

1.	School	Engineering
2.	Department	Civil Engineering
3.	Program Title (Arabic)	ماجستير هندسة إدارة المشاريع
4.	Program Title (English)	Master in Engineering Project Management
5.	Track	Thesis

First: General Rules & Conditions:

	Specialization	Degree	Dep #	School #	Year	Track
Plan Number	**	8	01	09	2018	Thesis

1. This plan conforms to the valid regulations of the programs of graduate studies.
2. Specialties of Admission: Holders of a bachelor degree in any engineering discipline can be accepted in the program.

Second: Special Conditions:

Additional undergraduate engineering courses are determined based on the courses taken by the student in the bachelor degree. These additional courses will not be counted for credit towards the program.

Third: Study Plan: Studying (33) Credit Hours as following:

1. Obligatory Courses (15) Credit Hours:

Course No.	Course Title	Credit Hrs	Theory	Practical	Pre/Co-requisite
0951757	Applied Statistics for Engineering	3	3	-	-
0901750	Project Management and Resource Planning	3	3	-	-
0951755	Research Methodology	3	3	-	-
0951771	Managerial Accounting for Engineers	3	3	-	-
0951770	Human Resource Management for Engineers	3	3	-	-

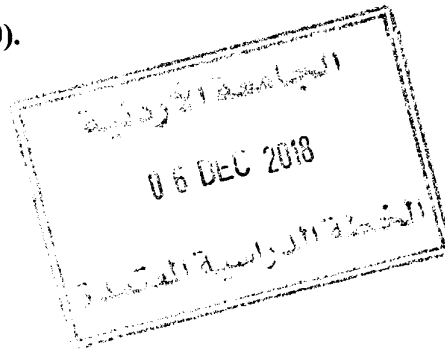
2. Elective Courses: Studying (9) Credit hours from the following:

Course No.	Course Title	Credit Hrs.	Theory	Practical	Pre/Co-requisite
0931702	Procurement and Financial Management	3	3	-	-
0951756	Project Appraisal	3	3	-	-
0941703	Contracts and Contractual Law	3	3	-	-
0951758	Scheduling Techniques	3	3	-	-
0951759	Special Topics in Engineering Project Management*	3	3	-	-
0906701	Operations Research	3	3	-	-
0951772	Total Quality Management	3	3	-	-
0951773	Project Risk Management	3	3	-	-
1601722	Organizational Behavior	3	3	-	-

*To be studied once regardless of the topic.

3. Thesis: (9) Credit hours (0901799).

4. Arabic Language Proficiency Exam (2501700).



Course Description

الجامعة الأردنية
06 DEC 2018
الخطة الدراسية- الماجستير
3 Cr. Hrs.

0951757 Applied Statistics for Engineers

This course includes theory of statistical inference; advanced analytical course in applied statistical methods: hypotheses testing, correlation, linear and non-linear regression analysis, multiple regression, time-series, T and F distributions, analysis of variance and post HOC comparisons, analysis of covariance, and nonparametric techniques; Experiment design; computer applications.

0901750 Project Management and Resource Planning

3 Cr. Hrs.

The focus of this course is on the systemic approach of managers to planning, organizing, staffing, implementation, and control. The course contains introduction, project definition, project planning, organizing a project, project manager, project team, work breakdown structure (WBS), scheduling tools, time estimating, planning the budget. Resource allocation, project cost reports, project reviews, accelerating a project, handling project changes. Leadership and project closeout.

0951755 Research Methodology

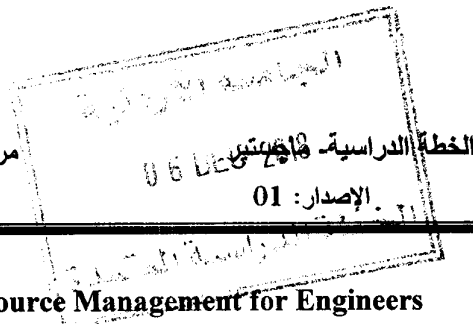
3 Cr. Hrs.

This course is designed to emphasize the foundational methods and techniques of research in project management context. Students will be exposed to the main components of the research process i.e., research problem, research question, research objectives, research hypotheses, data collection, ethical issues in research, report writing, and presentation. The main objective of this course is to enable students to understand the research process and conduct research project in an area of their choice.

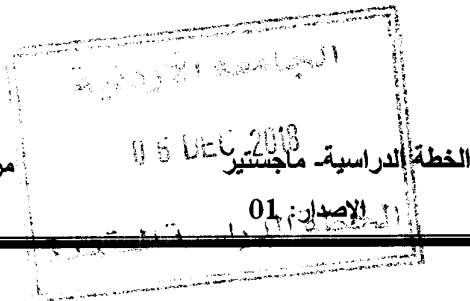
0951771 Managerial Accounting for Engineers

3 Cr. Hrs.

This course introduces the basic concepts of managerial accounting for internal decision-making. Major topics included are product costing, emphasizing costing approaches used in today's business environments, relevant costs for decision analysis, variance analysis, divisional performance evaluation, and transfer pricing.



- 0951770 Human Resource Management for Engineers 3 Cr. Hrs.**
- This course focuses on presenting and discussing the various principles and concepts of Human Resources Management. This course includes the discussion of the various functional activities of Human Resource Management such as planning, recruitment, selection, job analysis, performance appraisal, training and development, compensation, career planning and promotion, safety and health, and labor relations.
- 0931702 Procurement and Financial Management 3 Cr. Hrs.**
- This course is concerned with principles of financial management and the interface of procurement with finance management and procurement at the company level; plan, conduct, administer, and procurements; estimation of cost at different stages of design, conceptual estimating, cost control, and cost indices; parametric estimates; profitability analysis; financial statements analysis; source of financing; cost of capital; leverage; capital budgeting; working capital; and special financing.
- 0951756 Project Appraisal 3 Cr. Hrs.**
- Preparing a feasibility study in terms of market, technical, financial, social, and environmental studies: treatment of IRR with multiple roots: depreciation and taxation, capital allocation and budgeting, replacement decision analysis, evaluation decisions under risk, decision tree. Evaluation of public projects.
- 0941703 Contracts and Contractual Laws 3 Cr. Hrs.**
- Legal principles and landmark cases relevant to project engineering and management. Contracts, real property, environmental and labor laws, courts and arbitration, patents and copyrights, sureties, ethics, and education.
- 0951758 Scheduling Techniques 3 Cr. Hrs.**
- An overview of activity planning and scheduling, critical path method (CPM), work breakdown structure as a method of control; schedule monitoring and controlling, earned value concept, linear scheduling, PERT, resource allocation and leveling, time cost trade-off, special issues of project scheduling.



- 0951759 Special Topics in Engineering Project Management 3 Cr. Hrs.**
Study and analysis of advanced topics in project management approved by the Civil Engineering Department.
- 0906701 Operations Research 3 Cr. Hrs.**
Operations research methodology with emphasis on application to large scale systems. Algebraic and numerical techniques for computational error reduction; advanced topics in linear programming; nonlinear programming; optimization; sensitivity analysis; practical case studies and applications.
- 0951772 Total Quality Management 3 Cr. Hrs.**
The foundations of total quality management; key aspects of the quality system; TQM tools and the improvement cycle; conformance and non-conformance; the quality organization within an organization; control of quality records; internal quality audits; quality and business process reengineering; training for total quality management.
- 0951773 Project Risk Management 3 Cr. Hrs.**
This course will provide the student with an understanding of risk management; in a systematic; iterative approach that is composed of the following processes: plan risk management; identify risks; analyze risks qualitatively; analyze risks quantitatively; plan risk responses and control risks. risk management principles consistent with the Project Management Institute's Project Management Body of Knowledge (PMBOK)
- 1601722 Organizational Behavior 3 Cr. Hrs.**
This course includes the following subjects: Perceptions, attitudes, values, personality, learning, work stress, frustration, and foundation of group behavior. Understanding work teams, group types, groups structure, informal groups. Organization structure (work design). Technology. Communication. Leadership. Motivation (Job satisfaction). Types of Environments, elements of environments, environmental uncertainty, and organization and environment.