

POSTGRADUATE EDUCATION

BIOSECURITY & BIORISK MANAGEMENT

Connecting the dots...



Quality education intertwined with rich
cultural & development advancement

PROTECTING YOUR BORDERS FROM MULTIDIMENSIONAL THREATS

WHAT IS BIOSECURITY?

We practice biosecurity every day without even noticing! Do you take off your shoes at the door before entering someone's home or your own? Then, the simple act of removing your shoes at the door whether by tradition or by personal choice, is done to prevent spread of harmful germs. This is a key risk management practice as simple as it is can be very effective in protecting a home (ecosystem) for harmful pathogens and chemicals. It also highlights a critical component in biosecurity which is human behaviour.

A robust biosecurity system helps to protect way-of-life, lives and livelihoods, natural resources and biodiversity from harmful effects of adverse weather, pests, diseases, toxins and technology that threaten to corrode the wellbeing of society. The prediction, anticipation and prevention of such threats represent an enormous gap in the academic, legal and political capacity of the region. The Cave Hill Campus recognizes that the biosecurity field is necessarily multidisciplinary and positions the Centre so that it receives expertise from a range of disciplines. Scientific fields make up the majority of technical disciplines whilst social science disciplines are pivotal for effective governance and implementation.

The scope of expertise required to build and improve national biosecurity systems include anthropology, communications, agriculture, biology, chemistry, disaster management, cybersecurity, engineering, information technology, economics, environmental management, international development, international relations, medicine, legal profession, peace and conflict resolution, advocacy and policy development, public health, national defense, trade and veterinary science. Join us to learn more!

Contact us



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our website

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ABOUT US

Our Vision

Our vision is based on the overarching University mission to revitalize and protect Caribbean development with a commitment to upgrade community awareness and effect positive behavioural change via collaboration between multi-sectorial agents.

Our Mission

Our mission is to facilitate the reduction of vulnerability to bio-risks in the Caribbean through research, knowledge sharing, capacity building, policy advocacy and a platform for collaboration between key stakeholders.

Our Values

The University of the West Indies (UWI) Cave Hill Campus' core values include Integrity, Excellence, Student Centeredness, Diversity, Gender Justice, and Financial Sustainability. The campus also emphasizes Attentiveness, Efficiency, Courtesy, and Equity in its service values.



“ Open the door to an entirely **new** vista of opportunities by learning how to connect the dots of **bio**risks, and become trained in how to adeptly **protect lives and livelihoods.** ”

DR. KIRK DOUGLAS
DIRECTOR
Centre for Biosecurity Studies, UWI, Cave Hill Campus



CENTRE FOR BIOSECURITY STUDIES Your learning partner

Whether you're looking to plug skill gaps, embed your company culture, or develop a robust personal and organisational/business strategy, we are the education partner you need. At The University of the West Indies, Cave Hill Campus, we have decades of experience working with organisations of all sizes, and individuals across all industries and sectors to help you turn the latest theories and biosecurity and biorisk management principles into action.

Empowering Futures, Securing Societies

At the Centre for Biosecurity Studies at The University of the West Indies (UWI), Cave Hill Campus, started in 2019 as the sole entity in Caribbean Community solely devoted to biosecurity and biorisk management. We are proud to be part of an institution that is a global leader in education, research, and innovation.

Founded in 1948, The University of the West Indies is the foremost regional university, serving 17 English-speaking countries and territories in the Caribbean. With campuses in Jamaica (Mona), Trinidad and Tobago (St. Augustine), Barbados (Cave Hill), Antigua and Barbuda (Five Islands), and a global online campus, UWI is a powerhouse for Small Island Developing States (SIDS) knowledge, offering expertise that extends to CARICOM, Latin America, Africa, Europe, Asia and the global community.

Today, UWI is recognized internationally for its critical contributions to sustainable development, climate change adaptation, biosecurity, global health security, and resilient governance models for small and vulnerable economies.

For you

People like you are the true driving force behind successful organisations and businesses, and we will help you navigate the complex and challenging work in an increasingly digital, interconnected risk, and competitive world.

Personal Growth, Professional Advancement

Whether you are an early-career professional, a mid-level specialist, someone looking to find your niche, or senior executive, UWI Cave Hill offers a dynamic learning environment that nurtures your personal and professional ambitions.



Through our programmes and initiatives like the Centre for Biosecurity Studies, you gain access to:

- Cutting-edge research on biosecurity, climate, risk and health resilience, and sustainable development.
- World-class lecturers and practitioners from the Caribbean and around the world.

Opportunities for networking and collaboration with regional and global experts.

- Join a university community where your success is our commitment.

For your organisation

To stay ahead of the game, your workforce need the skills and motivation to perform to the highest standard. From specialised workshops and courses to aid in your talent development and retention, to co-created custom partnerships that will help ensure your organisation achieves its goals, we deliver identifiable value to you and your business.

Building Capacity, Enhancing Resilience

Your organisation can benefit directly from the expertise and regional leadership of UWI Cave Hill by:

- Training staff to meet emerging global challenges in health, environment, and security.
- Accessing consultancy services grounded in SIDS-specific solutions and global best practices.
- Partnering for research and innovation projects to build climate, health, sustainability and security resilience.

- Participating in tailored executive education programmes to meet your institutional goals.
- We help organisations across CARICOM, Latin America, and globally to future-proof their operations, ensuring they are equipped to thrive in an increasingly interconnected and risk-exposed world.

The latest knowledge and practical tools

Welcome to a world that combines world class research and breakthrough thinking, with practical skills, applicable learning and personal development. We don't just offer qualifications, but the knowledge, skills and experience to help you become a real Change Maker in your country, business or organisation.

Stay Ahead with Future-Ready Skills

At UWI Cave Hill, learning is applied, practical, and immediately valuable.

Our faculty and research centres, including the Centre for Biosecurity Studies, focus on:

- Climate Resilience and Disaster Risk Management
- Climate and Health
- Global Health Security and Pandemic Preparedness
- Sustainable Tourism and Blue Economy Strategies
- Agricultural Farm Risk Management
- Renewable Energy and Water Security Solutions
- Biosecurity Threat Assessments and National Risk Planning
- Biodiversity Risk Management



We translate global research into practical, Caribbean-contextualized solutions that empower individuals, businesses, and governments alike to protect delicate, large or small ecosystems against the ravages of complex, interconnected biorisks. This is done leveraging a **systems thinking approach** to assess interconnected risks and vulnerabilities and how to systematically create **effective and powerful solutions**.

Learning that suits your requirements

With part-time and customised workshops, courses and programmes available, we offer a range of flexible development options to suit your requirements and learning needs, helping you to think differently, to be creative in problem solving and be a catalyst for change.

Whether face to face at our Cave Hill Campus or completely remote where ever in the world you may be we offer you a range of flexible options to suit your current circumstances to advance.

Understanding the needs of modern learners and organisations, UWI Cave Hill offers:

- Customised training programmes tailored to your sector or institutional needs.
- Short courses, certifications, and professional diplomas in key growth areas.
- Hybrid and online delivery options to maximize accessibility across regions.
- Executive education seminars that address immediate organisational challenges.

No matter where you are in your career or where your organization operates, our flexible, tailored offerings ensure that you can learn, grow, and lead without borders.

Connect. Collaborate. Lead.

Through the Centre for Biosecurity Studies and other research hubs, UWI Cave Hill connects you to a thriving international network of professionals, academics, policymakers, and industry leaders working together to address:

- Emerging infectious diseases
- Climate adaptation strategies
- Sustainability
- Air pollution
- Artificial Intelligence
- Behavioural Science/Economics
- Food & Farm security
- Disaster preparedness
- Ecosystem protection

We host conferences, webinars, workshops, and collaborative projects that make it possible to share knowledge, shape policy, and drive innovation across the Caribbean and beyond. Become part of a forward-thinking, systems thinking, solution-driven community shaping a safer, more sustainable world.

This will provide you with opportunities to learn, discover and inspire you and your executives with the latest ground-breaking research and real-world practice of biosecurity and biorisk management.



If you join us as a custom partner, you will also work directly with our dedicated research-active faculty, to develop strategies and knowledge tailored to your organisational needs, and the confidence to turn this knowledge into practical solutions.

Highly ranked University

You can relax in the knowledge that we know exactly what we're doing. The University of the West Indies consistently ranks among the world's top universities.

- In the Times Higher Education (THE) World University Rankings 2024, UWI was placed among the top 1,000 universities globally, maintaining its position as the #1 university in the Caribbean and among the top 1.5% of universities worldwide.
- UWI is also ranked in the THE Impact Rankings, recognizing its leadership in advancing the United Nations Sustainable Development Goals (SDGs), particularly in Climate Action, Quality Education, and Partnerships for the Goals.

Our commitment to academic excellence, innovation, and regional relevance ensures that our graduates and partners are ready to lead change on the global stage.

The first entity in the Caribbean to be solely dedicated to biosecurity and biorisk management.



First Caribbean University to be triple accredited and to receive #1 Ranking, and ranked among the top 1.5% of all Universities across the work



Empowering Futures, Securing Societies

The Centre for Biosecurity Studies at The University of the West Indies (UWI), Cave Hill Campus, started in 2019 as the sole entity in Caribbean Community solely devoted to biosecurity and biorisk management. We are proud to be part of an institution that is a global leader in education, research, and innovation.

The Centre for Biosecurity Studies of The UWI Cave Hill Campus is the first organization in the Caribbean to tackle multidimensional biosecurity issues and thereby, stem the growing vulnerability of countries in the Region to various biological threats, either occurring naturally or through malice.

The Centre for Biosecurity Studies will provide systematic capacity building for biosecurity professionals and those in peripheral services, keeping them informed of changes in the field. It will engage with national leaders on policy formation and analysis, and the rules and regulations necessary for prevention and containment. The Centre for Biosecurity Studies will also be committed to upgrading community awareness and facilitating collaboration between multi-sectorial agents. All of its work will be rooted in a vibrant research agenda. The vision for Centre for Biosecurity Studies is based on the overarching University mission to revitalize and protect Caribbean development.

The mission of the Centre for Biosecurity Studies is to facilitate the reduction of vulnerability to bio-risks in the Caribbean through research, knowledge sharing, capacity building, policy advocacy and a platform for collaboration between key stakeholders.

The Advisory Board has been established to provide guidance and support to the Centre to further its advancements and to strengthen regional biosecurity and global health security.



Professor R. Clive Landis
 Principal & Pro-Vice Chancellor
 UWI, Cave Hill Campus



Professor Troy Lorde
 Dean - Faculty of Social Sciences,
 UWI, Cave Hill Campus



Professor Akin Abayomi
 Honorary Professor - Centre for Biosecurity
 Studies, UWI, Cave Hill Campus



Senator Dr. The Honourable Jerome Walcott, J.P.
 Minister - Ministry of Health & Wellness
 Government, Barbados



Dr. Lisa Indar
 Executive Director
 Caribbean Public Health Agency (CARPHA)
 Trinidad & Tobago



Dr. Kirk Douglas
 Director - Centre for Biosecurity
 Studies, UWI, Cave Hill Campus



Ms. Lisa A. Alleyne
 Campus Bursar
 The University of The West Indies
 Cave Hill, St. Michael, Barbados



Mr. Anthony Da Silva
 Chairman
 Innotech Group Caribbean
 Barbados

 Protector
 Graeme Hall Wetlands Trust
 Barbados



Dr. Joy St. John
 Vice Chair
 The Pandemic Fund Technical Advisory Panel
 The Pandemic Fund Secretariat



Dr. Keith Hamilton
 Senior Programme Manager
 Biological Threat Reduction
 World Organisation of Animal
 Health (WOAH)
 Paris, France



Mr. O'Neil Hamilton
 Deputy Director
 The International Biosecurity and Biosafety
 Initiative for Science (IBBIS)

 Nonresident Fellow
 Partnerships in Proliferation Prevention
 Stimson Institute
 Washington DC, USA



Professor Devi Sridhar
 Global Chair in Public Health,
 University of Edinburgh



Lieutenant Colonel Michael Jones
 Executive Director
 CARICOM IMPACS



Ms. Roberta Clarke
 Commissioner - Inter-American Commission
 on Human Rights (IACHR)



Professor Marvin Reid
 Director
 Tropical Metabolism Research Unit
 Caribbean Institute of Health
 Research (CAIHR)



Dr. Leslie Rollock
 Senior Medical Officer
 Ministry of Health & Wellness
 Government, Barbados



Professor David Yawson
 Director
 Centre for Resource Management and
 Environmental Studies (CERMES)
 UWI, Cave Hill Campus



Ms. Asanchia Griffith
 Administrative Assistant
 CBS, UWI, Cave Hill Campus



First Caribbean University to be triple accredited and to receive #1 Ranking, and ranked among the top 1.5% of all Universities across the world



Scan to visit our website

Our Postgraduate Open Workshop Programmes are 3 or 4-day, accredited programmes enabling you to seamlessly address skills gaps in your organisation.



Climate, Wildfires, Air Pollution and Disaster Risk Management

Drone (UAV) Use in Emergency Management

Barbados Fire Service Drone Team Training

Our **Specialised Training Programmes (STPs)** provide you with the opportunity to step away from the office and gain a new perspective by engaging and networking with your peers and across sectors. You will benefit from an immersive learning experience providing a deep insight into key biosecurity and biorisk management themes.

Climate, Biosecurity & Water Infrastructure Vulnerability

Illegal Wildlife Trade & National Security

Wastewater, Biosecurity and Climate Risk Management

Healthy Buildings, Climate & Sustainable Design

Crop Farm Biosecurity & Biorisk Management

Animal Farm Biosecurity & Biorisk Management

Renewable Energy, EVs & Fire Risk Management

Biosecurity, Health Emergency Planning & Response Risk Management

Sustainable Hospitality with EcoChef Certification

Climate-Smart Healthcare Building & Interior Design

Aircraft Wastewater & Pathogen Surveillance

Eco-Friendly Mosquito & Sandfly Vector Control

Sustainable Port Trade, Logistics & Biosecurity

Innovation in Biosecurity & Sustainable Development



Open Workshop Programmes

Our Postgraduate Open Workshop Programmes are 3 or 4-day, accredited programmes enabling you to address skills gaps in your organisation with minimal disruption.



Climate Change Nexus with Biosecurity, Wastewater Reuse & PV/Renewable Energy

Wastewater Reuse Training for Barbados Water Authority, Barbados Fire Service, and several other agencies

3R CREWS Barbados Training

Our **Specialised Training Programmes (STPs)** provide you with the opportunity to step away from the office and gain a new perspective by engaging and networking with your peers and across sectors. You will benefit from an immersive learning experience providing a deep insight into key biosecurity and biorisk management themes.

Climate, Biosecurity & Water Infrastructure Vulnerability

Illegal Wildlife Trade & National Security

Wastewater, Biosecurity and Climate Risk Management

Healthy Buildings, Climate & Sustainable Design

Crop Farm Biosecurity & Biorisk Management

Animal Farm Biosecurity & Biorisk Management

Renewable Energy, EVs & Fire Risk Management

Biosecurity, Health Emergency Planning & Response Risk Management

Sustainable Hospitality with EcoChef Certification

Climate-Smart Healthcare Building & Interior Design

Aircraft Wastewater & Pathogen Surveillance

Eco-Friendly Mosquito & Sandfly Vector Control

Sustainable Port Trade, Logistics & Biosecurity

Innovation in Biosecurity & Sustainable Development



cbs.uwi.edu

Key information

Duration	3-4 days
Location	Hybrid
Format	Part-time



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Develop critical skills to identify, assess, and manage biorisks, protecting health, economies, and ecosystems across public, private, and civil society sectors e.g tourism, trade, agriculture, environment, etc.

Upskill teams through targeted, practical training that closes knowledge gaps and strengthens organizational readiness and innovation for emerging biosecurity, climate and sustainability challenges.

Design and implement behaviour-based strategies that enhance biosecurity resilience, influencing safer actions at personal, organizational, and national levels.

Earn accredited training credits, enhance your professional portfolio, and position yourself or your organization for leadership in biosecurity and resilience sectors.

Overview

Organisations from across public and private sectors are now using facing the need to upskill employees at different levels to respond to risks. Cutting edge biorisk management is at the core of biosecurity to help encourage their citizens, customers, and employees to examine and change their behaviour. It also requires comprehensive understanding of specific vulnerabilities that undermine the safety and health of persons and endanger their livelihoods. By helping organisations to understand these issues it can strengthen risk resilience, and to improve lives and livelihoods for employees and citizens.

Our specialized training programmes are designed to meet the urgent and growing need for skills development in biorisk management, biosecurity, and climate resilience building across public and private sectors. In an era of rapidly evolving risks — from pandemics, invasive species, climate change impacts, to technological threats — organizations need trained, agile, and forward-thinking personnel capable of identifying vulnerabilities, managing risks, and protecting lives and livelihoods.

Regardless of educational background these Open workshop programmes are design to address all persons. Our hybrid-format workshops (both in-person and online) offer an immersive, flexible 3-4 day learning experience, combining scientific depth, real-world case studies, and practical exercises that you can apply immediately back in your organisation.

Participants can also accrue credits towards formal degree programmes offered by CBS — further advancing career pathways in a strategic and affordable manner.

Workshop content

Learn from leading experts and practitioners about how biosecurity and human behaviour intersect to shape resilient societies and sustainable futures.

Workshop participants will benefit from:

- **Foundations of Biosecurity and Biorisk Management:** Understand the principles, systems, and frameworks that underpin effective biosecurity and sustainable risk governance.
- **Behavioural Science in Risk Management:** Explore how simple behaviours — like taking shoes off at the door — represent profound biosecurity practices, and how behaviour change can strengthen risk resilience.
- **Practical Applications:** Real-world exercises working on your live challenges — with problem-solving labs to design, test, and refine solutions.
- **Sector-Specific Modules:**
 - o Climate Resilience and Natural Resource Protection
 - o Infectious Disease and Vector Control
 - o Healthy Building & Interior Design

- o Invasive Species and Wildlife Trade
- o Sustainable Agriculture and Farm Biorisk Management
- o One Health Approaches and Public Health Security
- o Disaster Risk Management and National Preparedness
- **Tools and Frameworks:** Access frameworks that you can immediately use in workplace assessments, training, and policy development.

Each day blends theory and practice, supported by peer learning and cross-sector networking, creating a vibrant learning environment where knowledge and action meet.

Our workshops are immersive yet down-to-earth, allowing participants from diverse educational and professional backgrounds to grasp complex ideas and implement them effectively.

Who is the course for?

This programme is tailored for organisations and individuals committed to upskilling their teams and closing critical skills gaps in climate and biorisk resilience and biosecurity.

This programme is for anyone who wants to learn and apply methods in analysing biosecurity risks and their interconnectivity to their work and such as:

■ **Government Ministries and Departments**
Health, Agriculture, Trade, Tourism, Environment, National Security, Disaster Management, State Owned Enterprises (utility, ports, airports)

■ **Private Sector Businesses and Organisations**
(hospitality, trade, water utility, waste management, tourism, health, food industries, agriculture, logistics, pharmaceutical, energy, and tech sectors)

■ **International and Regional Organisations**
(CARICOM, OECS, IICA, FAO, PAHO, CARPHA, CDEMA, IMO, OPCW, WOH, CARIBVET, CAFHSA, etc.)

■ **Non-Governmental Organisations (NGOs)**
working in public health, conservation, agriculture, or humanitarian sectors

■ **Academic Institutions and Educational Administrators**

Biosecurity in Practice



Kirk Douglas
Course Director

“Biosecurity is the science and practice of safeguarding lives and livelihoods through the reduction of systematic vulnerabilities to biological ecosystems.” There are several dimensions influencing biosecurity risk management including political, economic, social, technological, health, environment, ethic and legal factors. Our aim is to understand the mechanisms involved in risk generation and how those mechanisms can be leveraged creatively to minimize risk posed to people and their livelihoods.”



“This workshop included hearing about real-life examples from across the world, in the Caribbean and in Barbados on how climate change influences wastewater management, water reuse and the key biosecurity risks that impact us all not only at work but in everyday life. This enabled me to challenge my own thinking, learn from other sectors, and assess how this will impact my own organisation.”

Marlon Small
Divisional Fire Officer
Barbados Fire Service

3R CrEWS Training Workshop Participant



■ **Public Health Practitioners, Environmental Specialists, Agricultural Officers, Veterinarians, Biotechnologists, Policy Makers, Trade Specialists, Customs Officers, Defence Forces**

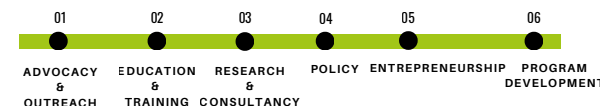
The Open Workshop Programme is highly customizable — content can be designed around your specific institutional needs, risk profiles, and workforce development plans. Whether your goal is to improve employee knowledge, meet regulatory compliance, or future-proof operations, CBS can tailor the curriculum to fit your objectives.

Why CBS Open Workshops?

- Caribbean and SIDS-specific expertise, but globally informed
- Practical, immediately applicable learning
- Accreditation pathways into formal academic programmes
- Network with experts across disciplines
- Hybrid delivery models for maximum flexibility
- Build individual, organizational, and national resilience



There are 6 major pillars on which CBS conducts its work namely:



CBS Postgraduate Programmes

AIMS

- Foster appreciation for the integral role biosecurity and biorisk management plays in sustainable development locally, regionally, and internationally.
- Promote understanding of the complexity, interconnected and multidisciplinary nature of biosecurity and biorisk management and its effective administration.
- Facilitate the design, development, and implementation of comprehensive and inclusive targeted solutions to biosecurity and biorisk threats.

FOCAL AREAS

- 01 Border Security & Trade
- 02 Climate Change & Its Impacts
- 03 Maritime Issues/Blue Economy



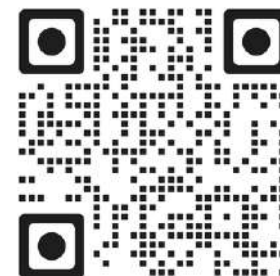
Non-Degree Entry Requirements

- Technical certificates or diplomas that can be assessed by The University of the West Indies.
- Five years' experience in a role within a relevant Biosecurity & Biorisk Management field.
- They are successful at an interview conducted by a select panel determined by the Campus Committee on Graduate Studies and the CBS.
- Two letters of recommendation.

Degree Entry requirements

- For Masters a Bachelor's degree or its equivalent from an accredited university as determined by The University of the West Indies with at least 2nd Class Honours in Natural Sciences, Medicine, Social Sciences, Humanities & Education, or Law
- An undergraduate GPA of at least 2.5 or a Pass degree (exceptions may be granted to this requirement as per Regulations 1.5(c) in The UWI Regulations for Graduate Diplomas and Degrees (2018)).
- Students are expected to be grounded in the fundamentals of the above-mentioned disciplines and be pursuant of a Master's in a Biosecurity & Biorisk Management stream relevant to this Bachelor's degree.
- Students with pass degrees will be considered on the following conditions:
 - They are currently working in an organization or in a related field and
 - They are successful at an interview conducted by an entrance committee within CBS.
- Two letters of recommendation.
- For PhD, a Masters degree or its equivalent from an accredited university as determined by The University of the West Indies in Natural Sciences, Medicine, Social Sciences, Humanities & Education, or Law.

Our CBS Postgraduate Programmes provide you with the opportunity to pivot, establish your niche and advance your career. You will benefit from an immersive learning experience providing a deep insight into key biosecurity, climate, environment, health, sustainability, international trade, tourism, behavioural economics themes.



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Costs

- **Postgraduate Certificate** - USD\$6,750 per year
- **Postgraduate Diploma** - USD\$8,000
- **M.Sc.** - USD\$15,000 or \$20,000 per year *
- **M.Phil.** - USD\$15,000 per year
- **Ph.D** - USD\$15,000 per year

Programme Length

- self-paced
- min. of 12 months (FT) - max 2 years (PT)
- min. 12 months (FT) or max. 18 months (PT)
- min. 24 months (FT) or max. 48 months (PT)
- min. 48 months (FT) or max. 96 months (PT)

* Additional costs due to expenses for Geneva study tour where this is a chosen option



Categorization of award of degrees

GPA	CATEGORY
3.70	DISTINCTION
3.30 - 3.69	MERIT
2.50 - 3.29	PASS
< 2.5	FAIL

- Based on overall programme GPA

CBS Postgraduate Certificate Programmes



CERTIFICATE IN SUSTAINABLE HOSPITALITY WITH PROFESSIONAL ECOCHEF CERTIFICATION

Virtual Information Session

Learn more about CBS' Certificate in Sustainable Hospitality with EcoChef Professional Certification at our free webinar.

>> JOIN US <<
Wednesday November 20th 2024

For more information Contact at:
246-417-7467
biosecurity@uwi.edu



CERTIFICATE IN CLIMATE SMART, SUSTAINABLE BUILDING & INTERIOR DESIGN

Virtual Information Session

Learn more about CBS' Certificate in Climate Smart, Sustainable Building and Interior Design Professional Certification at our free webinar.

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For more information Contact at:
246-417-7467
biosecurity@uwi.edu



CERTIFICATE IN AIRCRAFT WASTEWATER, TOURISM & HEALTH SECURITY RISK MANAGEMENT

Virtual Information Session

Learn more about CBS' Certificate in Aircraft Wastewater, Tourism and Health Security Management Certification at our free webinar.

>> JOIN US <<
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For more information Contact at:
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biosecurity@uwi.edu



CERTIFICATE IN BIOSECURITY, HEALTH EMERGENCY PLANNING & RESPONSE MANAGEMENT

Virtual Information Session

Learn more about CBS' Certificate in Biosecurity, Health Emergency Planning and Response Management Certification at our free webinar.

>> JOIN US <<
Wednesday November 20th 2024

For more information Contact at:
246-417-7467
biosecurity@uwi.edu



CERTIFICATE IN CLIMATE, BIOSECURITY, & WASTEWATER MANAGEMENT

Virtual Information Session

Learn more about CBS' Certificate in Climate, Biosecurity and Wastewater Management Certification at our free webinar.

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Wednesday November 28th 2024

For more information Contact at:
246-417-7467
biosecurity@uwi.edu




CERTIFICATE IN INTERNATIONAL TRADE, PORT & BIOSECURITY RISK MANAGEMENT

Virtual Information Session

Learn more about CBS' Certificate in International Trade, Port & Biosecurity Management Certification at our free webinar.

>> JOIN US <<
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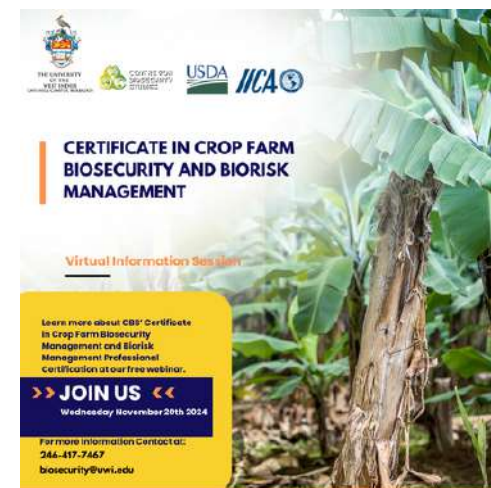
CERTIFICATE IN FARM BIOSECURITY AND BIORISK MANAGEMENT

Virtual Information Session

Learn more about CBS' Certificate in Farm Biosecurity and Biorisk Management Professional Certification at our free webinar.

>> JOIN US <<
Wednesday November 28th 2024

For more information Contact at:
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CERTIFICATE IN CROP FARM BIOSECURITY AND BIORISK MANAGEMENT

Virtual Information Session

Learn more about CBS' Certificate in Crop Farm Biosecurity Management and Biorisk Management Professional Certification at our free webinar.

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biosecurity@uwi.edu



MSc. in Biosecurity & Biorisk Management

TAUGHT DEGREE

Key information

Duration	12-18 months
Location	Hybrid
Format	Full time /Part-time
Website	cbs.uwi.edu

What will I learn

Earn to identify, assess, and manage biological, environmental, and technological threats that affect people's lives, economies, and ecosystems – using practical, real-world approaches.

Develop the skills to move beyond analysis – creating tangible, scalable, and sustainable solutions that strengthen resilience across communities, industries, and nations.

Tailor your expertise to today's and future emerging challenges with global and regional priorities like climate resilience, One Health, cybersecurity, & sustainable development.

Build leadership, innovation, and risk communication skills to influence policy, manage crises, and make an immediate impact in public, private, and international organisations

Costs **\$15,000**

Overview

In a world of dynamic and interconnected risks – pandemics, trade wars, pollution, cyberbiosecurity threats, invasive species, agricultural disruptions, natural disasters – traditional models of learning are no longer enough. Today's biosecurity leaders must be trained not just to understand threats, but to design, implement, and lead real-world solutions.

The Postgraduate Certificate, Postgraduate Diploma, and Taught MSc in Biosecurity and Biorisk Management at CBS, UWI Cave Hill, offer flexible, accessible pathways to build expertise that is globally relevant and Caribbean-contextualized. Learners can begin with the Postgraduate Certificate and ladder seamlessly into the Postgraduate Diploma or the full MSc programme, in accordance with The UWI Procedures for Transitioning from Postgraduate Diplomas to Masters Programmes (2011).

Key features include:

- **Internship placements** with national, regional, and international agencies
- **Research paper** options to strengthen analytical and applied research skills
- **Immersive study tour option to Geneva**, Switzerland, to visit UN agencies and international organisations working on global health security, trade, and environmental governance.

At CBS, your learning experience is about much more than classroom theory – it's about practical application, global exposure, and solution-building.

Programme content

All three programmes build progressively, but with a consistent problem-solving, interdisciplinary, and action-oriented approach:

→ Postgraduate Certificate (Flexible Entry Point)

- Foundations of biosecurity and biorisk management
- Introduction to systems thinking and dynamic risk analysis
- Sectoral vulnerabilities: health, agriculture, trade, security, environment
- Behavioural science and communication in biosecurity

→ Postgraduate Diploma (Broader Applied Expertise)

- Applied biosecurity governance and policy development
- Threat assessment and emergency preparedness frameworks
- Critical analysis of pandemics, climate change, biodiversity loss, and cyberbiosecurity risks
- Risk communication and stakeholder engagement
- Internship/short professional project options

→ Taught MSc in Biosecurity and Biorisk Management (Comprehensive Mastery)

- Advanced biosecurity intervention design and policy innovation
- Entrepreneurship and innovation in biosecurity (patenting, licensing, commercialization pathways)
- Research paper or applied project addressing real-world regional/global challenges
- Optional Geneva Study Tour: direct engagement with UN agencies (e.g., WHO, WTO, UNEP, ILO) and biosecurity governance institutions
- Capstone project linking theory to scalable implementation solutions

Important Note:

Graduate Certificate courses may account for no more than 50% of the requirements for the Postgraduate Diploma or Taught MSc, ensuring rigorous academic progression.

Who is the course for?

This programme is ideal for:

- **Public Sector Professionals** in health, agriculture, environment, disaster management, education, cybersecurity, national security, and foreign affairs.
- **Private Sector Leaders** across food systems, tourism, biotechnology, energy, logistics, information technology, and sustainability sectors.
- **NGO Practitioners and International Development Professionals** working in global health, international trade, tourism, environment, conservation, and humanitarian assistance.
- **Academics and Researchers** seeking applied, interdisciplinary, and entrepreneurial skillsets.
- **Early and Mid-Career Professionals** aiming to reposition themselves in emerging areas of risk management, sustainability, and global security.
- **Entrepreneurs and Innovators** passionate about developing commercial biosecurity solutions.

Customizable Learning Pathways

Whether you enter through the Postgraduate Certificate, Postgraduate Diploma, or directly into the Taught MSc, your journey can be tailored to fit your professional background, career goals, and personal interests.

This flexibility ensures that you can advance your learning at your pace, while maintaining professional responsibilities, and position yourself to lead the next generation of biosecurity, climate resilience and sustainability solutions.

Why choose us?

The CBS Postgraduate Certificate, Postgraduate Diploma, or the Taught MSc programme are highly attractive based on:



Dr. Kirk Douglas
Course Director

"For Small Island Developing States (SIDS) biosecurity and biorisk management are essential pillars of sustainable development. Global North-driven research often overlooks the systemic vulnerabilities we face. We must urgently embrace systems thinking to develop relevant, context-specific solutions that protect our health, environment, and economies. Building resilience for SIDS demands more than managing today's risks – it requires anticipating tomorrow's challenges and creating a future that safeguards our people, our resources, and our way of life."



COURSE REQUIREMENTS

The Postgraduate Certificate, Postgraduate Diploma, or directly into the Taught MSc. programme will consist of **various combinations** (see next page).

✓ **Flexibility:** Laddered pathways (Certificate → Diploma → MSc)

✓ **Practical Focus:** Internships, applied research, real-world capstone projects

✓ **Global Exposure:** International Study Tour to Geneva and access to international networks

✓ **Caribbean Context + Global Relevance**

✓ **Entrepreneurship and Commercialization Skills** Embedded

✓ **Part-time or Full-time, Remote, In-person, or Hybrid** Options

MSc. in Biosecurity & Biorisk Management

TAUGHT DEGREE

Key information

Core Courses

BSEC6000

Biosecurity & Biorisk Management: More Than Meets The Eye

BSEC6001

Geopolitics and Infectious Diseases

BSEC6002

Biosecurity, Behavioural Change & Bio-risk Communication

The Taught MSc in Biosecurity and Biorisk Management at the Centre for Biosecurity Studies (CBS), UWI Cave Hill Campus, offers a powerful blend of academic rigor, applied learning, and global relevance. Students are equipped to design real-world solutions that protect lives, sustain economies, and build resilient societies – while also gaining the flexibility to specialize in a concentration area aligned with their career goals.

You can customize your MSc journey by selecting a concentration through your elective choices, while building core skills through compulsory professional workshops that ensure a comprehensive, hands-on learning experience.

The programme structure includes:

1. Core Courses

Master essential knowledge in biosecurity systems, dynamic risk analysis, behavioural risk management, emergency preparedness, and sustainable development frameworks.

2. Elective Concentration Areas

Choose any three (3) courses from a specific focal area to obtain a specialized concentration:

USD \$6,750


USD \$8,000

USD \$15,000
OR
USD \$20,000

Core Courses	Credits	Postgraduate Certificate (Postgrad. Cert)	Postgraduate Diploma (Postgrad. Dipl.)	Master of Science (MSc.)
BSEC6000 Biosecurity & Biorisk Management: More Than Meets The Eye	3	Required	Required	Required
BSEC6001 Geopolitics and Infectious Diseases	3	Required	Required	Required
BSEC6002 Biosecurity, Behavioural Change & Bio-risk Communication	3			Required
BSEC6005 Workshops (three 2-credit workshops chosen by CBS)	6	Required	Required	Required
BSEC6006 Internships *	9			Required
BSEC6006 Research Paper**	9			Required
Selection of electives offered in MSc Biosecurity & Biorisk Management		1	3	5
TOTAL NUMBER OF CREDITS		≥ 15	≥ 21	≥ 39


5 ELECTIVE AREAS OF FOCUS

01




Planetary Health, Climate Action & Disaster Resilience

02




Global One Health & Security

03




Sustainable Global Trade & Diplomacy

04



IT & Data Sciences

05



Biodiversity and Conservation

Concentration	Focus
01 Planetary Health	Address global environmental changes impacting human and ecosystem health.
01 Climate Action & Resiliency	Focus on biosecurity strategies for climate adaptation, disaster resilience, and sustainability.
02 Global One Health & Security	Integrate human, animal, and environmental health to tackle global biosecurity threats.
03 Sustainable Trade & Tourism	Strengthen resilience in trade systems, tourism economies, and food security against biological and environmental risks.
04 Cyberbiosecurity, IT & Data Management	Secure digital and biological systems, protect sensitive data, and address emerging cyber-bio threats.
05 Biodiversity and Conservation	Conserve biological diversity, manage invasive species, and protect ecosystems under threat from biosecurity risks.

* For all MSc students the choice is **EITHER** an Internship **OR** Research Paper provided all the other core courses have been completed. There is an international study tour to Geneva, Switzerland that can be selected as an option for the Internship. This however requires additional costs upon registration (approximately \$5,000).

Core Research Initiatives

BIOSECURITY & BIORISK MANAGEMENT



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CARIBBEAN WILDLIFE INITIATIVE

- 01 **Improve the relationship between Caribbean people and Caribbean wildlife** and mitigate against the various threats posed to **public health, tourism, economy, agriculture** and **border security**.
- 02 Conduct a **legislative review of Caribbean wildlife laws** to identify and develop amended laws to close existing gaps and deficiencies.
- 03 Developing a **Caribbean Wildlife Crime Database** to facilitate data sharing and regional data analysis of Caribbean wildlife crime.
- 04 Establish CBS as a **regional knowledge hub for wildlife crime, environmental crime, wildlife trade and illegal wildlife trade** in the Caribbean.



CARIBBEAN AIR POLLUTION INITIATIVE

- 01 Establish **baseline levels of air pollutants** with remote and fixed site monitoring
- 02 **Standardisation of safe air pollutant levels** for the Caribbean
- 03 Developing a **regional database** to facilitate data sharing, incorporation of IoT and regional data analysis of Caribbean air pollution.
- 04 Establish CBS as a **regional knowledge hub for air pollution** in the Caribbean.

WASTE NOT WANT NOT INITIATIVE

- 01 Establish **alternative pathways for waste streams** to derive economic value and minimise pollution in the Caribbean.
- 02 **Maximise the bioeconomy potential** in the Caribbean
- 03 Developing **education and training courses and programmes** on Caribbean sustainability to utilise the bioeconomy to counter biosecurity threats in the Caribbean
- 04 Establish CBS as a **regional knowledge hub for bioeconomy and sustainability** in the Caribbean.



4TH INVISIBLE BORDER INITIATIVE

- 01 **Maximise the potential of IT tools such as AI, blockchain, remote sensing, big data, smart cities, drones, and machine learning** to combat biosecurity threats in the Caribbean
- 02 **Protect the cyber borders** within the Caribbean against systematic threats (e.g. improved cybercrime, data privacy legislation)
- 03 Developing **education and training courses and programmes** on Caribbean intelligence and awareness to cybersecurity and related IT tools to tackle biosecurity threats in the Caribbean
- 04 Establish CBS as a **regional knowledge hub for cybersecurity and related IT application tools** to fight biosecurity threats in the Caribbean



BIG OCEAN STATES INITIATIVE

- 01 **Maximise the potential of ocean and marine environments** in the Caribbean
- 02 Protect the **Blue Ocean Economy potential** in the Caribbean
- 03 Developing **education and training courses and programmes** on **Caribbean sustainability** to utilise the **Blue economy** to counter biosecurity threats in the Caribbean
- 04 Establish CBS as a **regional knowledge hub for the bioeconomy, Blue Economy and sustainability** in the Caribbean.

The **Centre for Biosecurity Studies (CBS)** leads **five dynamic research initiatives** addressing urgent regional challenges. The **Caribbean Wildlife Initiative** safeguards biodiversity from invasive species and illegal trade. The **Caribbean Air Pollution Initiative** monitors air quality and health impacts. **Waste Not Want Not Initiative** promotes sustainable waste solutions through innovation and resource recovery. The **4th Invisible Border Initiative** explores non-physical barriers to biosecurity, such as informal trade and ecological corridors. Finally, the **Big Ocean States Initiative** supports Small Island Developing States (SIDS) in managing marine biosecurity and ocean sustainability. Together, these initiatives strengthen Caribbean resilience and environmental health through research and action.

INNOVATION IN ACTION

BIOSECURITY & BIORISK MANAGEMENT



REST MOSQUITO & SANDFLY TRAPS

The REST (Renewable Energy powered Silent Terminator) Traps Project was awarded **Most Promising Innovation at Innovate! Cave Hill 2022**, receiving an **\$8,000 prize** for its groundbreaking approach to mosquito and sandfly control. Developed at the Centre for Biosecurity Studies, REST offers a chemical-free, eco-friendly alternative to fogging and insecticide spraying, which often harm pollinators, contaminate water sources, and contribute to insecticide resistance.

Designed with Small Island Developing States (SIDS) in mind, REST is low-cost, quiet, and scalable, making it ideal for use in urban and rural communities, schools, homes, clinics, and tourism zones. A pilot study at UWI Cave Hill Campus demonstrated REST's potential to drastically reduce vector populations through mass barrier trapping—without the toxic residue or public health risks of traditional methods.

REST addresses multiple Sustainable Development Goals (SDGs), including **SDG 3** (Good Health and Well-being) by reducing disease transmission, **SDG 9** (Industry & Innovation), **SDG 11** (Sustainable Cities and Communities) through safer public spaces, **SDG 13** (Climate Action) by replacing carbon-intensive fogging operations, **SDG 14** (Life Below Water) by reducing maritime pollution with insecticide via surface runoff, and **SDG 15** (Life on Land) by protecting beneficial insects and biodiversity.

As climate change increases the spread of vector-borne diseases, the need for sustainable, community-friendly control methods is more urgent than ever. REST bridges that gap—offering a smart, adaptable solution built for the environmental, economic, and health realities of SIDS. It represents the future of vector control: safer, greener, and made for us.



BIMSKIN FISH SKIN MEDICAL DEVICES

BimSkin, a flagship innovation emerging from the Centre for Biosecurity Studies, was awarded **Most Promising Innovation at Innovate! Cave Hill 2024** for its transformative approach to wound care using sterile fish skin grafts (FSGs) derived from sustainably sourced Barbadian fish waste. BimSkin offers a natural, affordable, and effective alternative to synthetic dressings—promoting faster healing, reducing infection risk, and minimizing dressing changes, particularly in burns, ulcers, and chronic wounds.

Free from religious or cultural concerns, BimSkin grafts pose low risk of rejection and avoid the biological and environmental harms associated with chemically processed materials. By valorizing fisheries waste, the project contributes to the circular economy, reduces landfill pressure, and supports local livelihoods. BimSkin is especially well-suited to Small Island Developing States (SIDS) where import reliance, high wound care costs, and waste management challenges intersect.

It supports multiple Sustainable Development Goals, including **SDG 3** (Health), **SDG 8** (Decent Work and Economic Growth), **SDG 9** (Industry & Innovation), **SDG 12** (Responsible Consumption and Production), **SDG 13** (Climate Action) by reducing methane emissions by upcycling fish skin waste, and **SDG 14** (Life Below Water) by promoting bio-based innovation, reducing waste, and supporting blue economy development.

Currently undergoing development for clinical validation and export readiness, BimSkin represents a promising leap forward in sustainable health innovation—healing people and the planet, one fish skin at a time.



FUTUREFERM BIOGAS PROJECT

Future Ferm is an innovative anaerobic digestion project developed by the Centre for Biosecurity Studies to transform **food waste, fats-oils-grease (FOGs), and organic matter** from the UWI Cave Hill Campus and surrounding communities into biogas and nutrient-rich biofertilizer.

Designed for Small Island Developing States (SIDS), Future Ferm offers a clean, circular solution to mounting organic waste, energy insecurity, and greenhouse gas emissions.

By converting waste into renewable energy and valuable by-products, the system reduces methane emissions from landfills, limits groundwater contamination, and cuts dependence on imported fossil fuels and synthetic fertilizers. It supports zero-waste strategies on campus while engaging restaurants, households, and local institutions in responsible waste practices.

Future Ferm aligns with several Sustainable Development Goals, including **SDG 7** (Affordable and Clean Energy), **SDG 8** (Decent Work and Economic Growth), **SDG 11** (Sustainable Cities and Communities), **SDG 12** (Responsible Consumption and Production), **SDG 13** (Climate Action), and **SDG 15** (Life on Land). The project also contributes to **SDG 9** (Industry, Innovation, and Infrastructure) by modelling a scalable, adaptable system for other Caribbean SIDS.

Currently in its pilot phase, Future Ferm is not only a climate intervention, but a practical demonstration of how bio-based solutions can power sustainable development. It turns everyday waste into economic and environmental opportunity—fueling a cleaner, greener future for Barbados and beyond.



MPhil. in Biosecurity & Biorisk Management

RESEARCH DEGREE

Key information

Duration	24-36 months
Location	Hybrid
Format	Full time /Part-time
Website	cbs.uwi.edu



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What will I learn

Assess how biorisks impact Caribbean lives, livelihoods, ecosystems, and economies using systems thinking approaches.

Formulate resilient biosecurity strategies to combat shocks to development and evaluate policies connecting biosecurity, business, and governance for sustainable growth.

Design intervention frameworks to strengthen national and regional resilience, mastering research methods for dynamic risk analysis.

Apply robust analytical techniques to inform evidence-based policies and action.

Overview

The world faces a complex web of biosecurity threats – from pandemics and invasive species to cyberattacks, climate impacts, and food system disruptions. Small Island Developing States (SIDS) like those in the Caribbean are particularly vulnerable, yet global solutions often overlook their specific needs.

The MPhil in Biosecurity and Biorisk Management at the Centre for Biosecurity Studies (CBS), UWI Cave Hill, is designed to change that. This innovative, flexible programme empowers you to not only understand biosecurity threats but to develop real-world, scalable, and implementable solutions that protect lives, sustain economies, and safeguard ecosystems. Delivered remotely or in person, the MPhil blends academic excellence, interdisciplinary insight, and practical application. It offers a rare opportunity to engage directly with the problems shaping Caribbean and global security – and to be part of the generation that solves them.

At CBS, we believe that biosecurity isn't just theoretical – it's practical. It's not only about analysis – it's about action.

Programme content

The MPhil provides a comprehensive, multidisciplinary education, combining science, governance, policy, leadership, and innovation:

- Assessing Bio-Threat Impacts
- Understand how biological, environmental, technological, and behavioural risks intersect to threaten livelihoods, economies, and ecosystems.
- Strategic Response Development
- Learn to formulate resilient strategies that protect societies from bio-threats through research, entrepreneurship, policy, and advocacy.
- Policy and Business Integration
- Compare and evaluate biosecurity policies, regulations, and economic strategies within the Caribbean, Latin American, and global contexts.
- Research Excellence
- Build robust research skills using qualitative and quantitative methodologies essential for biorisk analysis and intervention design.
- Dynamic Risk Evaluation & Systems Thinking
- Explore the biosecurity dimensions of pandemics, climate change, cyber threats, biodiversity loss, and disaster resilience.
- Organizational and Team Leadership
- Learn to manage institutions and multidisciplinary teams addressing biosecurity and sustainability challenges at national and global levels.

- Solution-Driven Thesis
- Your research project isn't just academic. It's targeted at real-world problems – aiming to produce concrete, scalable, and implementable solutions that can be adopted by governments, industries, and civil society.

Who is the course for?

The MPhil Biosecurity and Biorisk Management is ideal for:

- **Public Sector Management Professionals** working in health, agriculture, environment, national security, foreign affairs, customs, disaster management, education, and cybersecurity.
- **Private Sector Leaders** in industries such as tourism, logistics, energy, biotech, agriculture, healthcare, and information technology.
- **International and Regional Agency Specialists** looking to specialize in climate and biosecurity risk governance, sustainability, or development.
- **NGO and Civil Society Advocates** addressing public health, conservation, disaster preparedness, or food security.
- **Academics, Researchers, and Students** interested in deepening expertise in biosecurity, climate resilience, One Health, or sustainable development.

■ **Entrepreneurs and Innovators** passionate about developing solutions for the Caribbean and global challenges.

Customizable

We understand that learners come from varied professional and educational backgrounds. The MPhil can be customized to your existing knowledge, sector, and goals – making it highly relevant whether you are a policymaker, scientist, development professional, lawyer, engineer, technologist, or public health expert. The programme is available **remotely, in-person,** or via **blended delivery** to ensure accessibility across the Caribbean and globally.

Why choose us?

- ✓ Caribbean-specific and globally relevant
- ✓ Accredited by a globally ranked University (Top 1.5% Times Higher Education Rankings)
- ✓ Solution-oriented, practical research outputs
- ✓ Flexible remote or In-Person learning
- ✓ Cross-sectoral, multidisciplinary expertise
- ✓ Access to regional and international business and biosecurity networks



Dr. Kirk Douglas
Course Director

"For Small Island Developing States(SIDS) biosecurity and biorisk management are essential pillars of sustainable development. Global North-driven research often overlooks the systemic vulnerabilities we face. We must urgently embrace systems thinking to develop relevant, context-specific solutions that protect our health, environment, and economies. Building resilience for SIDS demands more than managing today's risks – it requires anticipating tomorrow's challenges and creating a future that safeguards our people, our resources, and our way of life."



COURSE REQUIREMENTS

The MPhil. programme will consist of **3 core courses, 2 electives or 3 workshops** to be completed within a **minimum of 3 years** provided the person has completed a **relevant Master degree**.

- ✓ Core - 2 core courses (3 credits each – 6 credits in total)
- ✓ 1 Graduate Seminar

- ✓ Electives - a choice of 1 course (minimum of 3 credits) or
- ✓ Workshops – two (2) 2-credit workshops (4 credits)

- ✓ Final MPhil research thesis



Ph.D in Biosecurity & Biorisk Management

RESEARCH DEGREE

Key information

Duration	36 -60 months
Location	Online or In-Person
Format	Part-time
Website	cbs.uwi.edu



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What will I learn

Develop innovative, context-specific research that produces tangible, scalable, and sustainable solutions to pressing biosecurity and biorisk management challenges in SIDS, the Caribbean, and globally.

Foster entrepreneurial thinking by enabling research outputs to transition into patentable, licensable, and commercializable solutions that directly impact sustainable development and resilience-building.

Equip scholars with interdisciplinary expertise and leadership skills to manage, design, and influence biosecurity systems across government, industry, academia, and international development sectors.

Promote applied, systems-based research that bridges theory and practice, targeting dynamic biosecurity threats while enhancing the resilience of lives, livelihoods, ecosystems, and economies.

Costs USD \$15,000 per year

Overview

In today's world, new and evolving biosecurity threats – pandemics, zoonoses, invasive species, agroterrorism, climate-related disasters, cyber-biosecurity threats – demand a new kind of leadership. Leadership that does not just analyse problems, but builds scalable, implementable, and sustainable solutions.

The PhD in Biosecurity and Biorisk Management at the Centre for Biosecurity Studies (CBS), UWI Cave Hill Campus, offers a unique opportunity for advanced scholars to move beyond understanding and into innovative problem-solving.

Our programme is research-driven and action-oriented, empowering candidates to develop original work that not only deepens global knowledge but generates real-world impacts. Whether your ambition is to design biosecurity technologies, shape national policies, develop scalable commercial ventures, secure intellectual property, or transform regional resilience, this PhD prepares you to lead.

The programme is flexible – offered remotely, in person, or through hybrid modalities – allowing you to work across borders while making global and regional impact.

At CBS, we don't just study risks. We transform risks into opportunities – for innovation, resilience, and sustainable development.

Course content

Our PhD programme is interdisciplinary, entrepreneurial, and deeply practical, built around a structured research pathway that includes:

- **Advanced Biosecurity Research**
 - Conduct pioneering research on critical biosecurity issues affecting Small Island Developing States (SIDS), Latin America, and the global community.
- **Systems Thinking and Dynamic Risk Analysis**
 - Apply integrated systems thinking to understand, model, and respond to complex biosecurity threats across health, agriculture, trade, security, and environmental sectors.
- **Solution-Driven Dissertation**
 - Develop a research thesis that targets a real-world biosecurity problem, with emphasis on implementable, scalable, and transferable solutions.
- **Entrepreneurship and Innovation**
 - Integrate entrepreneurial thinking into research outputs – with pathways for patenting, licensing, commercialization, and technology transfer.
- **Policy and Governance**
 - Explore biosecurity governance, legal frameworks, behavioural risk management, and public-private partnerships for national and regional resilience.

Professional Development and Global Engagement

- Participate in workshops, conferences, and collaborative networks focused on biosecurity innovation, global health security, One Health, climate and sustainable development.

Who is the course for?

The PhD in Biosecurity and Biorisk Management is designed for:

- **Scientists and Researchers** aiming to advance the frontiers of biosecurity research with actionable, scalable outcomes.
- **Public Policy Professionals** focused on designing biosecurity and risk governance strategies for government or international agencies.
- **Entrepreneurs and Innovators** interested in creating commercial solutions – such as new technologies, biosecurity products, risk management platforms, and services.
- **Public Health, Agricultural, Environmental, and Security Experts** seeking leadership roles in protecting lives, livelihoods, and ecosystems.
- **Lawyers, Cybersecurity Specialists, Economists, Engineers, and Technologists** working at the intersection of biosecurity and sustainable development.
- **International Development Specialists and NGO Leaders** committed to building resilience in vulnerable communities and regions.

Tailored to Your Goals

We recognise that biosecurity challenges are complex and multidisciplinary. The PhD programme is customizable to your professional background, research interests, and sector needs.

Whether you seek to develop new biosecurity protocols, engineer solutions, lead in bio-risk consultancy, or pioneer innovative interventions – the CBS PhD equips you to succeed.

Why choose us?

- ✓ Focused on real-world, scalable solutions – not just theory
- ✓ Integration of entrepreneurship, commercialization, and innovation pathways
- ✓ Caribbean expertise with global reach and relevance
- ✓ Flexible, accessible delivery options (remote, hybrid, in-person)
- ✓ Access to UWI's global academic network and research support



Dr. Kirk Douglas
Course Director

"The future of biosecurity lies not just in understanding threats, but in innovating solutions that are scalable, commercializable, and transformative. Small Island Developing States need research that doesn't end on a shelf, but translates into action, enterprise, and resilience. Our PhD programme equips scholars to lead this shift – from vulnerability to opportunity – securing sustainable futures for our societies and ecosystems. By integrating entrepreneurship, intellectual property development, and solution-driven research, we are shaping a generation of leaders who will secure our societies, economies, and ecosystems against old and new threats. The next chapter of sustainable development demands not only new knowledge, but new pathways to apply it."

- ✓ Positioned for leadership roles in academia, government, industry, and international agencies

COURSE REQUIREMENTS

The Ph.D. programme will consist of **3 core courses, 2 electives or 3 workshops** to be completed within a **minimum of 3 years** provided the person has completed a **relevant Master degree**.

- ✓ Core - 3 core courses (3 credits each – 9 credits in total)
- ✓ 3 Graduate Seminars
- ✓ Electives - a choice of 2 courses (minimum of 6 credits) or
- ✓ Workshops – three (3) 2 credit workshops (6 credits)
- ✓ Final PhD research thesis



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Core Courses

BSEC6000
Biosecurity & Biorisk Management: More Than Meets The Eye

BSEC6001
Geopolitics and Infectious Diseases

BSEC6002
Biosecurity, Behavioural Change & Bio-risk Communication

'Connecting the dots to solve complex risk problems by designing comprehensive & integrated biorisk management solutions to protect lives & livelihoods'



CONTACT US



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