

Master of Science in Waste Management and Circular Economy



Erasmus+



COURSE
HANDBOOK

**Faculty of Management Studies and Commerce
University of Sri Jayewardenepura, Sri Lanka**

In Collaboration With



European Union and Erasmus+ Partner Universities, Norway



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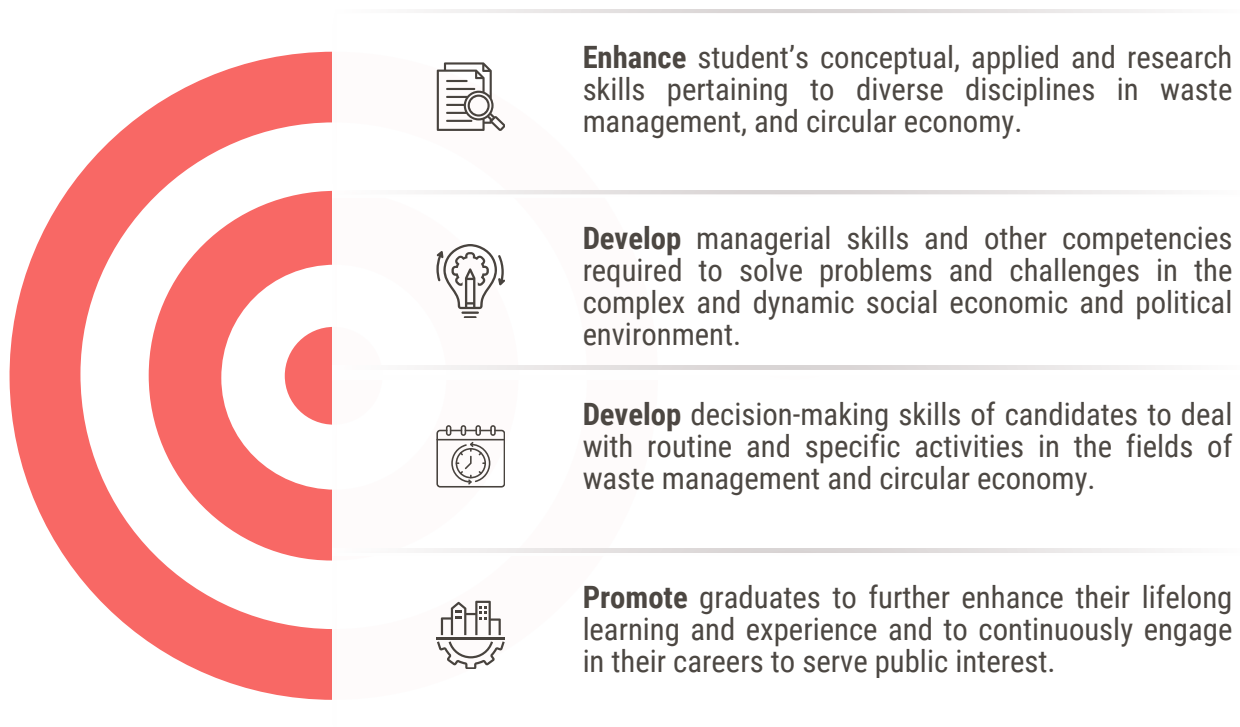


Aim and Objectives of the Degree Programme

Programme Aim;

This programme aims to develop professionals embedded with required knowledge, specialized skills including critical thinking and problem solving skills and right attitudes through effective student centered learning environments to use their competencies from theoretical and practical perspectives in diverse areas of waste management, sustainability, and circular economy to address contemporary needs of industry and academia.

Objectives



Earn your
Master in Science after
completing the 2nd year.



Earn your
Post Graduate Diploma
after completing the
1st year.



**Year 1
Semester 1**

**Year 1
Semester 1**

**Year 1
Semester 1**

**Year 1
Semester 1**

MWM5301
Introduction to Waste
Management and
Circular Economy

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MWM5301
Introduction to Waste
Management and
Circular Economy

60

Credit
Value

750

Credit
Hours

3000

National
Hours

Year 1 - Semester 1

Waste Management and Circular Economy

Module Code

MWM5301

Module Name

Waste Management and Circular Economy

03

Credit Value

45

Credit Hours

150

Notional Hours

Optional/Core

Core

Hourly Breakdown

Theory	Practical	Independent study
35 Hrs	10 Hrs	105 Hrs

Course Aims are to:

- **Provide** the relevance of and link between waste management and circular economy.
- **Identify** waste management strategies that differentiate circular economy from ecological economy.
- **Identify** the role of closed-loop supply chain in managing industrial waste in a circular economy.
- **Apply** waste management practices to create value sustainably.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Explain** the importance of managing waste in a sustainable manner.
- **Describe** the concepts of waste management, ecological economy and circular economy.
- **Demonstrate** the link between waste management strategies, circular economy, and ecological economy.
- **Compare and contrast** sources of waste and types of waste.
- **Explain** the significance of waste and importance of managing them.
- **Apply** waste management practices to day to day activities of people by referring self-initiations by students.
- **Describe** waste management strategies in a circular economy.
- **Communicate** the scope of waste management strategies in achieving circular economy objectives.
- **Apply** waste management practices to create value sustainably.
- **Demonstrate** how waste management practices are viable and sustainable in a circular economy.

Course Content:

Introduction			Fundamentals of Circular Economy Overview of a circular economy
Environmental Pollution and Waste Management			Implementation of circular economy
Sources and types of waste			Circular Economy and sustainable development
Waste, Waste Management and Waste as Raw Materials and inputs in economic activities			Waste Management practices and potentials in Sri Lanka
Waste hierarchy			Macro-Economic consequences of circular economy, sustainable development, and waste management
Global challenges			The future is circular economy

Continuous (Summative) Assessment*Reflection Journal***40%****Final Formative Assignment***Theory***45%***Practical***15%****Recommended Reading:**

- Tchobanoglous, G.; Kreith, F. (2002). Handbook of Solid Waste Management. Second Edition. McGraw-Hill International Editions.
- Williams, P.T. (2005). Waste Treatment and Disposal. John Wiley & Sons Ltd.
- Bilitewski, B.; Härdtle, G.; Marek, K.; Weissbach, A.; Boeddicker, H. (1997). Waste Management. Springer.
- White, P.; Frank, M.; Hindle, P. (1995). Integrated Solid Waste Management. A Lifecycle Inventory. Blackie Academic & Professional.
- Mika Sillanpää and Chaker Ncibi The Circular Economy, Case Studies about the Transition from the Linear Economy, 1st Edition - August 1, 2019, Paperback ISBN: 9780128152676, eBook ISBN: 978012815268
- https://ec.europa.eu/environment/topics/waste-and-recycling/waste-framework-directive_en
- Sadhan Kumar Ghosh, 2020, Circular Economy: Global Perspective, Springer

Year 1 - Semester 1

Waste Management Regulations and Policies

Module Code

MWM5302

Module Name

Waste Management Regulations and Policies

03

Credit Value

45

Credit Hours

150

Notional Hours

Optional/Core

Core

Hourly Breakdown

Theory	Practical	Independent study
35 Hrs	10 Hrs	105 Hrs

Course Aims are to:

- **Provide** a basic knowledge on public administrative structures, public finance and accounting and waste management regulations and policies.
- **Explain** legislation and public finance and waste management regulations and policies.
- **Describe** and interpret policies and legislation, main actors in policy designing and implementation (administrators, regulators, inspection, and operators) and regulatory operations in waste management systems.
- **Discuss** different roles played by public institutions in managing waste.
- **Discuss** the elements of the legislative framework applied in waste management in Sri Lanka.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Explain** the relevance and significance of regulations and policies in managing waste.
- **Explain** the importance of public sector finance and accounting in managing waste and its connections to regulations and policies.
- **Describe** and interpret policies and legislation, main actors in policy designing and implementation (administrators, regulators, inspection, and operators) and regulatory operations in waste management systems.
- **Discuss** the significance of public finance, policies and regulations on waste management practices.
- **Discuss** the importance of compliance with regulations in pursuit of achieving objectives of waste management.
- **Discuss** the ways in which regulations and policies work as leverages to improve waste management practices.

Intended Learning Outcomes (ILOs):

- **Apply** waste management regulations, and policies in day-to-day activities of learners.
- **Communicate** the scope of waste management regulations, and policies to establish sustainable waste management practices.

Course Content:

Introduction			Institutional arrangements in public sector
Public Administrative Structure of the Country			The legal framework for Waste Management
Regulations and Public Finance Management			Responsibilities of waste management
Public Procurement System in Sri Lanka			National Strategy and Policy for Waste Management Strategy formulation, implementation, and monitoring
Basics of Fiscal Analysis			International Collaboration
Financial Reporting and performance measurement in public sector			Regulatory and policy issues in Waste Management in Sri Lanka

Continuous (Summative) Assessment

Individual Assignment *Group Assignment*
20% **20%**

Final Formative Assignment

Theory
60%

Year 1 - Semester 1

Information Technology and Applications

Module Code

MWM5303

Module Name

Information Technology and Applications

03

Credit Value

45

Credit Hours

150

Notional Hours

Optional/Core

Core

Hourly Breakdown

Theory	Practical	Independent study
35 Hrs	10 Hrs	105 Hrs

Course Aims are to:

Develop and enhance required skills and competencies of the candidates, to use Information-communication technologies (ICT) including Web application as a tool to increase productivity, and improve effective communication, and collaboration among stakeholders in waste management and to provide a leadership role in an enterprise setup to foster an organizational culture that promotes ICT applications in waste management.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Explain** the importance of information technology and web-based applications in waste management systems.
- **Design** collaborative virtual working environments using web and computer network applications.
- **Use** Microsoft Office applications in waste management to enhance the productivity and efficiency.
- **Use** social media platforms to make communities aware of and engage in waste management.
- **Develop** a skills and competencies needed for designing and developing mobile applications and database management systems in waste management.

Course Content:

Overview			Training Google workspace application for collaborative waste management.
Introduction web-based services and infrastructure			Managing web applications and presence using Content Management Systems (CMS)
Computer networking in waste management			Introduction to the project management applications
Basic applications of Microsoft Office 365			Design and develop social media campaigns.
Development of digital skills			Developing information systems using database management systems
Advanced business applications			Implementing an integrated information system for waste management
Developing interactive presentations software skills			

Continuous (Summative) Assessment

<i>Individual Assignment</i>	<i>Group Assignment</i>
20%	20%

Final Formative Assignment

<i>Theory</i>	<i>Practical</i>
10%	50%



Year 1 - Semester 1

Innovative Enterprise

Module Code

MWM5304

Module Name

Innovative Enterprise

03

Credit
Value

45

Credit
Hours

150

Notional
Hours

Optional/Core

Core

Hourly Breakdown

<i>Theory</i>	<i>Practical</i>	<i>Independent study</i>
35 Hrs	10 Hrs	105 Hrs

Course Aims are to:










Provide students with an understanding of the nature of enterprise and entrepreneurship and to introduce the role of the entrepreneur, innovation and technology for being a sustainable and socially responsible enterprise in its context and in the entrepreneurial process.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Explain** the significance of entrepreneurship and innovation in waste management.
- **Discuss** entrepreneurship and innovation from both a theoretical and practical perspective.
- **Develop** plans for implementing entrepreneurial activities at different levels up to globalized and competitive environment responsible for the social, ethical and culture harmony and accountability.
- **Discuss** the attitudes, values, characteristics, behavior, and processes associated with sustained entrepreneurial behavior.
- **Explain** the ways in which entrepreneurs perceive opportunity, manage risk, and organize resources and add value.
- **Explain** the use of a wide range of source materials that facilitate continuing learning process to promote innovative waste management and entrepreneurship.
- **Discuss** the roles of the entrepreneurs in enterprise value creation processes.

Course Content:

Overview of entrepreneurship and Innovation			Triple Helix Model
Innovation drivers			Creating a culture for innovation
Perspectives of Innovation			Virtual Enterprise Environments
Entrepreneurship and Intrapreneurship			Global perspective on waste management
Lean Startup Methodology			

Continuous (Summative) Assessment*MCQ***10%***Case Study***30%****Final Formative Assignment***Theory***20%***Practical***40%**

Year 1 - Semester 1

Emergency Management

Module Code

MWM5305

Module Name

Emergency Management

Optional/Core

Core

Hourly Breakdown

<i>Theory</i>	<i>Practical</i>	<i>Independent study</i>
35 Hrs	10 Hrs	105 Hrs

03

Credit
Value

45

Credit
Hours

150

Notional
Hours

Course Aims are to:

Present students with relevant perspectives of risk and managing a crisis. Accordingly, the course will disseminate the knowledge on systematic identification of risks and vulnerabilities and develop relevant mitigation, preparedness and response frameworks.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Outline** the evolution and trends of emergency and crisis management in local and global contexts.
- **Identify** risks by focusing on value, threats and vulnerability assessments.
- **Analyze** the steps of Emergency and crisis Management Cycle.
- **Discuss** the trends, threats and challenges of emergency and crisis management.
- **Develop** Emergency and Crisis Management plans.
- **Discuss** strategies of emergency and crisis management.
- **Discuss** strategy implementation processes and issues to be faced in emergency and crisis management operations.

Course Content:

Historical context and evolution of emergency and crisis management



Practical Exercise
Planning, Performance, Evaluation

Risk and Vulnerability Assessment



Practical exercise: Emergency and crisis management

Practical exercise: Risk analysis



Information Security in emergency and crisis management

Emergency Management Cycle
Identification, Mitigation, Preparedness,
Response



International emergency and crisis management

Communication in emergency and crisis



Future of Emergency and crisis Management

Development of emergency and crisis management Framework

**Continuous (Summative) Assessment**

MCQ
10%

Case Study Analysis
30%

Final Formative Assignment

Theory
40%

Practical
20%

Year 1 - Semester 2

Waste Management Systems

Module Code

MWM5306

Module Name

Waste Management Systems

Optional/Core

Core

Hourly Breakdown

Theory	Practical	Independent study
30 Hrs	15 Hrs	105 Hrs

03

Credit
Value

45

Credit
Hours

150

Notional
Hours

Course Aims are to:

Provide candidates with adequate knowledge on waste management as a system, how such a system works and is managed, and how the system influences the contexts and is influenced by the societal context.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Describe** a waste management system.
- **Explain** the elements of a waste management system.
- **Discuss** different ways and strategies of reducing waste generation.
- **Discuss** new ways of reusing.
- **Apply** programmes and strategies for reuse of waste.
- **Demonstrate** different dimensions of recycling waste and possibilities of using them as inputs for another products/service thus promoting a circular economy operations.
- **Explain** waste recovery systems (e.g., as an alternative energy source).
- **Discuss** different models of dealing with residues arising from waste.

Course Content:

Overview of Waste Management Systems			Drivers of Waste Management Systems
Methodical approaches to waste management			Life cycle assessment
Complexity of Waste Management System			Integrated waste management approach
Waste Reduction, reuse and recycling in Waste Management System			Waste Management System practices across
Waste Recovery Systems			International presence in Waste Management System
Elements of a sustainable Waste Management System			Dealing with waste from business entrepreneurial perspective, market aspects and business models
Municipal Waste Management System			

Continuous (Summative) Assessment

Group Assignment *Case Study (Individual)*
10% **30%**

Final Formative Assignment

Theory *Practical*
45% **15%**

Year 1 - Semester 2

Accounting and Social Responsibility

Module Code

MWM5307

Module Name

Accounting and Social Responsibility

Optional/Core

Core

Hourly Breakdown

<i>Theory</i>	<i>Practical</i>	<i>Independent study</i>
30 Hrs	15 Hrs	105 Hrs

03

Credit
Value

45

Credit
Hours

150

Notional
Hours

Course Aims are to:

Develop students' knowledge of the relationships among accounting, and society. Specifically, the course aims to provide students with a critical awareness of the accountabilities and responsibilities of organisations and viability and legitimacy of such organizations, either as managers or investors, regulators or overseers, and the role of accounting in search of such accountabilities and responsibilities.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Explain** major theories/tools for analyzing cost, social responsibilities and their consequences for accounting and social responsibility.
- **Demonstrate** the ability to analyse costs and benefits of social responsibilities of organizations and apply cost management strategies to discharge their social responsibilities.
- **Discuss** the changing nature and roles of accounting and social responsibilities.
- **Describe** how modern finance applications work in accounting and discharging social responsibilities.
- **Evaluate** alternative approaches to ensure social responsibilities, by using both financial and non-financial information.

Course Content:**Continuous (Summative) Assessment**

Reflection Journal
10%

MCQ
30%

Case Study
30%

Individual Assignment
10%

Final Formative Assignment

Theory
45%

Practical
15%

Year 1 - Semester 2

Environmental, Social, and Governance Frameworks

Module Code

MWM5307=8

Module Name

Environmental, Social, and Governance Frameworks

Optional/Core

Core

Hourly Breakdown

Thoery	Practical	Independent study
30 Hrs	15 Hrs	105 Hrs

03

Credit Value

45

Credit Hours

150

Notional Hours

Course Aims are to:

Provide a holistic view on Environmental, Social, and Governance (ESG) aspects of investments, referring to its background and history of ESG, cutting-edge industry developments, and frameworks that guide people to develop responsible investments. The Impact of Common Investment Theories on ESG Investment and Trends will also be discussed.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Discuss** the Environmental, Social, and Governance aspects of investments.
- **Discuss** the Common Investment Theories on ESG Investment Trends.
- **Analyze** the Common Investor Concerns on ESG Investment Strategies.
- **Discuss** the relevance of ESG frameworks for responsible/ ethical investments.
- **Assess** ESG impact of investment and business operations.
- **Analyze** ESG perspectives of investment.
- **Discuss** Practical Considerations and ESG of investments.
- **Discuss** Methods for Modeling Risk and Return of Investments from ESG perspectives.

Course Content:

Introduction to Environmental, Social, and Governance aspects of investments



The Impact of Common Investment Theories on ESG Investment Trends

A Historical Survey of ESG Investing



Frameworks for ESG investment and performance measurements

Development of ESG Risk and the ESG Rating Systems



Common Investor Concerns Regarding ESG Investment Strategies

Common Methods for Incorporating ESG Investments into Portfolio Management



Methods for Modeling Risk and Return of Investments

Role of ESG Investing in Portfolio Management.



Case Study: Assessing Environmental, Social, and Governance aspects of investments.

Continuous (Summative) Assessment
Mid Semester Test *Group Assignment*
20% **20%**

Final Formative Assignment
Theory *Practical*
45% **15%**

Year 1 - Semester 2

Research Methodology

Module Code

MWM5309

Module Name

Research Methodology

Optional/Core

Core

Hourly Breakdown

<i>Thoery</i>	<i>Practical</i>	<i>Independent study</i>
50 Hrs	10 Hrs	140 Hrs

04

Credit
Value

60

Credit
Hours

200

Notional
Hours

Course Aims are to:

Provide an opportunity for candidates to enhance their knowledge and skills on research through exploration of research language, ethics, and conduct of research with different approaches while exploring the ways of challenges faced in conducting research to achieve its objectives mainly based on qualitative and quantitative approaches.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Examine** the steps of conducting qualitative and quantitative investigation comprehensively.
- **Explore** possibilities of conducting doable research issue.
- **Develop** a critical review of literature to justify/ articulate reasonable research question/argument.
- **Develop** a suitable research design to address the identified research issue/problem.
- **Develop** parameters to measure the concepts and test their validity and reliability.
- **Conduct/Apply** ethical practices in carrying out the research.
- **Prepare** a research proposal and final research report highlighting the required components of research.

Course Content:

Introduction to Academic Research			Five Qualitative Approaches to Inquiry
Research Process			Methods of Data Collection
Problem Definition/Identification			Sampling
Literature Review			Data Collection methods in Qualitative Research
Conceptualization and Operationalisation			Analysis and Reporting Techniques
Designing a Qualitative Study			Data Analysis and Representation
Research Design			Proposal Development

Continuous (Summative) Assessment
Research Proposal and Presentations
50%

Final Formative Assignment
Theory
50%

Year 2 - Semester 3

Business Models and Value Creation

Module Code

MWM6401

Module Name

Business Models and Value Creation

Optional/Core

Core

Hourly Breakdown

Theory	Practical	Independent study
45 Hrs	15 Hrs	140 Hrs

04

Credit
Value

60

Credit
Hours

200

Notional
Hours

Course Aims are to:















Make learners competent enough to explore the concept of value creation in waste management under different business models. The course further enables learners to understand the ways of generating and managing value in real life situations and find solutions to practical issues in the field of waste management and circular economy.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Explain** the role of business models in waste management and circular economy.
- **Explain** various structures and processes of business models and value creation.
- **Discuss** the role of stakeholders in the process of creating value.
- **Discuss** how technology is integrated with business models and value creation processes.
- **Explore** the possibilities of suggesting alternative business models and value creation in waste management and circular economy.
- **Assess** key operational and strategic trade-offs (cost vs. others) in waste management processes in a circular economy.
- **Apply** business models in waste management in pursuit of improving operational efficiency and effectiveness.
- **Communicate** and present ideas and views on business models with a view to provide leadership competencies in value creation and management.
- **Develop** new context specific sustainable business models.
- **Demonstrate** positive attitudes and social responsibilities at different working capacities.

Course Content:

Introduction			Value distribution and sustainability
Classification of and operations of business models			Business models and the social component
Business approaches in value creation			Infrastructure for business models
Business models from a social perspective			Designing and implementation of business models
Stakeholders in business models			Operations and controlling of business models
Stakeholders and their role in waste management			Implementation of business models
Business models in waste management			Practices of business models developed countries

Continuous (Summative) Assessment

Case Study Analysis *Individual Assignment*
20% **20%**

Final Formative Assignment

Theory *Practical*
50% **10%**



Year 2 - Semester 3

Green Technology and Ecology

Module Code

MWM6402

Module Name

Green Technology and Ecology

Optional/Core

Core

Hourly Breakdown

Theory	Practical	Independent study
35 Hrs	10 Hrs	105 Hrs

03

Credit
Value

45

Credit
Hours

150

Notional
Hours

Course Aims are to:

Introduce and adopt students to green technology and ecology in waste management and circular economy. Green technology is technology that reduces the environmental footprint from waste handling and processing.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Explore** opportunities for alternative sourcing, conservation, efficiency, and repurposing through an understanding of product life cycles from origins to recycling or inevitable disposal.
- **Design** products, processes and complex infrastructure systems to promote sustainable attributes of importance to the environment and the global community.
- **Explain** the interconnectedness between technical and scientific skills with an understanding of the environment, renewable energy management, waste utilization, resource management and land-based industries who can contribute to national and global development.

Course Content:

Overview of green technology and ecology in waste management



Process technologies

Stakeholders of green technology and ecology



Disposal technologies

Waste collection technologies



Environmental conscious manufacturing

Segregation/Sorting technologies



Green building technology

Transport technologies in green



Green compliance

Continuous (Summative) Assessment

Group Assignment

20%

Individual Assignment

20%

Final Formative Assignment

Theory

45%

Practical

15%

Year 2 - Semester 3

Climate Change and SDGs

Module Code

MWM6403

Module Name

Climate Change and SDGs

Optional/Core

Core

Hourly Breakdown

<i>Theory</i>	<i>Independent study</i>
45 Hrs	105 Hrs

03

Credit
Value

45

Credit
Hours

150

Notional
Hours

Course Aims are to:








Provide knowledge and skills with students to be aware of climate change issues and their consequences on the sustainability of all animals and take actions in learning and day today activities to combat it ensure that threats of climate change will be minimized. Working in line with SDGs help people to deal with the climate change issue and therefore, learning SDGs and using enhanced competencies to achieve SDGs are also focused in this course.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Identify** the causes and potential consequences of climate change issues on all livings.
- **Discuss** the Impact of climate change issues to the environment and human wellbeing.
- **Discuss** climate change adaptation and mitigation such issues through technologies and best practices.
- **Relate** SDGs to climate change issues and reconcile how the adherence to SDGs would help solve climate change issues.
- **Discuss** anticipatory approaches of climate change.

Course Content:

Overview of climate change and SDGs			Section Five: Assessing climate change
Section Two: What causes climate change?			Section Six: Climate change and SDGs
Section Three: Measures and risk			Section Seven: Waste management and climate change
Section Four: Theories and models			

Continuous (Summative) Assessment

Group Assignment *Individual Assignment*
20% **20%**

Final Formative Assignment

Theory
60%

Year 2 - Semester 3

Seminar in Waste Management and Circular Economy

Module Code

MWM6404

Module Name

Seminar in Waste Management and Circular Economy

03

Credit
Value

45

Credit
Hours

150

Notional
Hours

Optional/Core

Core

Hourly Breakdown

Theory

10 Hrs

Practical

10 Hrs

Research

25 Hrs

Independent study

105 Hrs

Course Aims are to:

Enable learners to develop a high-quality proposal for research projects offered in the following semester as the final outcome. The course aims to dig out theoretical and philosophical underpinnings of research articles thus enabling students to use them to achieve the above purpose. Accordingly, the capacity of learners in critical thinking, innovation, analyzing data and information, and communication skills are expected to be achieved at the end of the course.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Explain** what a scholarly research paper and a research project is.
- **Describe** different components of a research paper and research report.
- **Analyze** research papers from a critical and philosophical perspective.
- **Discuss** research issues stated and how they have been articulated in research papers.
- **Discuss** how theories are used in research papers.
- **Discuss** methodologies used and how they are relevant to achieve the objectives of research.
- **Develop** a doable research proposal to carry out a research project subsequently.

Course Content:**Continuous (Summative) Assessment**

<i>Group Assignment</i>	20%
<i>Reflection Journal</i>	30%
<i>Individual Presentation</i>	20%
<i>Research Proposal & Viva</i>	30%

Year 2 - Semester 4

Leadership for Transformational Change

Module Code

MWM6305

Module Name

Leadership for Transformational Change

03

Credit Value

45

Credit Hours

150

Notional Hours

Optional/Core

Core

Hourly Breakdown

Theory	Practical	Independent study
30 Hrs	15 Hrs	105 Hrs

Course Aims are to:

Provide students with a fundamental knowledge of leadership and leadership styles in business organization special focusing on waste management and the circular economy. This course opens the mind of students into the leadership realm and provides students with a sound working knowledge of leadership principles, styles and ethics involved in waste management. Upon completion of the course, the student will be able to apply basic leadership principles in daily organization, differentiate how the leadership varies in the context of waste management, assess different leadership styles, justify their personal choices, and compare leadership and management in waste management with other sectors.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Discuss** the need for Transformational Leadership (TL) in the dynamic business environment with special reference to waste management and circular economy.
- **Discuss** necessary competencies required in the field of waste management and circular economy in contemporary organization (in production, transportation, and consumption)
- **Discuss** the ways of using different tools and techniques in the field of waste management and circular economy to provide appropriate leadership to achieve set targets of an organization.
- **Explain** theories, concepts and models related to Transformational Leadership.
- **Demonstrate** leadership qualities and skills to influence and interact with stakeholders to practice efficient and effective waste management strategies in a circular economy.

Course Content:

Introduction -Need for Transformational Leadership



Attributes and skill requirements for transformational leaders

Organizational reality through the articulation of vision by leaders



Empowering self and others

Personality Factors and the Transformational Leadership



Role of leadership in waste management

The Transformational Leader and Change



Continuous (Summative) Assessment

Role Play
20%

Case Study
30%

Final Formative Assignment

Theory
30%

Practical
20%



Year 2 - Semester 4

Dissertation

Module Code

MWM6166

Module Name

Dissertation

Optional/Core

Core

Hourly Breakdown

Theory

35 Hrs

Research

710 Hrs

Supervision

45 Hrs

16

Credit
Value

750

Credit
Hours

3000

Notional
Hours

Course Aims are to:

Provide skills of carrying out applied/ qualitative research as well as inculcating the necessary thought process to investigate organizational or managerial problems/issues systematically and scientifically. Accordingly, this course covers the areas of establishing a research problem with appropriate evidence, deriving most logical reasoning for the problem from literature, examining the reasoning (root causes) of the problem empirically and deriving valid conclusions from the analysis, and finally proposing appropriate and feasible recommendations/solutions to solve the problem.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Identify/explore** a real-world unexplored research issue/problem and explore them with thorough investigations from theoretical perspective.
- **Articulate** the research issue identified above and engage in continuous writing.
- **Review** and interpret literature relevant and supportive in the pursuit of research engagement.
- **Demonstrate** scientific insight and skills within the selected area of maritime management.
- **Discuss** requirements for high quality academic work.
- **Discuss** the state of the art of academic literature publication.
- **Analyze** relevant empirical works and knowledge.
- **Demonstrate** the knowledge to develop a relevant and realistic research question.
- **Develop** relevant and realistic research questions.
- **Present** sufficient academic knowledge on a systematic and logical presentation of the topic of the dissertation.

Intended Learning Outcomes (ILOs):

At the completion of this course students will be able to:

- **Comprehend** the principle for research ethics for dissertation including information about identifiable individuals and groups.
- **Present** works written and orally to an academic audience applying technical tools.
- Use academic referencing/citation.
- **Analyze** other academic contributions which are relevant for the dissertation.
- **Relate** the terms and academic perspectives that are relevant for the research question asked, and arguments presented, in the dissertation.
- **Demonstrate** the competencies of developing drafts into the final dissertation under guidance and supervision.
- **Evaluate** academic problems related to the master dissertation on an individual basis.

Course Content:

Introduction to the course and guidelines to find a feasible research problem



Structuring the second chapter (Literature survey)

Identification a feasible research problem and articulate it



Structuring the third chapter (Data analysis/ root cause analysis)

Structure of the first chapter (Introduction)



Practical session on analyzing data

Progress presentation on research problem, questions, and objectives



Structuring fifth and sixth chapters (alternative solutions and recommendations)

Final Formative Assignment

Dissertation

80%

Viva

20%



Scheme of Grading

Programme Assessment Procedure / Rules of the nested qualification

(Describe in detail the Programme Assessment Procedure/Rules)

Lectures of a course are to be completed by 15 weeks and all continuous assessments of a given course should be completed by the 15 week. The final examination of the course is held after 2 weeks of study leave.

Evaluation of taught Course

1. Candidates are evaluated by both continuous assessments and end semester written examinations.
2. Continuous assessments include individual assignments, group assignments, case analysis, critical incident analysis, term papers, mid-term examinations, quizzes, practical, oral presentations etc. The continuous assessments will be limited to a maximum of 50% of the total marks.
3. A three-hour end semester written examination is held for each course.
4. Pass mark for each credit course is 50% of the total marks.
5. A candidate who repeats a course is evaluated only on the final exam and will be awarded a maximum of 50% marks for the repeat course.
6. Excuses are granted only for serious ill health, death of immediate family member, or any other cause acceptable to the board of studies subsequently approved by the Faculty Board and the University Senate. Medical leave recommended by the University Medical Officer should be submitted to the Coordinator of the MBA / MSc unit within 14 days of the conclusion of the examination.

Evaluation of the Research / Project

1. The evaluation of the Dissertation / Research / Project is done by two independent examiners.
2. A viva-voce examination is held for the dissertation, provided that the mark of the dissertation is not less than 50%. A total of 100 marks is allocated to the viva-voce examination.
3. The final mark is the average of the marks awarded by the two examiners and the viva-voce examination.
4. The grading system of the dissertation and viva-voce examination is similar to that of a credit course.

Scheme of Grading

Scheme of Grading

The grading system of a credit course is given in Table below.

Range of Marks	Letter Grade	Grade Points Per Credit Hour
85 - 100	A+	4.00
70 - 84	A	4.00
65 - 69	A-	3.70
60 - 64	B+	3.30
55 - 59	B	3.00
50 - 54	B-	2.70
45 - 49	C+	2.30
40 - 44	C	2.00
35 - 39	C-	1.70
30 - 34	D+	1.30
25 - 29	D	1.00
00 - 24	F	0.00

Repeat or Second Examinations

A student who obtained a grade below C (e.g. C-, D+, D, F, or E) in a particular course unit may re-sit the examination in respect of that course unit for the purpose of improving the grade; the best grade obtainable in this instance is "C". In the event a student obtains a lower grade while attempting to have a better grade, he/she will be entitled to the higher grade.

The students who obtain a grade below C (e.g. C-, D+, D, F, or E) in a particular course unit may re-sit the examination in the next academic year of that course unit/s for the purpose of improving the grade; the best grade obtained in this instance is "C". In the event a student obtains a lower grade while attempting to have a better grade, he/she will be entitled to the higher grade. Those who have provided medicals will not be considered as repeat candidates.



Scheme of Grading

Overall Evaluation

A candidate is deemed to have passed the study program only if he or she secures Cumulative Grade Point Average (CGPA) of not less than 2.30 in the entire program. GPA is the mean of Grade Points obtained for all the credit courses, dissertation /research/project, and the viva voce examination. Those who secure an overall CGPA of not less than 3.70 in the entire program shall be considered for a Merit Pass.

It is required for a candidate to have a minimum of 2.3 GPA for each semester to award the qualification.

Calculation of Grade Point

Average Grade Point Average (GPA) is the credit-weighted arithmetic mean of the Grade Point Value and the GPA is determined by dividing the total credit-weighted grade point value by the number of credits. GPA shall be computed to the second decimal place.

Fees Structure

Course/Consultancy Fee	Rs. 300,000
Registration Fee	Rs. 5,000
Library Fee	Rs. 7,000
Other - Application Fees	Rs. 3,000
Library Fees (Refundable)	Rs. 5,000
Total Cost	Rs. 320,000

Contact Us



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Best
OF
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Journey!