the core programme include bioenergy generation, bio-based products, pharmaceuticals, development of sustainable and environmentally safe products and biowaste management.

Structure of the Degree Programme

The Degree Programme is consisting with a core program, which spans 1st and 2nd years, and three major programmes, namely Bioenery, Biotechnology and Drug Discovery, being offered form 3rd year onwards. The core programme has been designed to provide principles in knowledge, skills and attitudes necessary for a graduate in Biosystems Technology

disciplines. The three major programmes have been designed to produce highly specialized graduates with knowledge and skills in relevant majoring areas. The core program is of 66 credits and the major programme is of 54 credits totaling to 120 credits that have to be completed by a student for being graduated. To be selected for a major progremme is based on the student's choice. In case, students' demand is greater than the number of students that can be accommodated by a particular major programme, students will be selected based on their GPA.

GRADUATE PROFILE- Bachelor of Biosystems Technology Honours

A Biosystems Technology graduate will have the following characteristics.

1. Ability to demonstrate sound knowledge and skills in numerical and computational methods in biosystem technology.
2. Basic knowledge and skills in chemistry, physics, environmental and biological sciences.
3. Ability to perform tasks of planning, designing and maintaining relevant machinery and machine components.
4. Have inculcated the knowledge and skills to design, innovate and develop systems related to bio- and alternative energy generation.
5. Possess required knowledge and skills in developing bio-based products in close collaboration with the industry.
6. Equipped with sound professional skills such as leadership, problem solving, communication, professional ethics and ethical behavior essential to any career.
7. Equipped with creative and innovative skills to transform opportunities into entrepreneurial ventures.
8. Possess knowledge and skills required to conduct applied research and interpret results and implement relevant practices based on the needs of the society, support to add value to the economy and bolster sustainable economic growth.

TARGET CAREER OPPORTUNITIES

The Bachelor of Biosystems Technology Honours (BBST Hons) degree is a first of its kind, where a significant part of the program is developed towards production-based courses, related to biotechnology, biopharmaceuticals, agrochemicals, ecosystem protection, bio-machinery and alternative energy enterprises which are increasing in demand at national and international levels, so that the graduates will be moulded to fit into a wide range of industries and research institutes.

Students are motivated and guided throughout the programme to develop entrepreneurial skills, where they could contemplate starting their own enterprises after successful completion of the degree. BST graduates can find rewarding careers in a variety of agricultural and environmental businesses. They can focus on applying their knowledge of technology, agriculture and processing systems. This 'hands-on' curriculum will enable the graduates to manage machines and equipment, biological processes, computers and other technologies to create new and improved products for the country, as well as products with export potential. They have employment prospects at different executive and technical levels such as Production Managers, Process Controllers, Quality Controllers, Quality Assurance

Officials, Product Development Officials related to plant-origin products (such as from tea, rubber, coconut, spices and tuber crops) and animal-origin products, Enterprise Resources Planners and Research & Development Officers. These graduates will find employment opportunities in a range of industries including Biotechnology, Pharmaceutical, Bioenergy, Brewery, Cosmetic, Confectionary, Leather, Cloth, Dairy, Cereal, Fibre, Agricultural bioproducts etc.

There is a tremendous potential for outstanding graduates to join academia at national and international levels and pursue postgraduate studies, where they could expand their horizons of biosystems technology knowledge and experience.

COURSE AND CREDIT DISTRIBUTION:

Department of Biosystems Technology

Course code abbreviation **:** BST – Biosystems Technology
Fist digit **:** Year,
Second digit **:** Semester
Third and fourth digits **:** Course number of the given semester
Last digit **:** Number of credits of the course

All the courses offered in Year I and Year II are compulsory
50 Notional hours = 1 credit
Notional hours include lectures, practicals, tutorials, assignments, field work, exam preparation etc.

Prerequisites: Students should have satisfactorily followed and maintained 80% of attendance in taught classes and sat for the final written examination of the course.

Continuous Assessment: There should be at least 2 evaluation components such as assignments, in-class quiz, midterm examination, presentation, etc. as specified in the curricular for each course, as appropriate.

COURSE DESCRIPTION- Bachelor of Bio Systems Technology Honours

Numbers of Credits of the Bachelor of Biosystems Technology Honours Degree.

Year	Semester I	Semester II	Total
Year I	17	17	34
Year II	17	15	32
Year III	19	19	38
Year IV	06	10	16
Total			**120**

CORE CURRICULUM
of
Bachelor of Biosystems Technology Honours (BBST Hons)

Faculty of Technology
Sabaragamuwa University of Sri Lanka
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Bachelor of Biosystems Technology Honours – Core Module

Course Code	Course Title	No. of Credits	Compulsory/ Optional
Year I			
Semester I – A student must earn a minimum of 17 credits			
BST 11013	Introduction to Biosystems Technology	3	Compulsory
BST 11022	Mathematics	2	Compulsory
BST 11032	Chemistry I	2	Compulsory
BST 11042	Physics for Biological Systems	2	Compulsory
BST 11052	Principles of Biology	2	Compulsory
BST 11063	Personality Development	3	Compulsory
BST 11071	Scientific Communication	1	Compulsory
BST 11082	ICT for Technological Applications	2	Compulsory
	Total Credits	**17**	
Semester II – A student must earn a minimum of 17 credits			
BST 12011	Fundamentals of Biometry	1	Compulsory
BST 12022	Chemistry II	2	Compulsory
BST 12031	Renewable Energy Systems	1	Compulsory
BST 12042	Molecular Biology	2	Compulsory
BST 12052	Principles of Microbiology	2	Compulsory
BST 12062	Biological diversity and Bio-prospecting	3	Compulsory
BST 12073	Economics for decision making in BST	3	Compulsory
BST 12083	Process Control and Automation in Bio-industry	3	Compulsory
BST 12090	Historic Developments and Current Affairs of Sri Lanka	0	Compulsory
	Total Credits	**17**	
Year II			
Semester I – A student must earn a minimum of 17 credits			
BST 21012	Experimental Designs	2	Compulsory
BST 21022	Principles of Biochemistry	2	Compulsory
BST 21032	Instrumentation and Measurements	2	Compulsory
BST 21042	Biomass for Bioenergy	2	Compulsory
BST 21051	Introduction to Biotechnology	1	Compulsory
BST 21061	Introduction to Nanotechnology	1	Compulsory
BST 21071	Environmental and Health Impacts of Modern Technologies	1	Compulsory
BST 21082	Organizational Behavior	2	Compulsory
BST 21092	Computer Aided Designs for Technology	2	Compulsory
BST 21102	Data Acquisition Techniques and Signal Processing	2	Compulsory
BST 21110	Global Historical Landmarks and Current Affairs	0	Compulsory
	Total Credits	**17**	
Semester II – A student must earn a minimum of 15 credits			
BST 22012	Entrepreneurship and Technology	2	Compulsory

	Management		
BST 22021	Introduction to drug discovery	1	Compulsory
BST 22032	Applied Chemistry	2	Compulsory
BST 22042	Energy conversion technologies	2	Compulsory
BST 22051	Bioinformatics	1	Compulsory
BST 22062	Microbial Applications in Biosystems Technology	2	Compulsory
BST 22071	Human Resources and Quality Management	1	Compulsory
BST 22082	Introduction to Electronics and Electricity	2	Compulsory
BST 22092	Directed study and Seminar	2	Compulsory
	Total Credits	**15**	

CURRICULUM
of
Bio-energy Major Module in
Bachelor of Biosystems Technology
Honours (BBST Hons)

Faculty of Technology
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Major Module: Bioenergy

Degree program: Bachelor of Biosystems Technology

Bioenergy is considered globally as one of the most dependable renewable energy sources, along with its generated by products in Bioenergy generation process, which creates the most reliable substitute for the petroleum industry fossil fuel and other refinery products such as tar, plastic, fuel additive, chemical products, etc., however, its contribution for Sri Lankan energy demand is very minimal. In Sri Lanka, in the absence of local non-renewable energy sources, such as fossil fuels, and ever growing energy demand and import expenditure of non-renewable fossil fuels, bioenergy could be considered as a viable alternative, mainly due to the high feasibility of producing dedicated biomass throughout the island rich of biodiversity, to be used as bioenergy sources. It is also expected that government investments in the bioenergy sector will continue to grow in the coming years.

Goal

In this context, the proposing Bioenergy Module, to be offered under the Biosystems Technology (BST) Degree Program of The Sabaragamuwa University of Sri Lanka, would generate graduates who are equipped with the state-of-the art knowledge and skills on energy production from biomass and waste, and the technologies of its heat recovery. These graduates are expected to contribute for or develop, required bioenergy production processes along with other valuable byproducts for substitute the petroleum industry related products, and help to resolve pertaining deficiencies of existing systems, at various capacities as technologist, scientists, entrepreneurs, and etc. related to bioenergy.

Graduated Profile

Students following The Sabaragamuwa University of Sri Lanka Bioenergy Module in BST Degree Program will be able to,

1 Demonstrate solid knowledge in essentials of biology, chemistry, physics, and other relevant basic and applied sciences as applied in biomass to energy processes

2 Recognize, based on multi-disciplinary scientific knowledge, various disciplines, expertise, and technologies involved the complex process of developing alternative bioenergy initiatives, along with other valuable materials to substitute the petroleum products such as tar, plastic, fuel additive, chemical products, etc.,

3 Solve problems pertaining to bioenergy processes via integrative and multi-disciplinary approaches

4 Demonstrate willingness to participate or initiate new approaches, for utilization of available natural resources or develop new biomass stockpiles for bioenergy production

5 Contribute in any of major collaborating scientific disciplines of bioenergy technologies as entry-level academic, technical, or professional trainees

6 Be sound and effective in communication of scientific and technical knowledge in both written and verbal formats with experts and non-experts

7 Display high level understanding of diverse socio, economic, and ethical contexts, and conduct highly responsible and accountable professional and personal practices

Bachelor of Biosystems Technology Honours: Bio-Energy Major Module

Year III: Major module: Bio-energy			
Semester I – A student must earn a minimum of 20 credits			
Course Code	**Course Title**	**No. Of Credits**	**Compulsory/ Optional**
BST 31212	Environment and pollution	2	Compulsory
BST 31222	Sustainable solid waste management	2	Compulsory
BST 31232	Bioenergy and environment	2	Compulsory
BST 31242	Bioenergy crop production & harvesting	2	Compulsory
BST 31252	Gasification and pyrolysis for bioenergy generation	2	Compulsory
BST 31262	Combustion + Hydrothermal & other techniques for bioenergy generation	2	Compulsory
BST 31272	Anaerobic digestion and bio gas technology	2	Compulsory
BST 31282	Alcohol fermentation for bioenergy generation	2	Compulsory
BST 31292	Physicochemical and Agrochemical conversions for bioenergy generation	2	Compulsory
BST 31302	Introduction to Mathlab	2	Optional
BST 31312	Process modeling and simulation with the commercial software ASPEN PLUS®	2	Optional
	Total Credits	**22**	
Semester II – A student must earn a minimum of 18 credits			
BST 32212	Proposal Writing and Project Management I	2	Compulsory
BST 32222	Value-added processing of biofuel residues and co-products	2	Compulsory
BST 32232	Occupational safety Hazard identifications in Bio-refining Process	2	Compulsory
BST 32242	Introduction to Thermodynamic and Design of Bio-machinery & rotating equipment	2	Compulsory
BST 32252	Introduction to Fluid Mechanics	2	Compulsory
BST 32262	Bioenergy Economics	2	Compulsory
BST 32272	Industrial Bio-Reaction Engineering, and Bio-reactors (Reactor design with chemical kinetics)	2	Compulsory
BST 32282	Design of Integrated Alternative Energy Generation Systems	2	Compulsory
BST 32292	Cleaner Production	2	Optional
BST 32302	Environment Impact Assessment	2	Optional
	Total Credits	**20**	
Year IV			
Semester I – A student must earn a minimum of 06 credits			
BST 41016	Industrial training	6 (*24 weeks of industrial training*)	Compulsory
	Total Credits	**6**	
Semester II – A student must earn a minimum of 10 credits			
BST 42011	Career development and progression	1	Compulsory

BST 42021	Proposal Writing and Project Management II	1	Compulsory
BST 42038	Research Project	8	Compulsory
	Total credits	**10**	

CURRICULUM
of
Biotechnology Major Module in
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Major Module: Biotechnology

Degree program: Bachelor of Biosystems Technology

Biotechnology is all about manipulating biological systems like plants, animals and microbes to develop new products or processes for improving the quality of life. As such, this major module has been designed to produce graduates with a solid understanding of science, technology and entrepreneurial skills to exploit biotechnology encompassing multidisciplinary areas such as agriculture, medicine, food, environment and bio-industries.

This major module allows students to explore and acquire cutting-edge molecular life science knowledge and practical skills leading them to address challenges and opportunities in the real world. The students who follow this module mainly focus on cloning, genetic engineering, enzymes and genomics while acquiring hands-on experience and skills through lab work and internship opportunities preparing themselves to find rewarding careers in a variety of both local and global biotechnology industries.

Goal

Though biotechnology related industries are rapidly emerging in Sri Lanka, there is a wide knowledge gap between these industries and graduates passing out from local Universities. Therefore, it is of paramount importance to narrow down this knowledge gap by delivering globally recognized student-centered, industry-oriented major module that produce readily employable graduates with innovative and entrepreneurial skills who can make a significant contribution to the economic development of Sri Lanka.

Graduated Profile

A Biotechnology graduate will have the following characteristics.

1. Possess knowledge and skills required for designing, researching, analyzing and interpreting data for investigating complex real-world problems related to biotechnology field and creating sustainable and innovative solutions individually and collaboratively.

2. Ability to conduct relevant applied research based on the needs of the society and support to add value to the economy and bolster sustainable economic growth.

3. Possess required basic knowledge and skills in biological sciences, environmental sciences, chemistry and physics to innovate and develop bio-based products in close collaboration with the industry.

4. Ability to demonstrate sound knowledge and skills in numerical and computational methods in biosystems technology.

5. Equipped with sound professional skills such as leadership, problem solving, communication, professional ethics and ethical behavior essential to any career.

6. Equipped with creative and innovative skills to transform opportunities into entrepreneurial ventures.

7. Proficiency in effective use of contemporary technologies related to biotechnology field and pursue lifelong personal and professional developments maintaining intellectual curiosity.

Bachelor of Biosystems Technology Honours: Biotechnology Major Module

Year III: Major module: Biotechnology			
Semester I – A student must earn a minimum of 19 credits			
Course code	**Course Title**	**No. of Credits**	**Compulsory/ Optional**
BST 31012	Ecological Concepts in BST	2	Optional
BST 31022	Innovation Management and New Product Development	2	Compulsory
BST 31033	Modern Diagnostic Techniques in Disease Control	3	Compulsory
BST 31042	Bioprocessing Technologies in Biorefinery	2	Compulsory
BST 31052	Dairy Biotechnology	2	Compulsory
BST 31063	Recombinant DNA Technology and Genetic Transformation	3	Compulsory
BST 31073	Plant cell and Tissue Engineering	3	Compulsory
BST 31082	Plant Growth Regulators and Signal Transduction	2	Optional
BST 31092	Production of Plant Secondary Metabolites	2	Optional
	Total Credits	**21**	
Semester II – A student must earn a minimum of 19 credits			
BST 32012	Proposal Writing and Project Management I	2	Compulsory
BST 32023	Bio products for Organic Agriculture	3	Compulsory
BST 32032	Industrial Uses of Plant Fiber	2	Compulsory
BST 32043	Enzyme Technology	3	Compulsory
BST 32052	Principles of Molecular Virology	2	Compulsory
BST 32062	Molecular Plant Breeding	2	Compulsory
BST 32071	Molecular Biology Practicum	1	Compulsory
BST 32082	Bio-waste Management	2	Compulsory
BST 32092	Unconventional Theories	2	Optional
BST 32102	Cereal technology	2	Optional
	Total Credits	**21**	
Year IV			
Semester I – A student must earn a minimum of 06 credits			
BST 41016	Industrial Training	**6** (*24 weeks of industrial training*)	Compulsory
	Total Credits	**6**	
Semester II – A student must earn a minimum of 10 credits			
BST 42011	Career Development and Progression	1	Compulsory
BST 42021	Proposal Writing and Project Management II	1	Compulsory
BST 42038	Research Project	8	Compulsory
	Total credits	**10**	

CURRICULUM
of
Drug Discovery Major Module in Bachelor of Biosystems Technology Honours (BBST Hons)

Faculty of Technology
Sabaragamuwa University of Sri Lanka
P.O. Box 02, 70140, Belihuloya

Major Module: Drug Discovery
Degree program: Bachelor of Biosystems Technology

This highly multidisciplinary drug discovery major module discusses essential coursework, develop skills in basic sciences biology, chemistry, physics, etc. at the early stages (Year I and Year II). Then it develops, in depth, advanced course work and mandatory skills related to rational drug design and synthesis strategies, mechanisms of drug action, pharmacology, toxicology, and analytical methods related to discovery, development, and quality assurance (Year III). Moreover, it introduces indispensable practices such as dose formulation, manufacturing and regulatory aspects in relation to drug discovery (Level III and IV).
This major module prepares students for strong grounding in securing entry level technologist positions in indigenous drug development, pharmaceutical, fine chemical, and biotechnology industries. Concurrently, it prepares undergraduates for graduate education in drug discovery and basic sciences, and post-baccalaureate professional education in pharmacy, law and business.

Goals

Suburb of The Sabaragamuwa University of Sri Lanka is highly enriched with huge bio-diversity and high volume of renewable resources such as plant and microbial sources. The goal of this module is to prepare graduates, equipped with modern scientific knowledge and tools, who are ambitious and capable of utilizing these sours to generate hit compounds or potential organisms and then to modify them chemically or genetically for improved potency and favorable PK, PD, and safety (toxicology, etc.) in academic research and industrial setting. This would increase possibilities of producing "innovative therapeutics of Sri Lankan origin" which is one of the main strategic endeavors, Sri Lankan government expect to realize in near future.

***G*raduate Profile**

Students following The Sabaragamuwa University of Sri Lanka Drug Discovery Major Module will be able to,

1 Demonstrate solid knowledge in essentials of biology, chemistry, physics, and other relevant basic and applied sciences as implicated in rational drug discovery processes

2 Recognize, based on multi-disciplinary scientific knowledge, various disciplines, expertise, processes, and stages underlying the complex process of modern drug discovery

3 To solve problems pertaining to drug discovery processes via integrative and multi-disciplinary approaches

4 Participate or initiate new approaches, for utilization of available natural resources for drug discovery processes

5 Contribute in any of major collaborating scientific disciplines of drug discovery processes as entry-level academic, technical, or professional trainees

6 Be sound and effective in communication of scientific and technical knowledge in both written and verbal formats with experts and non-experts

7 Display high level understanding of diverse socio, economic, and ethical contexts, and conduct highly responsible and accountable professional and personal practices

Bachelor of Biosystems Technology Honours: Drug Discovery Major Module

Year III: Major module: Drug Discovery			
Semester I – A student must earn a minimum of 19 credits			
BST 31413	Drug Discovery and Development-I	3	Compulsory
BST 31422	Principles of Immunology	2	Compulsory
BST 31432	Biochemistry-II	2	Compulsory
BST 31442	Principles of Drug Action	2	Compulsory
BST 31452	Pharmaceutical Drug Analysis-I	2	Compulsory
BST 31463	Medicinal Chemistry-I	3	Compulsory
BST 31472	Dosage Forms-I	2	Compulsory
BST 31483	Organic Synthesis for Drug Discovery-I	3	Compulsory
	Total Credits	**19**	
Semester II – A student must earn a minimum of 19 credits			
BST 32012	Proposal Writing and Project Management I	2	Compulsory
BST 32512	Drug Classes and Mechanisms	2	Compulsory
BST 32522	Dosage Forms-II	2	Compulsory
BST 32532	Drug Metabolism and Toxicology	2	Compulsory
BST 32542	Computer Aided Drug Discovery	2	Compulsory
BST 32552	Drug Discovery and Development-II	2	Compulsory
BST 32562	Pharmaceutical Drug Analysis-II	2	Compulsory
BST 32572	Medicinal Chemistry-II	2	Compulsory
BST 32582	Organic Synthesis for Drug Discovery-II	3	Compulsory
	Total Credits	**19**	
Year IV			
Semester I – A student must earn a minimum of 06 credits			
BST 41016	Industrial Training	**6** (*24 weeks of industrial training*)	Compulsory
	Total Credits	**6**	
Semester II – A student must earn a minimum of 10 credits			
BST 42011	Career Development and Progression	1	Compulsory
BST 42021	Proposal Writing and Project Management II	1	Compulsory
BST 42038	Research Project	8	Compulsory
	Total credits	**10**	

Activity plane for the Year IV semester I and II

Period	Task	Place	Credit
24 weeks	Industrial training	Industry	6
01 weeks	Industrial training report presentation	SUSL	
01 week	Vacation		
01 week	Career development and progression (an intensive course; 3 hr per day for 5 days)	SUSL	1
	Proposal Writing and Project Management II	SUSL	1
01 week	Research Proposal presentation	SUSL	
17 weeks	Final year research project	Place identified	8
01 week	Final year research presentation	SUSL	
02 weeks	Final year project report submission	SUSL	
	Total		**16**

Examination Criteria

General

A student who satisfies the following conditions will be awarded a Bachelor of Biosystems Technology Honours degree.

- Be registered at the University as a candidate for the degree programme.
- Have completed the programme of studies for each Semester to the satisfactory level to the Senate.
- Interlaid, at least 80% attendance for lectures, tutorials and practical assignments, etc.
- Every registered student who wishes to sit the examination should submit an application in the appropriate form within the stipulated period. Each eligible student will be issued an admission card/ form to sit the relevant examination.
- Every candidate should sit the examination in respect of all the relevant subjects studied during the semester.

Assessment Policy and Strategies

Each credited (GPA) course will have end semester comprehensive written examination. The practical component of the courses will be assessed as decided by the department and approved by the Faculty Board. The final year project will be assessed by the academic supervisor appointed by the department and a supervisor appointed for each student after the approval of the Faculty Board.

Examination Structure

Theory Examination

Theory paper consists of two parts:
Part I is a multiple choice questions paper
Part II both essay type and structured types

Practical Examination
There shall be a practical Examination for some courses of study and will include.

a) A practical examination (Spot test / Practical paper / Practical test) conducted at the end of each semester or a continuous assessment.
b) Viva voce examination (Oral examination)
c) Continuous assessment

Final Evaluation for Examinations

The final grade will be decided upon the marks calculated based on the marks distribution among Continuous Assessments, Practical, and Final Examination.

Final Evaluation for Examinations

The final grade will be decided upon the marks calculated based on the marks distribution among Continuous Assessments, Practical, and Final Examination.

Grading Procedure, Criteria and Grade Points

The grading procedure adopted by the senate of the Sabaragamuwa University of SriLanka will be adopted. The cut-off points for grades and the grade point will be as follows.

Grade	Percentage mark	Grade point	Description
A^+	85 and above	4.0	Excellent
A	80 to 84	4.0	
A^-	75 to 79	3.7	
B^+	70 to 74	3.3	Good
B	65 to 69	3.0	
B^-	60 to 64	2.7	
C^+	55 to 59	2.3	Pass
C	50 to 54	2.0	
C^-	45 to 49	1.7	Weak Pass
D^+	40 to 44	1.3	Conditional Pass
D	35 to 39	1.0	
E	0 to 34	0.0	Fail

Semester Grade Point Average (SGPA)

The calculation of the Semester Grade Point Average (SGPA) is based on the summation of Grade Point 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, where C_i is the number of credits for the i^{th} module in a given semester and GP_i is the grade points earned for that module and n is the number of GPA modules in the semester

$$SGPA = \frac{\sum_{i=1}^{n} C_i GP_i}{\sum_{i=1}^{n} C_i}$$

Academic Progression

A student who has not successfully completed the first three semesters will not be permitted to register for the fifth semester until the SGPA and grades in each of the first three semesters are improved as required.

Cumulative Grade Point Average (CGPA)

The Cumulative Grade Point Average (CGPA) describes a student's current 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, where C_i is the number of credits for the i^{th} module and GP_i is the grade points earned for that module and n is the total number of registered GPA modules.

$$CGPA = \frac{\sum_{i=1}^{n} C_i GP_i}{\sum_{i=1}^{n} C_i}$$

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

Cut-off levels of CGPA for awarding Classes/Pass

Classes will be awarded on successful completion of the degree program entirely on the CGPA of the student, on the following basis. All requirements for the award of the degree must be completed in four academic years to earn a Class.

Class	Cut-off CGPA for awarding Classes
First Class	3.70
Second Class (Upper)	3.30
Second Class (Lower)	3.00
Pass	2.00

Maximum period for the completion of the degree

The maximum period for the completion of all requirements for the award of the degree is recommended to be 06 academic years. The Senate of the University may grant one academic year at a time, beyond initial 06 academic years, based on the merit of individual applications, for a maximum of 03 years.