

Master of Science (Project Management)

SYLLABUS (IMPLEMENTED IN AY2024/25)

Description of Courses

PM5101 Project Management

The course offers an overview of project management. It covers the strategic use of projects as part of business strategy, the project cycle in terms of its conception, planning, and execution, and the factors that underpin the performance of projects. The project manager as an effective leader in managing projects is emphasized at each stage of the cycle.

PM5103 Contract Management

This course examines the management of contracts in a project. It covers contract strategy in terms of procurement and risk allocation, standard forms of contract, documentation, claims management, dispute management, and insolvency.

PM5105 Development Finance

This course covers the infrastructure development cycle, project identification and appraisal, feasibility study, grantor's project preparation, sponsor's bid preparation, tender, lender's due diligence, pre-construction activities, mobilization, construction, project close-out, operation and maintenance, and handing over.

PM5106 Design Management

This course provides project managers with the tools to manage the design of a project. It covers the design process from the development of the design program to conceptual design, design development, and the production of tender documents. It includes design evaluation, value engineering, constructability reviews, design for safety, and design for sustainability, green infrastructure, and resilience.

PM5107 Time and Cost Management

This course focuses on project costing and scheduling. It covers pre-construction cost estimates, detailed estimates, cost control, variation orders, cash flows, schedule of values, material and equipment procurement, and subcontracting. Scheduling involves network diagrams and critical path analysis, delays, extension of time, and disputes.

PM5112 Research Methods

This course examines research methodologies in terms of the general philosophies of science as well as detailed research methods. It covers the research process of problem formulation, hypothesis formulation, research design, data collection and analysis (including machine learning), developing the conclusion, and writing the research report.

PM5113 Managing Projects using BIM

This course is designed to provide project managers with knowledge on how to use BIM to manage projects. It covers the use of BIM for different purposes such as project presentations, statutory submissions, costing, design, and scheduling.

PM5114 Managing Complex Projects

This course focuses on the management of projects where there are many stakeholders and the scope, schedule, costs, interfaces, and other information may be uncertain. These projects also consist of many interactions among stakeholders and sub-systems.

PM5115 Project Finance Contracts & Agreements

This course provides an understanding of aspects of different project finance contracts and agreements. It covers the issues of risk management through contractual terms, duties and liabilities of lenders and borrowers, dispute management and contractual remedies, and issues relating to international contracts.

PM5116 Project Finance Case Studies

This course provides an opportunity for students to study how project finance plays an important role in a major development project by a review of relevant case studies.

PM5117 Urban Management

This course deals with how cities are managed at city and local levels. The major topics include urbanisation trends, urban challenges, the urban management approach, building capacity, spatial planning and strategies, local economic development, housing, transport, urban service delivery, public utilities, and the provision of urban services.

PM5118 Case Studies in Infrastructure Planning

This course applies the principles of infrastructure planning to case studies involving airports. It covers infrastructure and facilities planning, programming, development rules, developing infrastructure projects, capital improvement planning, managing infrastructure and facilities, as well as financing.

PM5119 Graduate Internship

This internship provides students with the opportunity to immerse themselves in real-world setting on projects with sponsoring organizations. The minimum duration is 12 weeks, and students may seek approval and start their internships before the start of the semester and register for this course at the beginning of the semester.