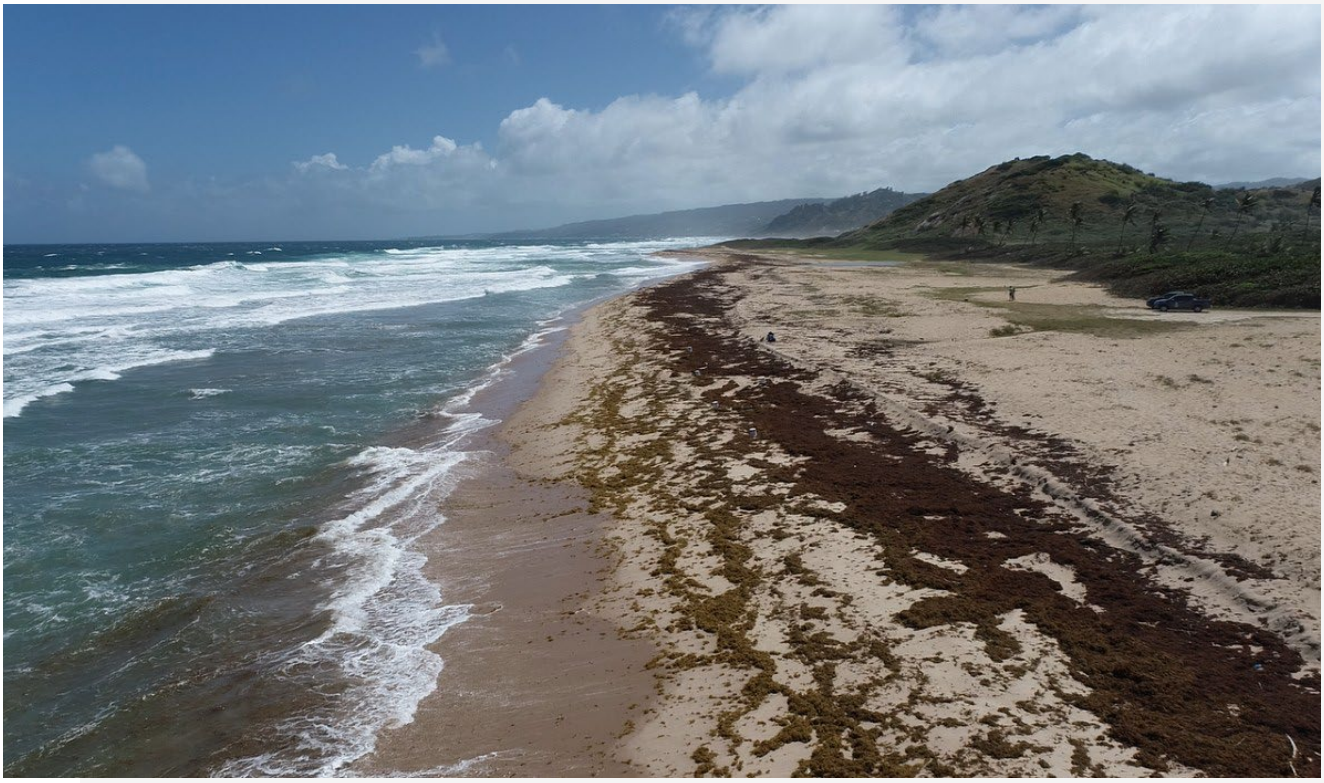
Natural Resources & Environmental Management

MSc Programme

Student Handbook

2024 - 2025



Centre for Resource Management and Environmental Studies
The Faculty of Science and Technology
The University of the West Indies (UWI), Cave Hill Campus
Barbados

Table of contents

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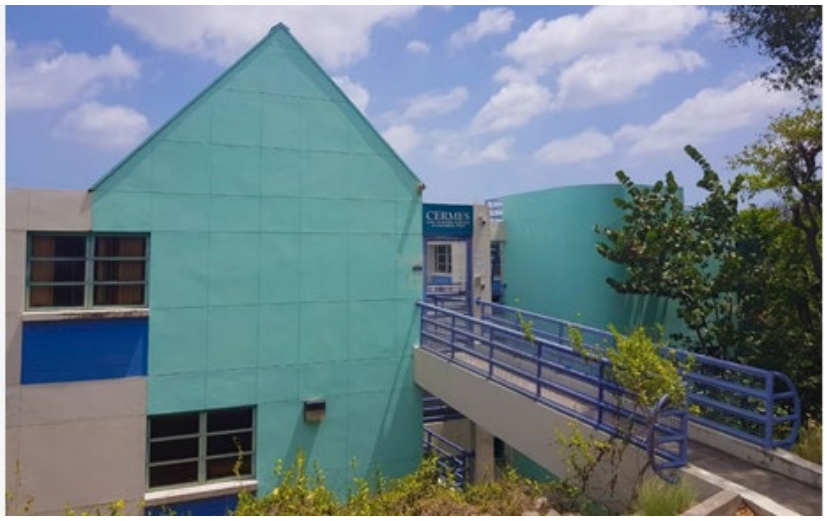
CERMES Faculty

Director	Dr. David Yawson
Programme Coordinator	Ms. Neetha Selliah
Academic Staff	Dr. Janice Cumberbatch Dr. Patrick McConney Prof. Hazel Oxenford Dr. Karl Payne
Professional Staff	
Project Officer	Ms. Maria Pena
Specialist Support Staff	
I.T Technician (Senior Laboratory Tech)	Mr. Dale Benskin
Laboratory/Field Technician	Mr. Joseph Weekes
Research Assistant	Mr. Khalil Greene
Administrative Assistant	--
Departmental Secretary	Ms. Mia Clarke

Part-time additional teaching staff for selected courses will be announced



Programme Objectives

The overall objective of the Masters Programme in Natural Resource and Environmental Management is to contribute to sustainable development in the Caribbean region by training professionals in environmental and natural resource management. The Programme seeks to provide graduate students with advanced training in techniques, mechanisms and policies for sustainable use and management of natural resources in the Caribbean.

Programme Structure & Content

Core Courses

The MSc consists of seven core courses worth three credits each and consist of 24 hours of lectures and an average of 12 hours of practical work.

Specialisation Stream Courses

There are four specialisation streams with four courses each. They are:

- Tropical Coastal and Marine Resource Management
- Climate Change
- Water Resources Management
- Land Management and Environmental Resilience

Specialisation courses are worth four credits each and consist of 36 hours of lectures and an average of 18 hours of practical work.

Students taking any stream may, on request, substitute one course from any other specialisation stream. On successful completion such students would be awarded the degree in their primary stream.

Non-Specialisation Option

CERMES has created a new option for students. This Non-Specialisation option allows students greater flexibility in choosing courses across our existing four specialisation streams.

After completing the core courses, students in the non-specialisation option have the flexibility to choose four specialisation courses from any of the above specialisation streams, taking a maximum of two courses from any single specialisation stream. Students will therefore have the flexibility to choose at least one course from each of the four specialisations to complete their degree.

The total number of credits required is the same as established for the existing specialisations (21 credits in core courses, 16 credits in specialisation courses and 8 credits in the research project).

Research Project

The research paper is worth eight credits.

To successfully complete this MSc Programme, students must therefore obtain the appropriate number of credits as outlined in Table 1. Students may be exempted from one or more core courses depending on their qualifications on entry to the Programme.

Programme Implementation & Duration

Duration

The Programme is delivered full-time in 14 months. This includes a ten-month period for course delivery and examination, and a four-month period for the research project. Courses are taught as two to three week modules, with examinations following the completion of each module where applicable, and course work being assessed throughout. Typically, courses are mostly delivered face-to-face, except for two core courses, which are delivered fully online and one core course which is blended (face-to-face and online). Due to changes in our global environment, Semester I and II modes of delivery will be decided based on the regional situation and UWI protocols.

Programme Requirements

A Bachelor's degree in a discipline appropriate to the MSc with a minimum Grade Point Average of 2.5 or Lower Second Class Honours or its equivalent is required. The minimum level of the degree required may be re-assessed for candidates with extensive professional experience in an appropriate discipline.

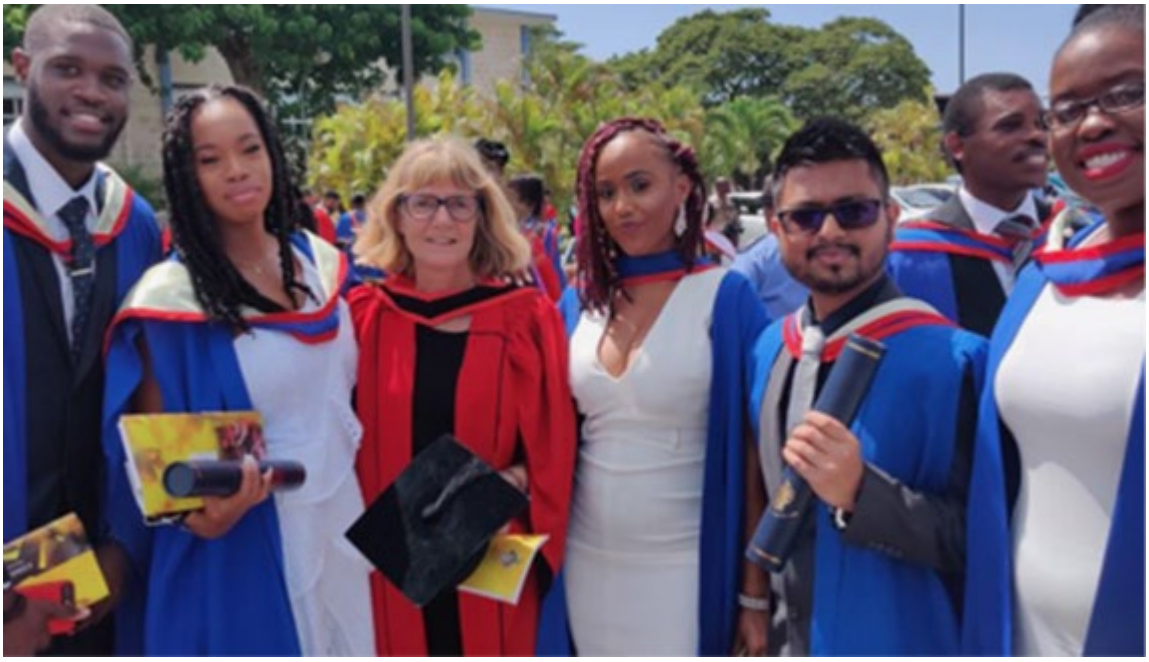
Application Procedures

Candidates should apply online through the School for Graduate Studies and Research, Office of Graduate Studies, of The University of the West Indies, Cave Hill Campus. Prospective graduate students can apply online via the website: http://www.cavehill.uwi.edu/gradstudies/future-students/application-steps.aspx.

Assessment Procedures

Courses are typically assessed by a combination of course assignments and a final examination or by a set of course assignments. For the research paper, assessment will be based on the examination of the paper (please refer to the Guidelines for ENVT 6900 Research Projects). The degree awarded is based on a GPA system:

GPA	Class of Hons Degree
3.70 & above	Distinction
3.00 – 3.69	Merit
2.00 – 2.99	Pass
0.00 – 1.99	Fail



For more details on the GPA system, please click here:
https://www.cavehill.uwi.edu/gradstudies/resources/gpa-regulations-for-graduate-certificates-diplomas.aspx

Graduation

Students are expected to graduate in October of the academic year following their year entry into the programme. However, once a student completes all programme requirements prior to graduation, a letter of completion can be written to assist with job applications, promotions or confirmation for return to service. Note that the UWI Masters certificate for the programme will be issued after the graduation ceremony is held (normally in October).

Table 1: Course Credits for MSc Programme in Natural Resource and Environmental Management

Course		Tropical Coastal & Marine Resources Management	Climate Change	Water Resources Management	Land Management & Environmental Resilience	Non-Specialisation option
ENVT 6000	Concepts and Issues for Environmental Managers*	3	3	3	3	3
ENVT 6001	Introduction to Environmental Planning and Management*	3	3	3	3	3
ENVT 6002	Professional Skills for Environmental Managers*	3	3	3	3	3
ENVT 6100	Environmental Impact Assessment*	3	3	3	3	3
ENVT 6120	Measurement and Analysis in Natural Resource Management	3	3	3	3	3
ENVT 6101	Geoinformatics for Environmental Management*	3	3	3	3	3
ENVT 6102	Resource Economics*	3	3	3	3	3
ENVT 6122	Fisheries Biology and Management	4				Choose 16 credits from any stream with a maximum of 8 credits from any one stream.
ENVT 6126	Coastal Dynamics and Management	4				
ENVT 6127	Ecology and Management of Coral Reef Ecosystems	4				
ENVT 6130	Climate Dynamics and Modelling		4			
ENVT 6131	Policy Response to Climate Change		4			
ENVT 6133	Climate Change Impacts: Mitigation and Adaptation		4			
ENVT 6220	Water and Wastewater Management			4		
ENVT 6230	Water Management and the Environment			4		
ENVT 6235	Soil and Water Conservation				4	
ENVT 6236	Hydro-meteorological Risks and Water Resource Management			4		
ENVT 6238	Surface and Groundwater Hydrology			4		
ENVT 6240	Land Use and Environmental Resilience				4	
ENVT 6245	Biodiversity and Protected Area Management				4	
ENVT 6250	Tools for Environmental and Food Systems Analysis				4	
ENVT 6255	Disaster Risk and Resilience in Caribbean Tourism	4	4			
ENVT 6900	Research Project	8	8	8	8	8
Total		**45**	**45**	**45**	**45**	**45**

Semester I courses

Semester II courses

* Online courses

Course Descriptions

Core Courses

ENVT 6000 Concepts and Issues for Environmental Managers

Environmental and natural resource managers address complex issues of sustainable development from local to global level. This introductory course provides an overview of the key concepts and fundamental issues with which environmental managers should be familiar. In doing so, it covers topics, some of which are addressed in greater detail in specialization streams and others that may not be encountered again, so that all students acquire a broad and integrating interdisciplinary perspective. It encourages participants to examine and explore subjects of interest to them within broad topic headings that include systems thinking, governance, environmental instruments, poverty, gender, sustainable livelihoods, global goals and assessments, blue and green economies, research communication, project management and more. The line-up of topics changes each year to keep current. Students have the opportunity to choose a topic as a special session. It expands the mind.

ENVT 6001 Introduction to Environmental Planning & Management

This course covers a wide range of areas including perspectives on environmental management and planning; international and regional agreements; arrangements for environmental planning, policy design, implementation, and evaluation; and people-centred practices in planning and management. Persons with backgrounds in natural science, social science and other disciplines will find it relevant to their education and experience. It is online, interdisciplinary, and prepares participants for a variety of careers related to the environment. Many of the specialisation courses build upon this. Students exchange information and experience on what it is like to be a participant in a planning process and what improvements they would envisage making if they became planners and managers. It is a very interactive course, making full use of the online discussion forum and a variety of media resources.

ENVT 6002 Professional Skills for Environmental Managers

This course equips students with a portfolio of skills that will allow them to present themselves, and to conduct and present their work, in a professional manner. It starts by addressing fundamental issues of verbal and non-verbal communication geared at enhancing the students' ability to share information in a range of settings. The improvement of writing skills and the delivery of professional and persuasive presentations are all covered in this course. It provides students with knowledge and skills required to prepare literature reviews. There is also an introduction to word processing and presentation. In addition, the course will provide a basic introduction to group dynamics to facilitate students' ability to function effectively in team settings.

ENVT 6100 Environmental Impact Assessment

Environmental Impact Assessment (EIA) is an essential process in support of sustainable development. This course introduces key concepts and processes involved in environmental impact assessment. The intent of the course is to increase students' understanding of the role of EIA in resource management to the extent that they should be prepared to work as part of an EIA team in their field of expertise.

ENVT 6120 Measurement and Analysis in Natural Resource Management

This two-part course aims to prepare students for their research projects and lifelong research activities. It covers both quantitative and qualitative methods of data collection and a range of widely or commonly used data analysis techniques that are useful to natural resource and environmental managers. Key statistical concepts underlying the data analysis techniques are explained and hands-on data analysis using statistical software is used to reinforce knowledge and skills.

ENVT 6101 Geoinformatics for Environmental Management

Spatial information constitutes a significant part of all information used in policy and management decisions. As such, knowledge and skills in spatial information technology can open several career paths, including natural resources and environmental management. This course provides theoretical and practical foundation in Geographic Information Systems (GIS) and remote sensing, which are the core components of spatial information technology. The course covers concepts and techniques for creating, analysing, and managing spatial data (including satellite images). This course is targeted at MSc Natural Resources and Environmental Management students and anyone interested in acquiring theoretical understanding and practical skills in spatial information technology. Students will gain practical skills in using the ArcGIS and QGIS software to analyse spatial data and satellite images to address problems in natural resources and environmental management. This course seeks to equip students with the theoretical understanding and practical skills in geo-informatics that underpin natural resources and environmental management. This course assumes no previous knowledge or skills in Geo-informatics.

ENVT 6102 Resource Economics

This course surveys a range of economic issues relating to environmental problems and solutions. Economic principles are developed and applied to evaluate environmental issues such as property rights, externalities, conservation, and public goods as well as public and private decisions involving the use and allocation of natural resources. After an introduction to markets, potential policy and institutional remedies to general environmental market failures are evaluated. This is followed by an introduction to cost-benefit analysis and economic valuation methods. The theoretical foundations for economic efficiency and optimal use are then developed and applied to the management of natural resources. Specific resource management areas such as forests, fisheries, land, minerals, and water are examined, with special attention given to coastal and marine resources. The course concludes with an examination of the economics of global environmental issues.

SPECIALISATION STREAMS

TROPICAL COASTAL AND MARINE RESOURCES MANAGEMENT

This stream will provide students with the knowledge and skills in concepts, policies, tools and techniques necessary for fishery and coastal zone management, and with a clear appreciation of the transdisciplinary approach required to be either effective fishery and coastal zone managers or effective advisors and consultants to organisations whose activities impact on the coastal zone. Emphasis will be on Caribbean case studies, with ample opportunity for practical experience. The four specialization courses offered in this stream are:

ENVT 6122 Fisheries Biology and Management

This course reviews the global importance and state of fisheries production and examines the information, tools and strategies needed for assessment and management of fishery resources. The course introduces students to biological assessment techniques suitable for tropical fishery resources, and provides an overview of current fishery management practice, needs and constraints. Emphasis is given to marine capture fisheries, tropical species and Caribbean case studies. The impacts of international agreements, the FAO Code of Conduct for Sustainable Fisheries and recent developments in ecosystem-based management are all considered in the context of fisheries management in the Caribbean. Topics include: importance and state of world fishery resources, aquaculture and current management issues; traditional and genetic-based stock identification techniques; stock dynamics (growth, mortality, reproduction/recruitment rates of individuals and populations); introduction to yield prediction modelling and interpretation; framework of international law and voluntary guidelines; influence of NGOs and market demand (eco-labelling); prioritizing management goals; selecting management objectives and performance indicators; review of management tools for controlling catch and effort (quotas, gear restrictions, minimum size, limited entry, closed seasons, MPAs); implementation strategies (top-down and community-based approaches); policy direction in the Caribbean (climate change adaptation, ocean policy and MSP, blue economy).

ENVT 6126 Coastal Dynamics and Management

This course examines the dynamics of principally critical abiotic coastal resources of the Caribbean with emphasis on the physical processes that shape them, and the linkages and interactions among them. Topics will include wind-generated waves and their properties, including refraction, diffraction, and reflection; coastal erosion, transport, deposition and resultant geomorphologic features; the sediment budget and beach stability; and a review of coastal management tools examining their advantages and disadvantages. These tools will include the use of water quality standards, coastal land use controls, coastal protection structures and approaches various approaches to integrated coastal zone management.

ENVT 6255 Disaster Risk and Resilience in Caribbean Tourism

This course explores the concept of disaster risk reduction for the tourism sector, paying attention to its complementarity to issues such as sustainable tourism and climate change adaptation. In addition, it recognises that the majority of persons employed in the tourism sector (both formal and informal) are women, and that women and men experience different levels of hazard exposure and risk – therefore the concept of gender mainstreaming will also be explored.

The course is designed for individuals who have an interest in or work in the tourism sector, with a specific view of understanding and responding to hazards that impact tourism and travel. It aims to equip students with the knowledge and skills to apply disaster risk reduction principles and strategies to enhance the resilience and sustainability of the Caribbean tourism sector.

ENVT 6127 Ecology and Management of Coral Reef Ecosystems

This course gives students the essentials of oceanography with a focus on the Caribbean. It then introduces students to the distribution, biology, ecology and dynamics of critical tropical coastal marine ecosystems (coral reefs, mangroves and seagrasses) with emphasis on the Caribbean and site visits to examples of these ecosystems in Barbados. The course will provide an understanding of the full suite of values and the key anthropogenic stressors of coral reefs and their associated ecosystems. This will include an overview of their current status and possible future scenarios. Students will consider options for tackling global stressors and discuss appropriate mitigation measures to address specific local stressors including a review of the pros and cons of ecosystem restoration techniques and marine parks. Students will be introduced to the ecosystem-based management approach, and will gain hands on experience with coral monitoring (rapid appraisal) and mangrove monitoring (long-term) and some of the complex issues of managing a multiple use marine park.

CLIMATE CHANGE

This stream will provide students with - an understanding of the causes of climate change globally and within the Caribbean; knowledge of current climate trends and projections for the Caribbean; an appreciation of potential impacts of climate change on natural and socio-economic systems in the region; knowledge of adaptive and mitigative measures available to buffer the impacts; an understanding of the regional and international policy framework within which climate change is addressed; and with the negotiation skills required to make significant contributions at regional and international climate change meetings and Conventions. The four specialization courses offered in this stream are:

ENVT 6130 Climate Dynamics and Modelling

This course develops knowledge and skills for modelling and simulating climate and interpreting the results from climate models. It demonstrates the contribution and relevance of interdisciplinary research and policy considerations as inputs to climate modelling. Topics include: constituents, structure and primary atmospheric processes; the global energy balance; atmospheric radiative transfer theory; the energy and moisture balances of the Earth's surface; climate sensitivity and climate feedback mechanisms; weather, climate and climate variability; global oceanic circulation; climate driving forces, including greenhouse gases and their effects; anthropogenic aerosols and volcanic eruptions; ultraviolet radiation, ozone and CFCs; numerical modelling and climate models; scaling issues and limitations of General Circulation Models; monitoring, observation and modelling of past climates and trends; global warming, hurricanes and El Nino Southern Oscillation (ENSO); future climate trends and changes.

ENVT 6131 Policy Response to Climate Change

This course evaluates a broad suite of policy approaches to GHG reduction and climate stabilization, in the context of the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol and the Paris Agreement. It develops knowledge and skills for policy formulation, and for strengthening negotiating capacity to further regional interests in the global climate change debate. Topics include: the international policy response; UNFCCC, Kyoto Protocol and Paris Agreement as instruments for atmospheric stabilization; policy approaches of developed and developing countries; negotiating positions of major UN Groups: European Union (EU), Japan-United States-Canada-Australia-New Zealand (JUSCANZ), Group of 77 and China (G77), Environmental Integrity Group (EIG), Organization of Petroleum Exporting Countries (OPEC), the Alliance of Small Island States (AOSIS) and others; application of key negotiating tenets, including the precautionary principle and common but differentiated responsibilities; exploring elements of a CARICOM negotiating position. In addition, the course is a forum for disseminating continuous information to students on CARICOM and SIDS initiatives in the areas of adaptation and mitigation, and also provides updates on the significance of outcomes of the Conference of the Parties (CoP), which are held annually.

ENVT 6255 Disaster Risk and Resilience in Caribbean Tourism

This course explores the concept of disaster risk reduction for the tourism sector, paying attention to its complementarity to issues such as sustainable tourism and climate change adaptation. In addition, it recognises that the majority of persons employed in the tourism sector (both formal and informal) are women, and that women and men experience different levels of hazard exposure and risk – therefore the concept of gender mainstreaming will also be explored.

The course is designed for individuals who have an interest in or work in the tourism sector, with a specific view of understanding and responding to hazards that impact tourism and travel. It aims to equip students with the knowledge and skills to apply disaster risk reduction principles and strategies to enhance the resilience and sustainability of the Caribbean tourism sector.

ENVT 6133 Climate Change Impacts: Mitigation and Adaptation

Climate change poses significant risks to the stability and maintenance of global bio-geophysical processes, resources, economies, and societies. These risks have been amplified since the start of the Industrial Revolution and will continue to be exacerbated as global greenhouse gas emissions (GHGs) from anthropogenic activities remain largely unabated. Both the Intergovernmental Panel on Climate Change (IPCC) and the United Nations Framework Convention on Climate Change (UNFCCC) have identified an urgent need for the implementation of adaptation and mitigation strategies at global, regional and local scales, in order to 'prevent dangerous anthropogenic interference with the climate system' (UNFCCC, Article 2). While all nations will be impacted by climate change, the consequences are expected to be severe and overwhelmingly adverse for Small Island Developing States and vulnerable regions such as the Caribbean, whose economic and social development is heavily dependent on the natural capital with which these countries are endowed. Without the swift implementation of efficacious climate change mitigation and adaptation strategies, achievement of the goal of sustainable development will be most challenging for these vulnerable Caribbean states.

With a focus on SIDS, the course examines the observed and projected impacts of climate change (adverse and beneficial), and the role of mitigation and adaptation interventions (and their evaluation) in minimizing the negative effects of change. The course will also explore the potential for climate change to cause shifts in marine boundaries, and potential international, regional and national responses. The course facilitates understanding of adaptation concepts, frameworks and tools, and the use of various instruments (e.g. tradable emission permits, taxes, insurance schemes) in the implementation of adaptation and mitigation strategies. Students will survey sector-specific adaptation and mitigation options and the potential for strategies in one sector to result in maladaptation in another.

WATER RESOURCES MANAGEMENT

The goal of this stream is to prepare graduates to address technical, social, economic and political dimensions of water resources management, especially in Small Island Developing States. The specialisation courses will cover the physical and organisational dimensions of water supply, distribution and wastewater management and the variety of issues facing water services managers. They will provide training in hydrological and hydrogeological analysis techniques and their application.

ENVT 6238 - Surface and Groundwater Hydrology

This course introduces students to hydrological concepts and principles that underpin scientific and operational management of water resources. The course starts by providing a context for and implications of the varied hydrogeological characteristics for water resource endowment and management in Small Island Developing States in the Caribbean. The hydrologic cycle and associated processes that underpin water flows and storage above and below the ground are discussed. These include precipitation, infiltration, percolation, evaporation, and runoff. General guidance on measurement and analysis of the hydrologic components will be provided. A catchment approach is adopted to understand these processes, as well as the storage of water on the surface and below the ground. The utility of hydrological principles and analysis for water resources management will be discussed, complemented with hands-on activities. Case studies will be provided to help deepen understanding and the application of the knowledge gained through the course to relevant problems in the Caribbean and elsewhere.

ENVT 6220 - Water and Wastewater Management

The focus of this course is on the technical, managerial, and organizational aspects of making water resources available to consumers and the removal, treatment and disposal of wastewater. Students will be provided with an understanding of the issues surrounding aspects of water and wastewater management such as water collection and treatment, transportation and distribution of water; water demand estimation, supply and demand management; water distribution in urban and rural areas; water quality standards and measurement; definitions and characteristics of wastewaters; the potential environmental and public health concerns; sanitation, different wastewater collection and wastewater treatment and disposal systems; green-, grey- and black-water recycling and reuse; residuals management; storm-water drainage and management in urban and coastal areas; policy, legislation and regulations; financial mechanisms and institutional arrangements. In addition, the potential impact of climate change on water and wastewater management and the range of responses, adaptations and mitigations measures will be explored.

ENVT 6236 – Hydro-meteorological Risks and Water Resource Management

This course aims to enable students to understand weather or climate and hydrological combinations that underpin water-related disaster. The course covers the relationships and interactions between the physical processes of weather or climate and the water cycle to create or exacerbate risks of undesirable hydrometeorological events, the nature of these events and how to assess, monitor and manage the risks in the context of water resources management. The impacts of climate change on hydrometeorological processes and risks of undesirable events are covered, as well as the human dimensions of risk amplification and/or attenuation in water resources management decisions.

ENVT 6230 - Water Management and the Environment

Integrated water resources management considers how water should be managed by considering the multiple viewpoints and factors that need to be taken account when making decisions and taking actions. The competing uses of water in the natural, social, and economic environment requires knowledge and expertise from across many different disciplines. The aim of this course will be to examine the varying aspects that constitute water resources management in island and non-island countries in the Caribbean region and the relationships between the technical, natural, social, economic and political environment, particularly those issues facing SIDS. The course places an emphasis on the economics of water and water resources as well as on legal and policy perspectives. Course material will cover: concepts of catchment/watershed management, integrated water resources management; national and international laws and institutional arrangements that impact on water management; economics; the political ecology of water; the impacts of water resources developments including land/marine interaction issues, decision support tools and development pressures.

LAND MANAGEMENT AND ENVIRONMENTAL RESILIENCE

Land and its ecosystems provide products and services that are fundamental to life and its quality. For this reason, the use and management of land resources are at the heart of sustainable human development and resilience. This stream aims to produce a cadre of professionals capable of integrating sector-specific requirements for resource management into a holistic, risk-sensitive land management approach that enhances environmental resilience and supports sustainable development goals. At the heart of this stream is the application of systems thinking and ecosystem approaches to address issues of environmental resilience and sustainable development. Graduates from this stream will be equipped to work with ministries, agencies, NGOs, and businesses with a focus in agriculture and food systems, disaster risk management, physical planning and land use management.

ENVT 6235 Soil and Water Conservation

This course aims to facilitate students' understanding of the importance of soil to human existence and development, and land management approaches to protect and secure soil and water. It covers the nature and properties of soil, land management approaches to enhance soil health and secure soils, land degradation processes and management, and concludes with the emerging concept of land degradation neutrality. The course will be delivered via a combination of lectures, discussions, demonstration, computer-based simulations and field work. It is targeted, primarily, at the MSc NAREM students in this specialization but also other professionals and students interested in understanding or analysing the relationships between food systems and environmental sustainability.

ENVT 6240 Land Use and Environmental Resilience

This course exposes students to the multi-scale and multi-dimensional interconnections between land use, resource sustainability and environmental resilience. The course focuses on analysis of how interactions between the human and natural environments generate disaster risks and how these risks can be mitigated or managed through the instrument of land use. Central to the course is the evaluation of land-use contexts (across varying spatio-temporal scales) in which environmental and natural resource management problems or disaster risks occur or can be addressed using both quantitative and qualitative approaches. Thus, issues are analysed from the functional and constituent perspectives in the nexus of land-use and resilience. In addition, students will gain advanced practical experience in GIS and remote sensing applications such as land-use/land cover mapping and analysis, and simulation of future land-use configurations to inform resilient development.

ENVT 6245 Biodiversity and Protected Area Management

This course exposes students to the principles and practices of sustainable management of biodiversity, protected areas and related ecosystem services. The imperatives of protected areas, core concepts of protected areas and effective management approaches for protected areas will be presented. Major international instruments and governance frameworks for biodiversity and protected area management will be studied. Students will be introduced to quantitative analysis of biodiversity and ecosystems in support of sound management and decision-making. In addition, students will learn the tools for evaluating management effectiveness.

ENVT 6250 Tools for Environmental and Food Systems Analysis

The course exposes students to the complex interactions between environment and food system that impact food security and human health, and the tools for analysing these interactions. The course covers topics in food systems and food security analysis, agro-environmental management, resource use and flows in food systems, systems thinking and resilience thinking, and advanced topics in GIS and remote sensing for environmental and food systems management. The course will be delivered via lectures, computer-based analysis, workshops, and discussions. The course is targeted, primarily, at the MSc NAREM students in this specialization but also other professionals and students interested in understanding or analysing the relationships between food systems and environmental sustainability.

NON-SPECIALISATION OPTION

This non-specialisation option was developed to allow students to combine their interests in different fields and to expand opportunities for employment and further studies. It provides students with broader knowledge and skills requisite for the complex demands of natural resources and environmental management. This option aims to produce a cadre of professionals capable of applying interdisciplinary approaches to addressing natural resources and environmental management challenges.

Graduates from this non-specialisation will be able to work or continue working in various sectors of the economy, or with several development agencies in the areas of natural resources and environmental management. They will also be able to pursue further studies in several areas related to natural resources and environmental management.

RESEARCH PROJECT

ENVT 6900

The Research Project is to be undertaken immediately after the end of Semester II from July to October. Students are required to submit their research paper at the end of this period for examination. Research projects are typically supervised by CERMES faculty and must be in priority research areas relevant to the students' specialisation stream. External non-CERMES persons can also act as supervisors, but they must be qualified experts in the relevant research areas, and approval must be granted by CERMES with CERMES faculty overseeing the project as secondary supervisors.

Orientation Week

CERMES hosts a mandatory Orientation for all new students which commences with a Meet and Greet with staff. The students then have a one-on-one session with the Programme Coordinator, followed by sessions on an introduction to postgraduate life, time management, study tips, use of social media as a research tool and living in Barbados. The CERMES Senior IT Technician then takes students through the CERMES/UWI IT resources and capacity, CERMES website and other resources. They are also introduced to Moodle, Zoom and MS Teams.

Important Points to Note

CERMES Office Hours

Opening hours for the departmental office are Mondays to Fridays from 8:30 am to 4:30 pm.

Course Registration

Course registration is done online via the UWI website: www.cavehill.uwi.edu .

Assignments

When submitting work, please use your identification number. Unless specifically told otherwise, all written assignments must adhere to the CERMES Instructions to Authors typically available with your course rubric and other course guidance. Assignments should not be printed unless so instructed, and never in colour unless requested by lecturers. They should be submitted as electronic files via Moodle (UWI eLearning platform) or by email unless advised differently by the course lecturer. If printed (double-sided), they may need to be submitted during office hours to either the Administrative Assistant or the Secretary in the CERMES Main Office. CERMES encourages you to help reduce paper use and printing costs.

Penalties for Late Submission of Assignments

Penalties may be issued for late submission of assignments. Students will be granted a grace period of seven (7) days to submit their work. However, during those seven (7) days, marks will be lost, at the discretion of the lecturer. After the grace period, the student will be awarded a zero (failing) grade/mark, if the coursework has not been submitted for marking. Your late submissions affect the efficient grading of all assignments. This negatively impacts the entire class and causes unnecessary anxiety, especially as the courses are modular, often in quick succession.

Plagiarism

According to The University of the West Indies Regulations for Graduate Diplomas and Degrees "plagiarism is a form of cheating. Plagiarism is the unauthorized and unacknowledged use of another person's intellectual efforts, ideas and creations under one's own name howsoever recorded. Since any piece of work submitted by a student must be that student's own work, all forms of cheating, including plagiarism, are forbidden." For more information on plagiarism and the penalties please read The University of the West Indies booklet on Regulations for Graduate Diplomas and Degrees (page 25-26).

To avoid plagiarism, the University has created a Postgraduate account that will allow you to check your papers. Your student package from Graduate Studies should provide you with the credentials for this resource.

Laptops

It is a practical necessity for students to have their own laptops during the course of the programme, but it is not an academic requirement.

Cell phone usage

Cell phones are to be turned off during lectures. Distraction due to cell phones is a serious breach of the expected academic etiquette.

Field Trips

Appropriate wear is required for field trips as some of these may occur on land and others in the water. You will be advised accordingly.

Lab Sessions

Appropriate wear as suggested by lecturers is required in the labs. CERMES takes occupational health and safety seriously.

Photocopying & Scanning

Students are allowed to use the printer/scanner/copier in the CERMES Main Office to photocopy and scan documents and will be billed for all copies and scans made. They are asked to settle their accounts promptly with the departmental secretary. Photocopies can also be made in the main library after the purchase of a photocopy card.

Printing Paper

Students must provide their own paper for printing documents. However, paper may be purchased by the ream from the CERMES Main Office. The use of recycled paper is practiced within the department and students are encouraged to participate in this practice.

Notices

Students should check the notice boards on the relevant lecture room doors for academic messages. Students are also asked to check their email regularly since this medium is also used for the dissemination of CERMES information.

Recycling

The UWI implemented its Recycling Initiative in April 2009. Please participate in this worthwhile programme. Recycling bins have been placed in the CERMES building for the collection of plastic, metal, glass and paper recyclables. Please rinse all bottles before placing them in the bins. Used printer cartridges are also collected for recycling by a local company, Ink Link. Please deposit these in Maria Pena's mailbox. Scrap paper for printing and photocopying can be obtained from the office.

ID Cards

Kindly check with the Postgraduate section for your UWI identification cards.

Maintenance issues

Any maintenance problems should be reported to Dr. Jennifer Hurley, CERMES Administrative Assistant.

Contacts

Please leave your term address, email address and contact number(s) with the office. Immediate notice of any change of address or telephone number(s) is required. Students are required to give one week's notice when leaving the island (unless in cases of emergency).

Mailing Address

The mailing address for the CERMES is:

CERMES
The University of the West Indies, Cave Hill Campus
Bridgetown, BB 11000, Barbados

Students may use the CERMES address during their period of study, but they are asked to inform all correspondents of their forwarding address on leaving the Programme.

Contact information

Tel: (246) 417-4316
Email: cermes@cavehill.uwi.edu
Website: http://www.cavehill.uwi.edu/cermes/

Request for Transcripts

Transcripts are issued on request from the Student Affairs (Records) office. For more information on how to request a transcript, please visit the webpage:
https://www.cavehill.uwi.edu/chol/examinations/request-transcript.aspx

Security

Students can use their student ID cards to gain access to the building, lecture rooms and the computer lab. On receipt of your ID card, please take it to the CERMES Main Office, so that they can request access be given to you. Please note that for your security and ours, under no circumstances should your ID card be loaned out. Please always keep the emergency door on the ground floor closed.

Campus security will escort students out of buildings and to vehicles after normal working hours. They may be contacted when required at EXT 4003/4164.

Sidney Martin Library (Main Library)

Students are only permitted to use the main library on presentation of their UWI identification card. Opening hours are as follows:

Monday to Friday *9:00 a.m. to 11:00 p.m.*
Saturday *9:00 a.m. to 5:00 p.m.*

The library is closed on all public and University holidays. Students should also be reminded that use of cell phones is prohibited in the library.

Bookshop and Campus Mart

Newspapers, academic books, novels, magazines and stationery can be purchased from the UWI bookshop. There is also a limited supply of toiletries and confectionery available. Opening hours are Mondays to Fridays from 9:00 am to 5:00 pm. The Campus Mart is well stocked with basic food items and toiletries. It is located adjacent to the Sir Frank Worrell Halls of Residence. Opening hours are Mondays to Fridays from 9:00am to 10:00pm and Saturdays from 9:00am to 8:00pm.

Banking Services

For your convenience, an Automatic Teller Machine (ATM) is located on Campus just outside the bookshop.

Accommodation

For information on Halls of Residence and Off Campus accommodation, please check the web link: https://www.cavehill.uwi.edu/Accommodation/home.aspx

Transportation

The University offers a Student Shuttle Service. To access the Shuttle Service, you must present a VALID UWI student identification card. Only students will be allowed to board the shuttle. Please visit the website of the Office of Student Services to learn more about their current **routes and schedules**.

Students can ask the CERMES Main Office for recommendations on taxi operators for your shuttling/taxi needs.

Important Telephone Numbers

External

Operator	0
Police Emergency	211
Fire Service	311
Ambulance Service	511
Directory Enquiries	411

To make an external call, dial 9 followed by the number.

Internal

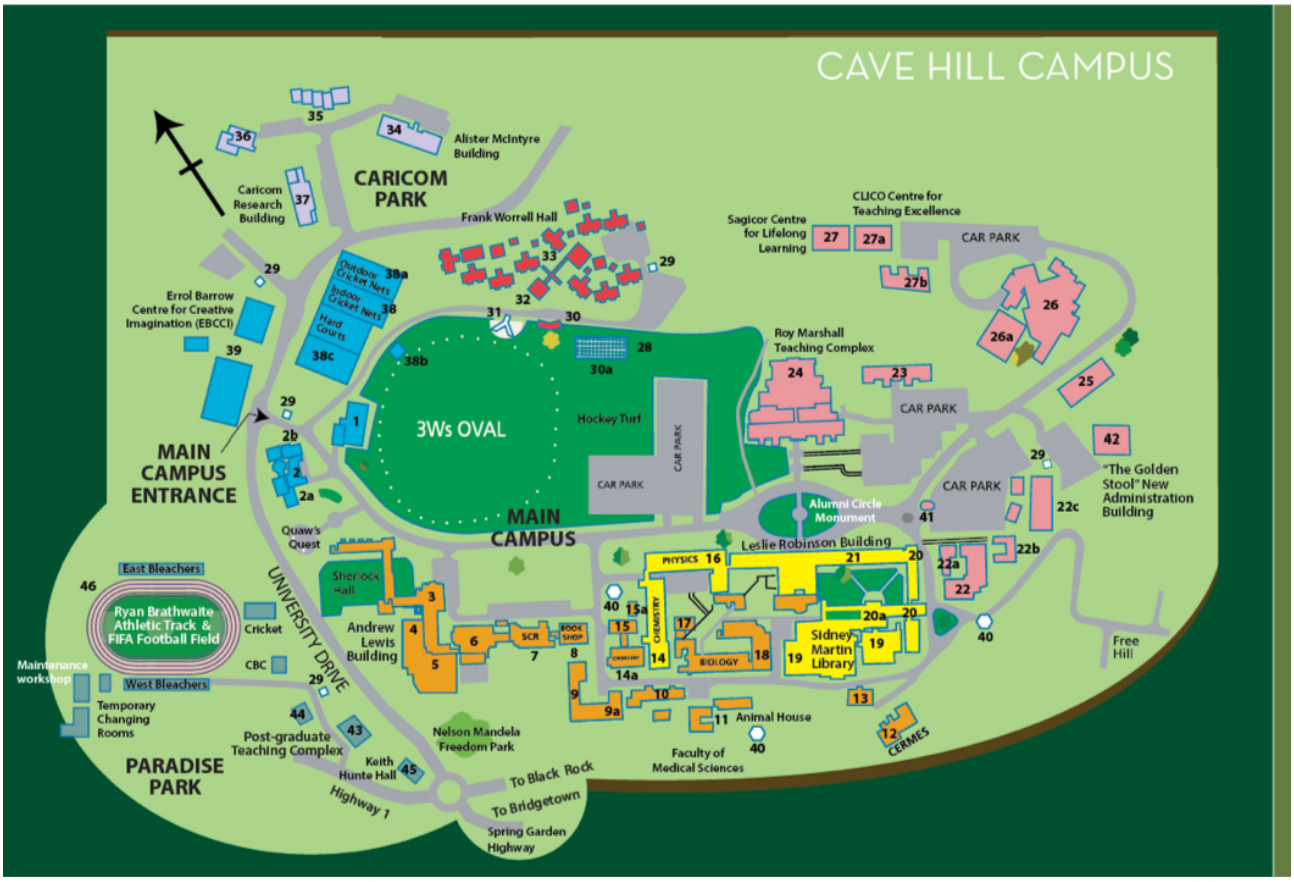
General Campus Numbers

Campus Security (HQ)	4164
Campus Security (Lobby)	4003
Campus Security (Sherlock Hall)	4177
Student Services	4165
Student Health Clinic	4170/1

CERMES Numbers

BENSKIN, Dale	4313
CLARKE, Mia	4317
CUMBERBATCH, Janice	4569
Administrative Assistant	4339
McCONNEY, Patrick	4725
PAYNE, Karl	4829
PENA, Maria	4727
SELLIAH, Neetha	4568
WEEKES, Joseph	4567
YAWSON, David	4830
Department Secretary	4316
Students Project Room	4728
Water Quality Lab	4583
Fisheries Lab	4840

Campus Map



Location	MAP REF
CARICOM PARK	
Campus Archives	35
Campus Office of Planning and Projects	35
Caricom Research Building	37
Cave Hill School of Business	36
Lexicography Projects/Caribbean Law Institute	34
Office of Research (2nd Fl.)	37
Security Office	35
Shridath Ramphal Centre for International Trade Law, Policy and Services	37
Sir Arthur Lewis Institute of Social and Economic Studies (SALISES)	37
Tertiary Level Institutions Unit	34
University Office of Planning and Development	37
UWI Credit Union	37
MAIN CAMPUS	
3Ws Oval Pavilion	1
Academy of Sport	2
Administration Building (The Golden Stool)	42
Aquaculture Research Laboratory	13
Arts Lecture Theatre (ALT)	20a
Bursary	42
Business Development Office (Ground Floor)	21
Cafeteria Kiosk	41
Campus IT Services (CITS)	23
Campus Mart (Ground Floor of the CLICO Centre)	27a
Campus Pharmacy	6
Campus Records	9a
CARDI	10
Centre for Excellence in Teaching and Learning (CETL)	21
Centre for Resource Management & Environmental Studies (CERMES)	12
Chemical Sciences - *Rooms : ML4, NCSR*	14a
Chemistry Building - *Rooms : CSR, InorgLab, InorgChem, OrgLab, PhyChmLab*	14
CLICO Centre for Teaching Excellence *Rooms : LR6, LR7, LR8, LR9, LR10, LR11, LT4*	27a

Location	MAP REF
CLR James Centre for Cricket Research	2a
Confucius Centre	28
Cultural Studies Department	20
Dept. of History & Philosophy	20
Dept. of Language, Linguistics & Literature	20
Dept. of Biological Sciences *Rooms : BL Down, BL Ext, BSR*	18
Dept. of Computer Science, Maths & Physics (CSMP)	17
Dept. of Government, Sociology & Social Work	22a
Dept. of Management Studies *Rooms : MSR1, MSR2, MSR3*	22c
E-Commerce Building / Earth Sciences Lab	15a
Errol Barrow Centre for the Creative Imagination (EBCCI)	39
Evaluation Centre	9
Faculty of Humanities and Education *Rooms : A27, ALT, ASR1, ASR2, SOE Sem*	20
Faculty of Law - *Rooms - LLT, Moot Court*	26
Faculty of Medical Sciences Laboratory & Teaching Complex	*Rooms : MMS10, MMS9, MSS1, MSS4, MSS5, MSS6, MSS8, MSTL, MSLT*	11
Faculty of Medical Sciences	21
Faculty of Social Sciences - *Rooms : S6, S7, S8* Faculty Offices, Economics, Govt & Social Work	22
Frank Worrell Halls of Residence	33
Frank Worrell Memorial	32
Gazebo	40
Guard Hut Security	29
Hard Courts	38c
Henry Fraser Lecture Theatre	11
Hockey Turf	30a
Indoor Cricket School / Indoor Cricket Nets	38
Institute of Gender and Development Studies : Nita Barrow Unit	22b
International Office (1st Floor)	21
Law Library	26a
Language Laboratory (1st Floor)	21
Sidney Martin Library (Main Library)	19

Location	MAP REF
Marketing & Student Development (Ground Floor)	21
Maintenance Dept. Administration	27b
Media Centre	38b
Mount Restaurant / Solutions Centre	7
New Administration Building (The Golden Stool)	42
Office of Deputy Principal (First Floor)	21
Office of Humanities (First Floor)	21
Office of Student Services	15
Office of the Guild of Students (First Floor)	6
Open Campus Centre	25
Outdoor / Indoor Cricket Nets	38
Physics Building - *Rooms : Lab Up, Lab Down, SLT*	16
Quality Assurance Office (Upstairs)	9a
Roy Marshall Teaching Complex *Rooms : TSR1, TSR,LR1, LR2, LR3, LR4, LT1, LT2, LT3*	24
Sagicor Centre for Lifelong Learning *Rooms : TSR7, TSR8, TSR9, TSR10, TSR11, TSR12, Computer Lab #6, LR12, LR13, LR14*	27
Sagicor/WICB High Performance Centre	2b
School of Education	9
SEED Project	15
Sherlock Hall Halls of Residence	3
Solutions Centre / Mount Restaurant	7
Staff Lounge	30
Student Affairs - Admissions, Examinations, Records	42
Student Health Clinic	6
Students Lounge (Andrew Lewis Building)	4
Students Union (Ground Floor)	6
University Bookshop	8
UWI Students Cafeteria	5
UWI HIV/AIDS Response Programme (UWIHARP)	6
Walk of Fame	31
PARADISE PARK	
Usain Bolt Sports Complex	46
Graduate Teaching Complex	43
Keith Hunte Halls of Residence	45
Maintenance Workshop	44

Prepared by the

Centre for Resource Management and Environmental Studies (CERMES) The Faculty of Science and Technology

The University of the West Indies (UWI), Cave Hill CampusBarbados W.I.