#### HERIOT WATT UNIVERSITY | EDINBURGH BUSINESS SCHOOL

# H11DP DELIVERING SUCCESSFUL PROJECTS SYLLABUS

## COURSE AIM

The aim of Delivering Successful Business Projects course is to equip students with the necessary skills to conceive of, plan, control and deliver projects, for enabling successful realisation of business objectives, through the use of the practical framework of project management.

## COURSE SYNOPSIS

The course equips managers and business professionals with knowledge, understanding and skills to manage projects using integrative concepts, tools and techniques.

The course starts by setting the mind-set for project decision-making, followed by obtaining fundamental concepts of the project management discipline and how it assists organisations with materialising their strategic and change objectives, considering multi success criteria, together with the concepts of programmes and portfolios. The setting of projects in the organisational context is discussed, followed by leadership and behavioural aspects of human resources of how the project manager and the project team work. The main project success criteria time-cost-performance jointly with risk and risk management as major elements of effective project and business management are examined. Detailed qualitative and quantitative planning and control practical processes of time, cost and performance are discussed, such as time and cost estimating, trade-off, monitoring and reporting. The project work termination, where the project is closed then connects back to the strategic intent via benefits realisation, project final evaluation and reporting. The course then present with some current advanced topics that trend the project management profession, such as the project management office function, ethics, sustainability and agile project management.

### COURSE LEARNING OUTCOMES

On completion of this course students will be able to:

- Explain the principles, concepts, theory and future trends of modern project management;
- Critically analyse and evaluate complex business problems to propose robust and sustainable project based solutions;
- Demonstrate an applied understanding of project management skills to address issues and enable strategic benefits realisation;
- Demonstrate an ability to plan and then implement the plan, manage change and successfully achieve project objectives;
- Show critical awareness of and the ability to apply current project management tools and techniques to plan a project based solution;
- Proactively assess and manage business systems improvements;
- Implement and realise a single definable project solution, by balancing multiple, sometime conflicting, objectives in ways that are accountable and achievable; and
- Propose appropriate solutions for managing multidisciplinary stakeholders and complex scenarios under conditions of risk, uncertainty and change.

## COURSE STRUCTURE

The course is broken down into 9 learning modules as follows:

## Module 1: Projects and Project Management

The aim of this module is to provide students with an introduction to the concept of project management, what it is used for and how it relates to business objectives in the overall organisational context.

At the end of this module students will be able to:

- Debate the definitions and characteristics of projects and project management;
- Demonstrate an applied understanding of project management as a managerial discipline driven by strategic intent;
- Differentiate between project success and project management success;
- Explain how projects are decided upon;
- Explain why business projects should be driven by strategic intent;
- Explain the potential business benefit of projects;
- Articulate issues and challenges in the project environment;
- Critically evaluate how project practice supports the goal of sustainability; and
- Know the historical origin of project management.

Topics covered are as follows:

- The characteristics of project;
- The importance of projects;
- Project Lifecycle;
- The characteristics of project management;
- Determinants of project success;
- The history and future trends of project management; and
- Sustainability in project management.

### Module 2: The Project Manager

The aim of this module is to set the understanding that project management is a responsible leadership of ideas and people, by expanding on the project manager's role both as manager and a leader, backed up by the project sponsor while acting in a professional ethical way.

At the end of this module students will be able to:

- Demonstrate an applied understanding of the characteristics required of a project manager to lead a project effectively;
- Explain why project management needs leadership;
- Articulate the concept, position and role of the project manager as manager and leader;
- Consider the benefits of ethics in project management; and
- Explain the concept, role and responsibilities of the project sponsor.

Topics covered are as follows:

- The role of the project manager;
- The skills required by the project manager;
- The way project managers lead projects and achieve cross-functional cooperation;

- The ethical conduct of project practitioners; and
- The concept of the project sponsor.

#### Module 3: From Strategy to Project

The aim of this module is to equip students with a critical understanding of the setting of a project in the organisational environment, how it is generated, how it is justified, how it is link to strategic portfolio and programme activities of the organisation and finally, how it is actually starting.

At the end of this module students will be able to:

- Use information to evaluate the environment in which projects are set;
- Articulate the relationship between projects and strategy, portfolio and programme;
- Demonstrate an applied understanding of how a project is selected, initiated and justified;
- Use a modern framework to define and differentiate between projects.

Topics covered are as follows:

- Project conceptualisation and the organisational context it is set in;
- Establishing project goals;
- Projects selection;
- Projects, programmes and portfolios;
- Project conceptual development and authorisation.

#### Module 4: Human Resourcing – Structuring and managing project teams

The aim of this module is develop students' understanding of how a project operates in an organisational setting, how the project stakeholders are managed, how the project team work and what does the project management office do.

At the end of this module students will be able to:

- Differentiate between project organisational structures;
- Demonstrate an applied understanding of the process carried out by the project manager in order to obtain human resources and identify stakeholders and team members;
- Contrast the relevant project team concepts and leadership challenges such as communications and motivation; and
- Critically evaluate the characteristics of the Project Management Office (PMO).

Topics covered are as follows:

- Project structures;
- Projects and organisational culture
- The project team characteristics, reasons for failure, stages in group development, virtual teams;
- The Project Management Office (PMO);
- Stakeholder management.

#### Module 5: Risk Management

The aim of this module is to provide an overview of risk management as an integral part of the work of the project and the importance of contracts in managing project risks.

At the end of this module students will be able to:

- Critically analyse the concept of risk management and why it is important;
- Develop critical awareness of how decisions are made under conditions of certainty, risk and uncertainty;
- Critically articulate the characteristics of contracts and appreciate their importance in project and risk management; and
- Implement a risk management system.

Topics covered are as follows:

- Introduction to risk;
- Decisions and risk;
- Developing and using a risk management system;
- Risks and contracts.

### Module 6: Time Management

The aim of this module is to discuss time management as an integral part of the project.

At the end of this module students will be able to:

- Critically evaluate the concepts of project time planning, scheduling and control;
- Calculate and interpret the duration of activities using deterministic and probabilistic approaches;
- Critically assess the concept of project acceleration and generate and present trade-off scenarios; and
- Critically evaluate the characteristics of agile Project management.

Topics covered are as follows:

- Concept of planning in projects;
- Use of work breakdown structure and work logic evaluation;
- Key scheduling terminology;
- Scheduling process;
- Precedence diagrams;
- Deterministic and probabilistic duration estimating;
- Calculation of early and late completion times and float;
- Calculation of CPM and PERT networks;
- Trade-off and rescheduling using crashing technique;
- Acceleration when damages are involved;
- Demonstration of project management tools, such as MS-Project; and
- The use of Agile approach in time and overall project management.

#### Module 7: Financial and Cost Management

The aim of this module is to discuss cost management as an integral part of the project work.

At the end of this module students will be able to:

- Critically evaluate the concepts of cost estimating and project budgeting;
- Apply the concept and structure of project cost planning and control systems; and
- Carry out earned value analysis (EVA) and reporting.

Topics covered are as follows:

- Control cycles model;
- Cost types and headings;
- Cost estimation;
- Budgeting;
- Project cost control;
- Earned value analysis; and
- Project performance monitoring and reporting.

#### Module 8: Quality and Performance Management

The aim of this module is to provide an overview of the importance of quality, or performance management in projects.

At the end of this module students will be able to:

- Critically evaluate the concepts of quality and quality management;
- Explain the project quality management system; and
- Apply quality management tools.

Topics covered are as follows:

- Concept of quality and standard;
- Cost and value of quality;
- Concept of quality management;
- Quality management system; and
- Quality tools and techniques.

#### Module 9: Project Closure and Evaluation

The aim of this module is to provide an overview of the final part of the project work (or project lifecycle), where the project has to be properly closed (finished), inspected against its goal and objectives and handed-over to the client to start operating and performing the objectives of which it was initiated for.

At the end of this module students will be able to:

Explain the project closure stages;

- Demonstrate an applied understanding of the challenges of handing over a project;
- Conduct final project evaluation, reporting and lessons learned; and
- Develop critical awareness of the connection between project completion and strategy.

Topics covered are as follows:

- Types of project closure;
- Benefits realisation; and
- Project evaluation and final report.

## ASSESSMENT

The course is assessed by final examination, accounting for 100% of the overall mark. The exam is in a 'take-athome' format. There is no choice in the selection of questions to be answered.

The exam paper has a Case Study with 4 essay based question each worth 25 marks.