PROSPECTUS 2024/2025

FACULTY OF URBAN AND AQUATIC BIORESOURCES
UNIVERSITY OF SRI JAYEWARDENEPURA

PROSPECTUS
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FACULTY OF URBAN AND AQUATIC BIORESOURCES
UNIVERSITY OF SRI JAYEWARDENEPURA

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PROSPECTUS - 2024/2025

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UNIVERSITY OF SRI JAYEWARDENEPURA

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VICE-CHANCELLOR'S MESSAGE

The University of Sri Jayewardenepura (USJ), driven by its vision and mission, has established itself as a premier institution of higher education in Sri Lanka with a rich history. Dedicated to producing well-rounded graduates equipped with the knowledge, skills, and experience needed to excel in a fast-paced environment, USJ proudly stands as the largest university in Sri Lanka by student population, with over 16,000 undergraduates. The Faculty of Urban and Aquatic Bioresources (FUAB), the tenth faculty of the University, was established to cultivate professionally qualified graduates to address the demands of a blue-green economy.

As urbanization in Sri Lanka accelerates, it increasingly strains natural resources. Prioritizing the sustainable utilization and development of our urban bioresources is crucial to mitigate the negative impacts of this growth. Additionally, Sri Lanka is endowed with abundant, largely untapped aquatic resources, including an extensive exclusive economic zone in the Indian Ocean. Future generations must be equipped with the knowledge and skills to sustainably manage and utilize these urban and aquatic bioresources. Recognizing this need, the University aims to produce graduates prepared for the blue-green economy through this new faculty.

The Faculty of Urban and Aquatic Bioresources is unique and inspiring, as students with a common biological science background work towards two pillars of a knowledge-based economy: the blue economy and the green economy. I am confident that all new students enrolling in the undergraduate program in this Faculty will significantly contribute to our knowledge-based economy through the sustainable management of urban and aquatic bioresources. USJ is proud to serve the nation by offering innovative professional study programs for the future generations of Sri Lanka.

Congratulations on your achievements thus far. I wish you the best of luck in all your academic endeavors and hope you have a wonderful undergraduate experience at the University of Sri Jayewardenepura.

Senior Professor Pathmalal M Manage
[B.Sc. (Hons.), M.Sc. (Japan), PhD (Japan), C.Biol.]
Vice- Chancellor
University of Sri Jayewardenepura Gangodawila,
Nugegoda
Sri Lanka

DEAN'S MESSAGE

It is a great honor to provide this message to the very first prospectus of the Faculty of Urban and Aquatic Bioresources as the founding Dean of the Faculty. The faculty was established with the great enthusiasm of the former Vice-Chancellor and former UGC Chairman Senior Prof. Sampath Amaratunge, to launch a faculty of this caliber, the first of its kind in the Sri Lankan university system. The inception of the Faculty of Urban and Aquatic Bioresources (FUAB) was immensely supported by the patronage of Emeritus Prof. Gamini Senanayake former Vice-Chancellor/University of Ruhuna. As the Dean of the Faculty, I extend my sincere thanks to all who have contributed towards the establishment of this Faculty as the 10th faculty of the University of Sri Jayewardenepura (USJ).

The pressing need for the sustainable utilization of urban and aquatic bioresources in Sri Lanka, created the need for a faculty of this kind and I am glad that we, the USJ family have identified the timely requirement. With the current acceleration of urbanization and population growth, food and water scarcity will be of vital concern in future, both locally and globally. In this background, sustainable utilization of urban and aquatic bioresources through a knowledge-based blue-green economy is a timely solution. With the introduction of FUAB, we are aiming to produce graduates and postgraduates, who are confident and capable of meeting the objectives of a blue-green economy. The research output of the faculty is expected to boost national development and contribute to policy development of the country, in this regard.

At this exciting juncture of your life, I warmly welcome you to the J'pura family, and I thoroughly believe this is one of the greatest decisions that you have ever taken in your life. The opportunities are widely open for you, and I wish you all the very best during your entire stay at FUAB, USJ.

Senior Prof. Pradeep Jayaweera, BSc (Hons) (USJ), PhD (Belfast, UK)
Acting Dean, Faculty of Urban and Aquatic Bioresources
University of Sri Jayewardenepura
Gangodawila, Nugegoda
Sri Lanka

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02

UNIVERSITY OF SRI JAYEWARDENEPURA

Vision of the University of Sri Jayewardenepura
Prosper lives through education

Mission of the University of Sri Jayewardenepura
Develop globally competent citizens through our education for a sustainable future, drawing inspirations from our cultural heritage and wisdom

History of the University of Sri Jayewardenepura
Located in a beautiful setting at Gangodawila, Nugegoda, fifteen kilometres away from Colombo, the University of Sri Jayewardenepura is one of Sri Lanka's foremost state universities. The history of the university goes back to 1883 when the Venerable Hikkaduwe Sri Sumangala Thero established the Vidyodaya Pirivena (a centre of learning for Buddhist monks) at Maligakanda. The University Act No. 45 of 1958 elevated the Vidyodaya Pirivena to University status. Ven. Welivitiye Soratha Maha Thero who was the Principal of the Vidyodaya Pirivena at the time was appointed the first Vice-Chancellor of the Vidyodaya University, and the university itself was ceremonially opened on 16th February 1959.
Independent university status was restored at the University of Sri Jayewardenepura, while assigning some of the coordinating functions to then newly formed University Grants Commission (UGC), under the Universities Act No. 16 of 1978. Today, the University of Sri Jayewardenepura is one of the largest universities in the country spreading over 55 acres of land, comprising of elevan faculties.
Faculty of Humanities and Social Sciences, Faculty of

Applied Sciences, Faculty of Management Studies and Commerce, Faculty of Medical Sciences, Faculty of Graduate Studies, Faculty of Technology, Faculty of Engineering, Faculty of Allied Health Sciences, Faculty of Dental Sciences, Faculty of Urban and Aquatic Bioresources and Faculty of Computer Science. The university is home to over 12,000 undergraduates and over 1000 postgraduate students. It is considered the largest university in terms of student population in Sri Lanka.

The University is also in the forefront of research and innovation with a research council of over 20 research centres and an Invention, Innovation and Venture Creation Council with over 50 Entrepreneurs and stakeholders with over 15 patents.

The University of Sri Jayewardenepura has maintained strong ties with many international bodies of education and have signed over 60 MoUs with internationally recognized universities; and over 60 MoUs with established international and local companies. The university strives to give its students an international experience, offering student exchange programs and internships.

Throughout the years the University of Sri Jayewardenepura has managed to develop in many areas expanding its horizons and will continue this journey reaching many milestones that will no doubt ensure that the university will produce smart, efficient, skillful and professional individuals that will aid in the development of our mother nation.

Faculty of Urban and Aquatic Bioresources (FUAB)

The University of Sri Jayewardenepura (USJ) situated in the suburbs of Colombo, having a vision to "Prosper Lives through Education", established the new Faculty of Urban and Aquatic Bioresources (FUAB), which is uniquely positioned to teach, research and provide services in the fields of urban and aquatic bioresources. There are numerous industries and institutions in and around Colombo that are based on terrestrial and aquatic bioresources.
However, there is an acute dearth of trained human resources to collaborate with these industries, to contribute and to conduct research and development in the fields of urban and aquatic bioresources. The primary objective of establishing the FUAB was to nurture human resources that would contribute and provide the necessary expertise to the development of urban and aquatic bioresources in the country. While collaborating with reputed industries and institutions, the FUAB would also join hands with small and medium scale entrepreneurs to strengthen the entire work force of the urban and aquatic bioresources sectors of the country.

Mission of the Faculty

The mission of the Faculty is to develop the required human resources for a knowledge-based bioeconomy through undergraduate and postgraduate degree programs. The intended development is to be achieved by means of research and development in the fields of urban and aquatic bioresources and through dissemination of novel knowledge to strengthen water security, sustainable food production and healthy ecosystems.

Graduate profile

A student who has completed an undergraduate degree programme at the Faculty of Urban and Aquatic Bioresources of the University of Sri Jayewardenepura will:

- be knowledgeable and competent in productive and sustainable utilization of urban/ aquatic bioresources for the economic development of the country
- acquire expertise in field and laboratory activities for the successful achievement of goals and to carry out research in diverse fields of urban/aquatic bioresources
- have a creative and innovative mind with critical thinking skills
- have leadership and entrepreneurial skills to carry out tasks with self-confidence
- be competent to overcome real-life challenges faced in implementing the blue-green concepts in a knowledge-based bioeconomy
- possess communication skills to effectively communicate ideas, to collaborate and successfully interact and to disseminate knowledge across many layers of the community to meet expected outcomes pertaining to the development and sustainable utilization of urban/aquatic bioresources.

Why study Urban and Aquatic Bioresources?

The urbanization in Sri Lanka has taken place in an ever-increasing rate, over the past few years. Annually a large sum of foreign exchange is spent on importation of agricultural goods. On the other hand, majority our aquatic resources are largely untapped and are yet to be explored. In a knowledge-based bioeconomy, it is high time that we identify, understand and work towards the sustainable utilization and management of our urban and aquatic bioresources.

The Faculty aims at producing professionally qualified graduates that our country needs to face the challenges that lie ahead for a much-needed bioeconomy. In this regard, our degree programmes pay a special emphasis on the blue-green concepts of bioeconomy, focusing on the sustainable use and development of urban and aquatic bioresources.

The undergraduate and postgraduate degree programmes of the Faculty are expected to cater a broader spectrum of career interests in the academic, research, industrial and entrepreneurial spheres, both in the urban resources sector and the aquatic resources sectors.

Degree Programs of the Faculty of Urban and Aquatic Bioresources

The Faculty of Urban and Aquatic Bioresources offers highly practical-oriented teaching programmes which includes undergraduate degree programmes (both Bachelors and Honors) in Urban and Aquatic Bioresources, for the first time in Sri Lanka.

Bachelor's degree program in Aquatic Bioresources

- BSc in Aquatic Bioresources

Honors degree program in Aquatic Bioresources

- BSc (Hons) in Aquatic Bioresources

Bachelor's degree program in Urban Bioresources

- BSc in Urban Bioresources

Honors degree program in Urban Bioresources

- BSc (Hons) in Urban Bioresources

BSc Degree Program in Aquatic Bioresources

Each student should take course-modules to meet a minimum cumulative credit value of 15 per an academic semester

FIRST YEAR

SEMESTER 1

Course-code	Course-module	Course type
MDS1201	Environmental Economics	Core
MDS1102	Nutritional Benefits of Urban and Aquatic Food Products	Core
ABR1131 (based on UBR1101)	Effective Water Management in an Urban Setup	Core
MDS1103	Analytical Instruments	Core
MDS1204	Entrepreneurship and Business Development	Core
ABR1201	Practical Aspects of Aquatic Architecture	Core
ABR1202	Environment Management in Aquaculture	Core
ABR1203	Ornamental Fish Culture and Breeding	Core
MDS1039	English - Level I	Compulsory
MDS1205	Fundamentals of Information Technology	Optional
ABR1204	Fundamentals of Seaweed Production	Optional
ABR1132 (based on UBR1108)	'B' friendly gardening: Butterflies, Bees and Birds	Optional

SEMESTER 2

Course-code	Course-module	Course type
ABR1233 (based on UBR1209)	Municipal Solid Waste Management	Core
MDS1206	Occupational Health and Safety in Bioresource Management	Core
MDS1141	Basic Mathematics	Compulsory
ABR1205	Fishery Resources Management	Core
ABR1206	Aquatic Animal Health	Core
ABR1207	Fish Feed Technology	Core
ABR1208	Mariculture	Core
MDS1040	English – Level II	Compulsory
MDS1207	Environment and Bioenergy	Optional
MDS1108	Free Tools in Science Communication	Optional
ABR1109	Fattening of Edible Crustaceans	Optional

SECOND YEAR

SEMESTER 1

Course-code	Course-module	Course type
ABR2234 (based on UBR2216)	Farming in Controlled Environments	Core
ABR2235 (based on UBR2217)	Advanced Water and Wastewater Treatments	Core
MDS2209	Urban and Aquatic Post-Harvest Technology	Core
MDS2110	Data Modelling and Analysis	Core
ABR2210	Coastal Aquaculture: Methods and Technology	Core
ABR2211	Seaweed/Algae Farming and Processing	Core
MDS2212	Aquatic Resource Economics	Core
MDS2213	Renewable Bioresources and Bioremediation	Optional
ABR2212	Biochemistry for Aquaculture	Optional
ABR2213	Induced Breeding in Aquaculture	Optional
ABR2236 (based on UBR2222)	5R system in waste management	Optional
MDS2239	ICT for Smart Farming	Optional

SEMESTER 2

Course-code	Course-module	Course type
ABR2237 (Based on UBR2223)	Biotechnology	Core
MDS2214	Food Packaging and Value Addition	Core
MDS2115	Basics of Agro/Aquatic Tourism	Core
MDS2116	Instrumentation and Analytical Techniques	Core
MDS2117	Basic Statistics	Core
MDS2118	Innovation for Sustainable Development	Core
ABR2214	Fish Farm/Aquatic Farm Designs and Production	Core
ABR2115	Hatchery Management	Core

ABR2116	Pond Engineering	Core
ABR2217	Marine Mollusc Production	Core
MDS2019	Field Study Programme	Compulsory
MDS2220	Value Chain Management in Urban and Aquatic Bioresources	Optional
MDS2121	Business Development and Project Analysis	Optional
ABR2218	Aquatic Pathology and Microbiology	Optional

THIRD YEAR

SEMESTER 1

Course-code	Course-module	Course type
ABR3219	Urban and Aquatic Genetic Resources	Core
MDS3223	Entrepreneurship and Regional Development	Core
ABR3138 (based on UBR3127)	Community-based Bioresources Management	Core
ABR3220	Advanced Aquatic Farm Designs	Core
ABR3221	Smart Aquaculture	Core
MDS3225	Advanced Aquatic Resources Economics	Core
ABR3222	Use of Bioresources in Agro-Marine Technology	Core
MDS3226	Technology Transfer Management	Optional
MDS3127	Policy and Regulatory Framework	Optional
ABR3239 (based on UBR3231)	Invasive Flora and Fauna in Bioresource Management	Optional

SEMESTER 2

Course-code	Course-module	Course type
ABR3240 (based on UBR3232)	Urban Bioresources and Sustainable Built Environment	Core
MDS3228	Experimental Methods and Statistical Tools	Core
MDS3229	Urban and Coastal Waste Management	Core
MDS3130	Ecosystem-based Disaster Risk Reduction	Core
MDS3131	Biosafety and Biosecurity in Bioresource Management	Core
ABR3223	Bioresources Conservation and Management in Coastal Wetlands	Core
ABR3224	Fishing Gear Technology	Core
MDS3232	Industrial Training	Core

FOURTH YEAR

SEMESTER 1

Course-code	Course-module	Course type
MDS4333	Applied Statistics	Core
MDS4234	Applied Environmental Economics	Core
MDS4235	Professional Practice and Personal Skills	Core
MDS4336	Research Methodology, Data Collection and Reporting	Core
MDS4237	Bioresources Conservation Management	Core
MDS4238	Embedded Systems for Sensing Environment	Core
ABR4225	Advances in Aquatic Landscaping	Optional
ABR4226	Advances in Aquaculture and Fisheries	Optional
ABR4227	Engineering Aspects of Aquatic Farming	Optional
ABR4228	Legislation in Aquatic Bioresources	Optional
ABR4129	Labeling in Fish and Fish Products	Optional

SEMESTER 2

Course-code	Course-module	Course type
ABR4930	Research Project	Compulsory

BSc Degree in Urban Bioresources

Each student should take course-modules to meet a minimum cumulative credit value of 15 per academic semester

FIRST YEAR

SEMESTER 1

Course-code	Course-module	Course type
MDS1201	Environmental Economics	Core
MDS1102	Nutritional Benefits of Urban and Aquatic Food Products	Core
UBR1101	Effective Water Management in an Urban Setup	Core
MDS1103	Analytical Instruments	Core
MDS1204	Entrepreneurship and Business Development	Core
UBR1202	Practical Aspects of Agro-Urban Architecture	Core
UBR1203	Plant Propagation and Nursery Management	Core
UBR1204	Urban Composting, Soil and Fertilizer Management	Core
MDS1039	English - Level I	Compulsory
MDS1205	Fundamentals of Information Technology	Optional
UBR1205	Green Buildings and Sustainable Urban Development	Optional
UBR1206	Cut Flower Production and Ornamental Plants	Optional
UBR1107	Bonsai and Bottle Gardening	Optional
UBR1108	'B' friendly gardening; Butterflies, Bees and Birds	Optional

SEMESTER 2

Course-code	Course-module	Course type
UBR1209	Municipal Solid Waste Management	Core
MDS1206	Occupational Health and Safety in Bioresource Management	Core
MDS1141	Basic Mathematics	Compulsory
UBR1210	Bioresource Management in an Urban Setup (Farming systems)	Core
UBR1211	Fundamentals of Plant Pest and Disease Management	Core
UBR1212	Urban Forestry and Wildlife	Core
UBR1213	Urban Livestock Production	Core
MDS2040	English - Level II	Compulsory
MDS1207	Environment and Bioenergy	Optional
MDS1108	Free Tools in Science Communication	Optional
UBR1214	Fundamentals of Herb Culture	Optional
UBR1215	Mushroom Production in an Urban Setup	Optional

SECOND YEAR

SEMESTER 1

Course-code	Course-module	Course type
UBR2216	Farming in Controlled Environments	Core
UBR2217	Advanced Water and Wastewater Treatments	Core
MDS2209	Urban and Aquatic Post-Harvest Technology	Core
MDS2110	Data Modelling and Analysis	Core
UBR2218	Edible Parks	Core
UBR2219	Plant Pest and Disease Management	Core
MDS2211	Urban Ecosystem/Environmental Economics	Core
MDS2213	Renewable Bioresources and Bioremediation	Optional
UBR2220	Commercial Mushroom Production	Optional
UBR2221	Nature-based Urban Recreation	Optional
UBR2222	5R System in Waste Management	Optional
MDS2239	ICT for Smart Farming	Optional

SEMESTER 2

Course-code	Course-module	Course type
UBR2223	Biotechnology	Core
MDS2214	Food Packaging and Value Addition	Core
MDS2115	Basics of Agro/Aquatic Tourism	Core
MDS2116	Instrumentation and Analytical Techniques	Core
MDS2117	Basic Statistics	Core
MDS2118	Innovation for Sustainable Development	Core
UBR2224	Urban Pomology	Core
UBR2225	Commercial Herb Production	Core
UBR2226	Beekeeping for Honey Production	Core
MDS2019	Field Study Programme	Compulsory
MDS2220	Value Chain Management in Urban and Aquatic Bioresources	Optional
MDS2121	Business Development and Project Analysis	Optional
MDS2222	Green Concepts in the Hotel Industry	Optional

THIRD YEAR

SEMESTER 1

Course-code	Course-module	Course type
UBR3245 (based on ABR3219)	Urban and Aquatic Genetic Resources	Core
MDS3223	Entrepreneurship and Regional Development	Core
UBR3127	Community-based Bioresources Management	Core
UBR3228	Advanced Urban Farm Designs	Core
UBR3229	Smart Farming	Core
MDS3224	Advanced Urban Ecosystem/Environmental Economics	Core
UBR3230	Urban Bioresources Management in Green buildings	Core
MDS3226	Technology Transfer Management	Optional
MDS3127	Policy and Regulatory Framework	Optional
UBR3231	Invasive Flora and Fauna in Bioresource Management	Optional

SEMESTER 2

Course-code	Course-module	Course type
UBR3232	Urban Bioresources and Sustainable Built environment	Core
MDS3228	Experimental Methods and Statistical Tools	Core
MDS3229	Urban and Coastal Waste Management	Core
MDS3130	Ecosystem-based Disaster Risk Reduction	Core
MDS3131	Biosafety and Biosecurity in Bioresource Management	Core
UBR3233	Bioresources Conservation and Management in Urban Wetlands	Core
UBR3234	Machinery and Tools in Farming	Core
MDS3232	Industrial Training	Core

FOURTH YEAR

SEMESTER 1

Course-code	Course-module	Course type
MDS4333	Applied Statistics	Core
MDS4234	Applied Environmental Economics	Core
MDS4235	Professional Practice and Personal Skills	Core
MDS4336	Research Methodology, Data Collection and Reporting	Core
MDS4237	Bioresources Conservation Management	Core
MDS4238	Embedded Systems for Sensing Environment	Core
UBR4235	Advances in Urban Landscaping	Optional
UBR4236	Engineering Aspects of Urban Agriculture	Optional
UBR4237	Advances in Urban Floriculture Production/Forestry and Wildlife	Optional
UBR4238	Arboriculture	Optional
UBR4239	Advances in Commercial Mushroom Production	Optional
UBR4140	Advances in Urban Livestock Production	Optional
UBR4141	Regulations in Urban Wetland Management	Optional
UBR4142	Bioresource Utilization in Plantation/State Sector	Optional
UBR4243	Urban Toxicology	Optional
UBR4246	Nano and Advanced Technologies for Agricultural Applications	Optional
UBR4247	Advances in Tissue Culture and Plant Factory Systems for Commercial Horticultural Production	Optional

SEMESTER 2

Course-code	Course-module	Course type
UBR4944	Research Project	Compulsory

Departments in the Faculty of Urban and Aquatic Bioresources

The Faculty of Urban and Aquatic Bioresources consists of three departments of study.

Department of Aquatic Bioresources Department of Urban Bioresources Department of Multidisciplinary Studies

03

DEPARTMENT OF AQUATIC BIORESOURCES

Sri Lanka is blessed with a magnificent coastal belt that serves as a tourist attraction and a source of numerous livelihoods in coastal fishery. The wealth of our marine resources extends way beyond the coastal belt, leaving us with an exclusive economic zone (EEZ) of 517,000 km^2 in the Indian Ocean. On the other hand, a legacy of inland water reservoirs, fabulous river systems, picturesque estuaries and the life in these freshwater, brackish water and marine habitats, all add to this wealth of aquatic resources. Majority of these aquatic resources are largely untapped and are yet to be explored. In a knowledge-based bioeconomy, it is high time to identify, understand and work towards the sustainable utilization and management of our aquatic bioresources. The Department of Aquatic Bioresources was established to meet this objective.

The undergraduate and postgraduate degree programmes of the Department are expected to cater a broader spectrum of career interests both in the marine sector as well as in the inland water sectors. The Department is also involved in conducting research and dissemination of novel knowledge in diverse fields of aquatic bioresources.

The Department of Aquatic Bioresources offers two-degree programs in Aquatic Bioresources.

Bachelor's degree program in Aquatic Bioresources - BSc in Aquatic Bioresources
Honours degree program in Aquatic Bioresources - BSc (Hons) in Aquatic Bioresources

BSc degree programmes in Aquatic Bioresources

Course code : ABR
Duration : Three years (Bachelor's degree)

Four years (Honours degree)

For Whom?

For students from the biological science streams who are interested in pursuing careers in diverse fields of aquatic bioresources

Eligibility: Students who have become successful in the G.C.E (Advanced Level) Biology stream are eligible to apply for the above degree programmes.

Career opportunities: The degree programmes of the Department are expected to cater a broader spectrum of career interests both in the marine sector as well as in the inland water sectors.

Academic Staff

Prof. Erandi Pathirana *BVSc (Peradeniya) MSc (Osaka) PhD (Sydney) FSLCVS*
Head/Department of Aquatic Bioresources
Professor/Veterinary Surgeon
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Course modules offered by the Department of Aquatic Bioresources

First Year

ABR1201	Practical Aspects of Aquatic Architecture
ABR1202	Environment Management in Aquaculture
ABR1203	Ornamental Fish Culture and Breeding
ABR1204	Fundamentals of Seaweed Production
ABR1205	Fishery Resources Management
ABR1206	Aquatic Animal Health
ABR1207	Fish Feed Technology
ABR1208	Mariculture
ABR1109	Fattening of Edible Crustaceans
ABR1131	Effective Water Management in an Urban Setup (based on UBR1101)
ABR1132	'B' friendly gardening: Butterflies, Bees and Birds (based on UBR1108)
ABR1233	Municipal Solid Waste Management (based on UBR1209)

Second Year

ABR2210	Coastal Aquaculture: Methods and Technology
ABR2211	Seaweed/ Algae Farming and Processing
ABR2212	Biochemistry for Aquaculture
ABR2213	Induced Breeding in Aquaculture
ABR2214	Fish Farm/Aquatic Farm Designs and Production
ABR2115	Hatchery Management
ABR2116	Pond Engineering
ABR2217	Marine Mollusc Production
ABR2218	Aquatic Pathology and Microbiology
ABR2234	Farming in Controlled Environments (based on UBR2216)
ABR2235	Advanced Water and Wastewater Treatments (based on UBR2217)
ABR2236	5R System in Waste Management (based on UBR2222)
ABR2237	Biotechnology (based on UBR2223)

Third Year

ABR3219	Urban and Aquatic Genetic Resources Advanced Aquatic Farm Designs
ABR3220	Smart Aquaculture
ABR3221	Use of Bioresources in Agro-Marine Technology
ABR3222	Bioresources Conservation and Management in Coastal Wetlands
ABR3223	Fishing Gear Technology
ABR3138	Community-based Bioresources Management (based on UBR3127) Invasive
ABR3239	Flora and Fauna in Bioresource Management (based on UBR3231) Urban
ABR3240	Bioresources and Sustainable Built Environment (based on UBR3240)

Fourth Year

ABR4225	Advances in Aquatic Landscaping
ABR4226	Advances in Aquaculture and Fisheries
ABR4227	Engineering Aspects of Aquatic Farming
ABR4228	Legislation in Aquatic Bioresources
ABR4129	Labeling in Fish and Fish Products
ABR4930	Research Project

04

DEPARTMENT OF URBAN BIORESOURCES

The urban population in Sri Lanka is expected to increase over the years to come. Meeting the increasing food demand and proper management of bioresources is becoming a challenge. This has become a serious problem, causing numerous adverse effects on the urban environment and its life, with an increased risk of disasters. The negative consequences of urbanization can be addressed effectively through bioeconomic strategies thereby achieving sustainable economic development in Sri Lanka. The introduction of strategically developed urban farming in cities and utilization of bioenergy would be an integral part of this development. The main objective of the Department of Urban Bioresources is to train human resources for a knowledge-based bioeconomy that will effectively utilize resources in an urban environment for the said development.

The undergraduate and postgraduate degree programmes of the Department are expected to cater these needs by serving a wide spectrum of career interests, providing excellent career opportunities for students. The Department will also conduct research on diverse fields of urban bioresources while disseminating novel knowledge to the betterment of the community.

The Department of Urban Bioresources offers two-degree programs in Urban Bioresources.

Bachelor's degree program in Urban Bioresources - BSc in Urban Bioresources

Honours degree program in Urban Bioresources - BSc (Hons) in Urban Bioresources

BSc degree programme in Urban Bioresources

Course code	:	UBR
Duration		Three years (Bachelor's degree) Four years (Honours degree)

For Whom?

For students from biological sciences streams who are interested in pursuing careers in diverse fields of urban bioresources

Eligibility: Students who have become successful in the G.C.E (Advanced Level) Biology stream are eligible to apply for the above degree programmes.

Career Opportunities:

The degree programmes of the Department are expected to cater a broader spectrum of career interests providing excellent career opportunities for students in a variety of fields in urban agriculture and urban bioresource management. The Department will also conduct research on diverse fields of urban bioresources while disseminating novel knowledge to the betterment of the community.

Academic Staff

Prof. J. A. Surani Chathurika *B.Sc. Agri. Tech. & Mgt. (Peradeniya), MSc. (Peradeniya), PhD. (Peradeniya and Winnipeg, Canada), Postdoc (SLINTEC)*
Head/ Department of Urban Bioresources
Professor in Soil Sciences
Specializations: Soil Science, Agronomy, Crop science, Advanced fertilizer technologies, Green soil amendments and Natural product-based bio stimulants

Dr. E. Udari Uvindhya Rathnathunga *BSc (Hons) (Ruhuna) PhD (Ruhuna)* Senior Lecturer (Grade II)
Specializations: Plant Sciences, Plant Breeding, Genetics, Urban Bioresource Management and Controlled Environment Research
Email: uvindhya@sjp.ac.lk

Dr. Anusha Ekanayaka *BSc. (Hons) (Kelaniya), PhD. (Thailand)*
Senior Lecturer (Grade II)
Specializations: Mycology, Molecular Phylogeny, Plant pest and disease, Microbial Biotechnology, Mushroom production.
Email: anushahasini@sjp.ac.lk

Course-Modules offered by the Department of Urban Bioresources

First Year

UBR1101	Effective water management in an urban set up
UBR1202	Practical aspects of Agro-Urban Architecture
UBR1203	Plant Propagation and Nursery Management
UBR1204	Urban Composting, Soil and Fertilizer Management
UBR1205	Green Buildings and Sustainable Urban Development
UBR1206	Cut Flower Production and Ornamental Plants
UBR1107	Bonsai and Bottle Gardening
UBR1108	'B' friendly gardening; Butterflies, Bees and Birds
UBR1209	Municipal Solid Waste Management
UBR1210	Bioresource Management in an Urban Setup (Farming Systems)
UBR1211	Fundamentals of Plant Pest and Disease Management
UBR1212	Urban Forestry and Wildlife
UBR1213	Urban Livestock Production
UBR1214	Fundamentals of Herb Culture
UBR1215	Mushroom Production in an Urban Setup

Second Year

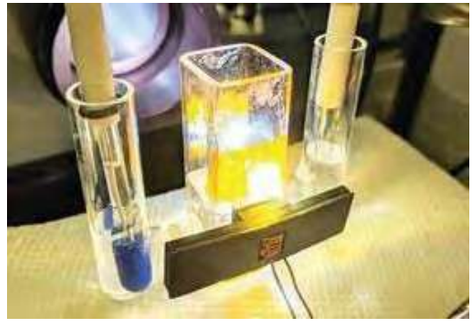
UBR2216	Farming in Controlled Environments
UBR2217	Advanced Water and Wastewater Treatments
UBR2218	Edible Parks
UBR2219	Plant Pest and Disease Management
UBR2220	Commercial Mushroom Production
UBR2221	Nature-based Urban Recreation
UBR2222	5R System in Waste Management
UBR2223	Biotechnology
UBR2224	Urban Pomology
UBR2225	Commercial Herb Production
UBR2226	Beekeeping for Honey Production

Third Year

UBR3127	Community-based Bioresources Management
UBR3228	Advanced Urban Farm Designs
UBR3229	Smart Farming
UBR3230	Urban Bioresources Management in Green Buildings
UBR3231	Invasive Flora and Fauna in Bioresource Management
UBR3232	Urban Bioresources and Sustainable Built Environment
UBR3233	Bioresources Conservation and Management in Urban Wetlands
UBR3234	Machinery and Tools in Farming
UBR3245	Urban and Aquatic Genetic Resources (based on ABR3219)

Fourth Year

UBR4235	Advances in Urban Landscaping
UBR4236	Engineering Aspects of Urban Agriculture
UBR4237	Advances in Urban Floriculture Production/Forestry and Wildlife
UBR4238	Arboriculture
UBR4139	Advances in Commercial Mushroom Production
UBR4140	Advances in Urban Livestock Production
UBR4141	Regulations in Urban Wetland Management
UBR4142	Bioresource Utilization in Plantation/State Sector
UBR4243	Urban Toxicology
UBR4246	Nano and Advanced Technologies for Agricultural Applications
UBR4944	Research Project



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DEPARTMENT OF MULTIDISCIPLINARY STUDIES

The Department of Multidisciplinary Studies (DMDS) offers course-modules common for all degree programmes offered by the Faculty of Urban and Aquatic Bioresources. The spectrum of the department includes a diverse array of disciplines ranging from Chemistry, Mathematics, Entrepreneurship and Business Development, Information Technology, to disciplines such as Artificial Intelligence (AI), Nanotechnology, Advanced Algorithms, Bioinformatics, Geographic Information Systems (GIS), Remote Sensing and Spatial Analysis. The DMDS ensures that the students of the faculty are acquiring the essential fundamentals through this broad spectrum of disciplines and will blend the skills and competencies gained,

with their specialized field.

Advances in technology are expected to groom the graduates of the faculty to the world of cutting-edge research and will let them explore the possibilities and opportunities of incorporating these novel technologies to cater the needs of a knowledge-based bioeconomy. Improving the soft skills of graduates will boost their preparedness to understand the principles, legal and ethical responsibilities in their respective fields and will open up avenues to knowledge dissemination across many layers of the community.

The Department of Multidisciplinary Studies offers the following common courses to all degree programs offered by the faculty.

Academic Staff

Dr. Janitha K. Walnita *BSc (USJ) PhD (Bowling Green*

Senior Lecturer (Grade I)

Specializations: Biocatalysis, Photochemistry, Instrumental analysis, Environmental remediation

E-mail: jkwalpita@sjp.ac.lk

Dr Jayani Kulathunga BSc. (Hons) (WUSL); MSc (NDSU, USA); PhD. (NDSU, USA); Post-doc (NDSU, USA)
Senior Lecturer (Grade II)
Specializations: Cereal chemistry and bakery science, Structure function relationships of carbohydrates, Dietary fiber functionality and fermentability
E-mail: jayanichathurika@sjp.ac.lk

Course modules offered by the Department of Multi-disciplinary Studies

First Year

MDS1201	Environmental Economics
MDS1102	Nutritional Benefits of Urban and Aquatic Food Products
MDS1103	Analytical Instruments
MDS1204	Entrepreneurship and Business Development
MDS1205	Fundamentals of Information Technology
MDS1206	Occupational Health and Safety in Bioresource Management
MDS1207	Environment and Bioenergy
MDS1108	Free Tools in Science Communication
MDS1039	English - Level I
MDS1040	English - Level II
MDS1141	Basic Mathematics

Second Year

MDS2209	Urban and Aquatic Post-Harvest Technology
MDS2110	Data Modelling and Analysis
MDS2211	Urban Ecosystem/Environmental Economics
MDS2212	Aquatic Resource Economics
MDS2213	Renewable Bioresources and Bioremediation
MDS2214	Food Packaging and Value Addition
MDS2115	Basics of Agro/Aquatic Tourism
MDS2116	Instrumentation and Analytical Techniques
MDS2117	Basic Statistics
MDS2118	Innovation for Sustainable Development
MDS2019	Field Study Program
MDS2220	Value Chain Management in Urban and Aquatic Bioresources
MDS2121	Business Development and Project Analysis
MDS2222	Green Concepts in the Hotel Industry
MDS2239	ICT for Smart Farming

Third Year

MDS3223	Entrepreneurship and Regional Development
MDS3224	Advanced Urban Ecosystems/Environmental Economics
MDS3226	Technology Transfer Management
MDS3127	Policy and Regulatory Framework
MDS3228	Experimental Methods and Statistical Tools
MDS3229	Urban and Coastal Waste Management
MDS3130	Ecosystem-based Disaster Risk Reduction
MDS3131	Biosafety and Biosecurity in Bioresource Management
MDS3232	Industrial Training

Fourth Year

MDS4333	Applied Statistics
MDS4234	Applied Environmental Economics
MDS4235	Professional Practice and Personal Skills
MDS4336	Research Methodology, Data Collection and Reporting
MDS4237	Bioresources Conservation Management
MDS4238	Embedded Systems for Sensing Environment

Consultants and Honorary Appointments

Consultant

Emeritus Prof. Gamini Senanayake (BSc. PhD)
Faculty of Agriculture/University of Ruhuna Former Vice-Chancellor/University of Ruhuna

Honorary Appointments

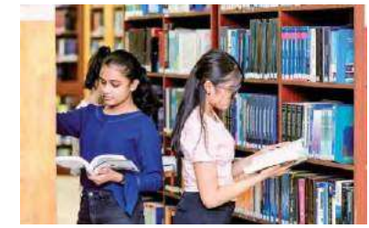
Prof. Emeritus Richard Whittington
BVSc MACVSc PhD GAICD FASM
Professor in Aquatic Animal Health
Sydney School of Veterinary Science, Faculty of Science
The University of Sydney – Camden Campus
Australia

Prof. Luigi Lucini MSc, PhD
Associate Professor in Agricultural Chemistry
Department for sustainable food process (DiSTAS)
University of Milan
Italy

Prof. Hicham Idriss BSc, MSc, PhD and Habilitation (Dr. Science)
Department of Chemistry of Oxidic and Organic Interfaces
Karlsruhe Institute of Technology
76131 Karlsruhe,
Germany

06

COMMON STUDENT FACILITIES PROVIDED BY THE UNIVERSITY



Library

The library commenced with an initial collection inherited from Vidyodaya Pirivena with the establishment of the Vidyodaya University of Ceylon in 1959. Subsequently it was housed in a substantial area of the Sri Sumangala Building since 1961 and developed the collection over the years. The entire collection of the library was shifted to aspirate library building in 1988 which certainly located with provision for a full-pledged library.

The Library of the University of Sri Jayewardenepura possess a collection of more than two hundred and seventy-five thousand books and hundreds of scholarly journals and electronic databases along with a rare book collection which covers Applied Sciences, Medical and Allied Health Sciences, Engineering, Humanities, Social Sciences, Management and Commerce etc. Visit the Library website (http://lib.sjp.ac.lk) for more details.

The Mission

The Mission is to provide access to the library and information services in an efficient, effective and useful manner to support teaching, learning and research activities of the intellectual community by making resource materials available, and by assisting users to be acquainted with skills in locating information deemed necessary in the modern information age.

English Language Zone (ELZ)
ELZ is maintained for learning English language within the library. It contained basic grammar books and short story books.

Scholar Bank
Scholar Bank provides access to the research articles of the academic staff members of the University through the website link; http://dr.lib.sjp.ac.lk/.

Inter Library Loans (ILL)
ILL provides the facility to borrow books and other materials from other Libraries on mutual co-operation. The request can be placed through library website or by emailing to illusjp@sjp.ac.lk.

Electronic resources
Electronic resources include full-text electronic journals, electronic books, reference resources and supplementary readings which can be accessed through the library website, http://lib.sjp.ac.lk/.

Remote Access to Library E-Resources
This facility will be provided through the Centre for IT Services (CITS)
You can access our electronic databases of Emerald, JSTOR, Taylor and Francis, Oxford Journals and Oxford Medicine Online outside the university premises which are useful for your online studies especially during this pandemic.

To be eligible for this facility, you are required to get registered with USJNet Sphere. For further details and instructions on registration refer the university library website, http://lib.sjp.ac.lk/.

New undergraduate students may join the library by completing the library membership application forms available in the library website.

Opening hours of the Main Library
The opening hours of the library may change depending on the situational circumstances with prior notification.

Monday - Friday	8.00 am. - 8.00 pm.
Saturday	8.00 am. - 6.30 pm.
Sundays and Public Holidays	8.00 a.m. - 6.30 p.m.

Contact details of the Staff

Librarian:
Dr. (Mrs.) N. D. Wijayasundara
Email : librarian@sjp.ac.lk
Tele : +94 11 2804194
Fax : +94 11 2804194

Center for IT Services
The Center for IT Services (CITS) facilitates the IT Infrastructure, Server Administration and it maintains e-Services and Applications while facilitating the IT Technical Support and Solutions for the university students and the staff.

CITS Website:
http://www.sjp.ac.lk/cits/
Contact Details:
Email: cits@sjp.ac.lk
Tele: +94 11 2758 757

Career Guidance Unit (CGU)
The objectives of the University Career Guidance are,

- To provide a service in Career Education, Career Guidance and Career Management.
- To expose undergraduates and recent graduates of the university to a variety of resources including people, data and information.
- To support undergraduates to set life goals, plan future career and put those plans into effect.
- To support students for employability skills development through various activities and programs.
- To help graduating students in their job search and career projects through recruitment-related services.

This unit provides up to date information on training and employment opportunities available

in the local and international training market to enhance the success of undergraduates' career. This Unit also helps undergraduates to develop their skills and abilities of self-assessment information seeking and decision making required for coping with the needs of complex of world of work & to develop lifelong learning ambitions. The unit has annually organized multifunctional programs based on the different themes such as Entrepreneurship & Innovation, personal grooming, Outward Bound Training Program, Awareness Programs in Orientations, Annual Job Fair & Career Guidance Workshop Series and Inter University Best Speaker Competition, Career Skills Development Society (CSDS), Touch the Peak- Japura Annual Job Fair and Workshop Series, Voyage Workshop Series, Shadow of Success, OBT camps, JESA- J'pura Employability Skills Awards, Gavel Club, Vorbitor- Intra University Best Speech Competition, Speech Master-Inter University Best Speech Competition, Tharanaya.

Career Guidance Unit web site:
http://ww.sjp.ac.lk/career/
Contact Details:
Email: sjpcareers@gmail.com
Tele: +94 11 2801 088

Medical Center

Medical Center provides medical facilities to undergraduates and staff of the University. Medical center facilitates the counselling sessions to required undergraduates, who need support group assistance which could affect their learning.

All students should register at the Medical Centre to obtain treatment from the Medical Center. The new students entering the university should submit his/her medical history sheet to the Medical Center within two weeks from receiving the registration number. More instructions can be found in the Medical Center Website.

Medical Center Website:
http://www.sjp.ac.lk/students/medical-center-and-medical-facilities/
Medical Center Medical Center opening hours:
Monday-Friday: 8.00 am. - 4.00 pm.
Dental surgery opening hours:
Monday - Friday: 8.30 am. - 3.30 pm.
Contact Details:
Dr. (Mrs.) A.D. Sagarie de Silva
Chief Medical Officer
Medical Health Center
University of Sri Jayewardenepura
Tele: +94 713 017 520

Department of English Language Teaching (DELT)

The DELT has designed all its courses in alignment with the UTEL (University Test of English Language) bandings.

The aim is to make English available, accessible, and eventually familiar which is important for personality development while providing basic language input to the undergraduates. The English language leaning program the students are encouraged to follow other optional English courses offered by DELT such as the Certificate Course in English.

Student Welfare Division

The Student Welfare Division is an active body which handles many issues relevant to the wellbeing of students. Host facilities, canteens, Mahapola and other scholarships, bursaries, transport season tickets and other such facilities are looked into by the division. At the same time, it also supervises students' unions, subject unions and student elections.

Student Welfare Division Website:
http://www.sjp.ac.lk/students/student-welfare-division/
Email : usjwelfare@gmail.com
Tel : 0112881731

University Accommodation

The University has 28 hostels to offer accommodation facilities. Some of these hostels are located within the university premises while others are situated in close-by areas. The total capacity of these hostels is up to 37% of the total student population which is approximately 15,000 students.

First and third year students are given priority in the selection process in order to be of more assistance to their studies. One and half months before the end of each academic year, students will be informed about their hostel facilities for the next year. A set of rules and regulations are lined up for students to abide by. These are to be followed with utmost attention which benefits both students and the university. Common conditions and rules and regulations for residential students are detailed in;

http://www.sjp.ac.lk/students/hostels/hostels-rules-and-r regulations-for-residential-students/
Hostel Website:
http://www.sjp.ac.lk/students/hostels/

Cafeterias
The university has a chain of canteens which are located within faculties and in common areas. The quality and hygiene of the food and the cleanliness of the canteens are supervised by the welfare division. A variety of food and beverages can be obtained for very reasonable prices.

Physical Education and Sports Center (PESC)
The Physical Education Division provides an opportunity for undergraduates to take part in different recreational and sports activities and to develop their personalities and qualities of teamwork through such participation.

The PESC provides facilities and equipment to students who excel in sports in order to be competitive at University, National and International level. They provide basic sports and recreational facilities to all students and staff. It improves social harmony in the University by providing opportunity for social interaction through sports and it establishes a complete and well-equipped sports center within the university.

Available Sports in PESC:
Athletics, Netball, Road Race, Rugby, Carrom, Table Tennis, Tennis, Taekwondo, Swimming, Badminton, Basketball, Chess, Volleyball, Football, Hockey, Karate, Cricket,

PESC Website:
http://www.sjp.ac.lk/physical-education/
Contact Details:
Mrs. Nishanthi Vidanage
Email: phyedu@sjp.ac.lk
Tele: +94 11 2803475
Fax: +94 11 2801604
Department of Physical Education
University of Sri Jayewardenepura
Nugegoda, Sri Lanka.

07

ANNEXURE

Scholarships/Medals/Awards offered by the Faculty

Academic Excellence Award
The Academic Excellence Award is conferred on two students with highest academic excellence from two-degree programs. The intent of the award is to recognize, encourage and assist currently enrolled undergraduate students for their academic excellence in their academic life.

Aim

To recognize and honor students who achieve well across the breadth of their subjects. To promote students aspiring to academic excellence and provide additional motivation.

Eligibility

The applicant should

be a student enrolled in a degree program which is offered by the Faculty of Urban and Aquatic Bioresources (FUAB)
have completed 30 credits for the applying academic year.
have 80% attendance for all practical classes for the applying academic year.
have garnered a Cumulative Grade Point Average (CGPA) of minimum 3.0 as of the applying academic year.
have earned grade above C for all courses of the academic year.
not have been subjected to any punishment for an academic related or other offenses, or received any warning letter from the University within the duration of enrolled degree program.

Dean's award for the best performance in the BSc (Honours) degree program in Urban Bioresources

Awarded for the student who obtains a First-Class Pass with the highest GPA in the BSc (Honours) degree program in Urban Bioresources

Dean's award for the best performance in the BSc (Honours) degree program in Aquatic Bioresources

Awarded for the student who obtains a First-Class Pass with the highest GPA in the BSc (Honours) degree program in Aquatic Bioresources

Dean's award for the best performance in the BSc (Bachelor's) degree program in Urban Bioresources

Awarded for the student who obtains a First-Class Pass with the highest GPA in the BSc (Bachelor's) degree program in Urban Bioresources

Dean's award for the best performance in the BSc (Bachelor's) degree program in Aquatic Bioresources

Awarded for the student who obtains a First-Class Pass with the highest GPA in the BSc (Bachelor's) degree program in Aquatic Bioresources