THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON DC

MASTER OF SCIENCE IN PROJECT MANAGEMENT
DECISION SCIENCES DEPARTMENT

COURSE SYLLABUS BOOK

Version 2.0, Updated January 2011

This document contains syllabi for all required courses in the Master of Science in Project Management Program as well as for selected elective courses. Please note that syllabi are subject to change by individual faculty and/or the program.

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THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF BUSINESS

Decision Sciences Department
Project Management Program

Course Syllabus Template
__ credit hours

Course Description
This syllabus template provides the foundation for all course syllabi in the Master of Science in Project Management program. Each syllabus will contain, at a minimum, pre-requisites, course objectives, required reading, assignment overview, grading policies, and a weekly breakdown of topics and deliverables.

The "Applicable Policies and Other Information" section is standard for all MSPM courses and will be in effect for all courses even if not explicably stated on the individual course syllabus.

Pre-Requisites
None

Course Objectives
1) To provide a standard template for all MSPM courses.
2) To ensure clarity around classroom policies.

Reading Assignments
The student is responsible for studying and understanding all assigned materials. If reading generates questions that are not discussed in class, the student has the responsibility of addressing the instructor privately or raising the issue in a discussion section on Blackboard. Additional reading, including technical papers and on-line material, may be assigned during the course.

Texts and Software

Required Text	
Optional Text	
Software	

Grading
The grades earned will be assigned based on the point total at the end of the semester, as indicated below.

Grade	A	A^-	B^+	B	B^-	C+	C
Points	930	900	870	830	800	770	730

Assignments
The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	Points	Effort (Team/Individual)

Due Dates
Deliverables must be turned in through Blackboard by the due date and time given in the syllabus unless noted otherwise. Only the instructor can extend any deadlines for assignments, the GTA cannot extend deadlines. Late submission will be penalized 10% per day (integer values only, 1 day late, 2 days late, etc., including holidays and weekends). **Deliverables will earn zero points if submitted beyond 1 week past the due date.**

Syllabus and Deliverables for _____

Session	Date	Subject/Topic	Deliverable Due
1			

Applicable Policies & Other Information
Attendance
The George Washington University Bulletin, Graduate Programs, 2009–2010: "Regular attendance is expected. Students may be dropped from any class for undue absence…. Students are held responsible for all of the work of the courses in which they are registered, and all absences must be excused by the instructor before provision is made to make up the work missed."

University Policies Regarding Conduct and Academic Integrity
Students are expected to do the individual assignments and exams on their own. Plagiarism on individual assignments will result in loss of all the points for the assignment and report to academic integrity office. Students are also expected to know and understand all college policies especially the code of academic integrity. For more details see http://www.gwu.edu/~ntegrity/code.html.

Cell phones and electronic equipment: As a courtesy please turn off all cell phones, etc. You may quietly use electronic devices (e.g. laptops, etc.) for taking notes as long as it does not provide a distraction from the class lecture or discussion.

Accommodations: Any student who feels he or she may need an accommodation based on the impact of a disability should contact his or her professor privately to discuss specific needs. To establish eligibility and to coordinate reasonable accommodations, please contact the Disability Support Services office at 202-994-8250. For additional information refer to http://gwired.gwu.edu/dss/.

Changes: This syllabus represents the current plan of the course best possible plan at this time. The instructor reserves the right to make revisions to any item on this syllabus, including, but not limited to any class policy, the course outline and schedule, grading policy, required assessments, etc. Please note that the requirements for deliverables may be clarified and expanded

in class, via email, or on Blackboard and students are expected to complete the deliverables incorporating such clarifications and additions. Thus, students should check email and Blackboard announcements and discussion forums frequently before submitting deliverables.

Other notes: The student is responsible for studying and understanding all assigned materials, whether covered in class or not. If the assignments or projects generate questions that are not discussed in class, the student has the responsibility of discussing with the instructor individually, or, as is generally preferred, raising the issue in the class or in a discussion forum on Blackboard.

THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF BUSINESS

Decision Sciences Department
Project Management Program

DNSC 6261 Introduction to Project Management
3 credit hours
Version 2.0, Spring 2011

Course Description
This course provides a comprehensive overview of project management. The course addresses (1) the culture, (2) the principles, and (3) the basic techniques of project management.

The course reviews the general stages of a project in rough chronological order and describes how the stages interrelate. Basic concepts and tools of project management, such as work breakdown structure, scheduling, earned value analysis, and risk management, are introduced by the instructor and subsequently used in student assignments.

The elements of project management critical to the success of a project also are identified and explained. The principles and tools are integrated and clarified through case studies from a variety of organizational settings and through creation of project management plans developed by students working in teams.

Pre-Requisites
None

Course Objectives
1) To describe, demystify, and formalize project management so that students are prepared for the Project Management curriculum and can utilize new knowledge and skills in their work. Real world examples, case studies, and even anecdotes will be used to illustrate major points. These illustrations will also show that managing projects, while a challenging and rewarding career choice in of itself, is a valuable asset in all professions.
2) To introduce, in a substantive way, major topics of project management that can be addressed later, in more detail, in specific courses. This basic course serves as the framework upon which these separate topics can be placed, so that the later courses make sense in a whole-project context.
3) To enable the immediate practice of project management in any workplace, independent of discipline. Students will learn to use project management processes and discuss them intelligently with colleagues, senior executives, or clients.
4) To provide a set of reference materials comprising class notes, sample project management plans (developed as class assignments), and handouts. These reference materials will serve the student as a project manager or as a professional who depends on project management.
5) To enjoy the class and have spirited, knowledgeable debates with classmates and instructors, whether in a classroom or via Blackboard.

Reading Assignments
See Template

Text and Software

Required Text	Meredith, J. R., and Mantel, S. J., *Project Management: A Managerial Approach*, 7th edition, Wiley, 2009.
Optional Text	**Verzuh, Eric, *The Fast Forward MBA in Project Management*, Wiley, 2005.**

Grading
See template.

Assignments
Case studies, exams, and a group project; the two exams will be open-book, open-notes and test your individual understanding of the material covered.

The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	Points	Effort
Team Charter	100	Team
Homework 1	150	Individual
Homework 2	150	Team
Quiz 1	150	Individual
Quiz 2	150	Individual
Team Project	250	Team

Due Dates
See template.

Syllabus and Deliverables for Introduction to Project Management

Session	Subject/Topic	Deliverable Due
1	Introduction and Course Overview	
2	Teams, Charter, PMOffice	Teams assigned
3	Communication, Teams, Conflict	
4	Work Planning and the Deliverable Work Breakdown Structure (DWBS)	
5	Project Scheduling	Team Charter
6	Estimating and Assigning Resources	Homework 1
7	Integrating Resources, Costs, and Schedules	Quiz 1

8	Project Conception and Initiation	
9	Procurement, Proposals, and Contracting	Homework 2
10	Monitoring, Evaluation, and Control	
11	Project Risk and Quality	
12	Project Termination and Closeout	
13	International Projects, Portfolio Management, PM Future Directions	Team Project
14	Team Project Presentations; Distance Presentations over Elluminate Live.	Quiz 2

Applicable Policies & Other Information
See template.

THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF BUSINESS

Decision Sciences Department
Project Management Program

DNSC 6202 Statistics for Managers
3 credit hours
Version 2.0, Spring 2011

Course Description
This course provides an introduction to various decision making tools and techniques, and to the basic statistical methods which are used both in the direct solution of managerial problems and as foundations for more advanced statistical analysis. It is expected that students will develop a good understanding of probability and its role in statistics and decision making, learn to formulate hypotheses i.e., ask the right questions, and be able to collect appropriate data and analyze it using appropriate statistical techniques. This course is equivalent to the two course sequence MBAD 6221: Judgment, Uncertainty, and Decisions and MBAD 6222: Data Analysis and Decisions.

Pre-Requisites
None

Course Objectives
1) To develop an understanding of key probability concepts useful in decision making;
2) To develop an understanding of several decision making tools, how they may be used, and their limitations;
3) To learn to identify appropriate data (variables) relevant for analysis;
4) To learn to formulate appropriate hypotheses given the context;
5) To learn to identify and carry out the appropriate statistical tests;
6) To learn to interpret results of statistical tests, to make valid conclusions and logically present results for managerial policy decisions;
7) To provide you with a practical and theoretically sound decision-making foundation that you will use in your curriculum and in your future professional activities.

Reading Assignments
See template.

Text and Software

Required Text	Data Analysis and Decision Making with Microsoft® Excel, Revised, 3rd Edition. S. Christian Albright | Wayne Winston | Christopher Zappe. ISBN-10: 0324662440 ISBN-13: 9780324662443 © 2009
Software	1. Decision Tools and Statistic Tools Suite, Palisade Corporation. These tools come with the text book. 2. Microsoft Excel

Grading
See template.

Assignments
There will be four assignments consisting of problems and mini-cases. Some of these will involve the use of software.

The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	Points	Effort
Assignment 1	75	Individual
Assignment 2	75	Individual
Assignment 3	75	Individual
Assignment 4	75	Individual
Quiz 1	75	Individual
Quiz 2	75	Individual
Midterm Exam	250	Individual
Final Exam	300	Individual

Due Dates
See template.

Syllabus and Deliverables for Statistics for Managers

Session	Subject/Topic	Deliverable Due
1	Introduction to managerial decision making, common biases, need for analytical; skills and synthesis; competitive and cooperative decision making; data types and describing data; descriptive statistics: stem and leaf displays, histograms, box-whisker plots; description of two variables	
2	Basic Probability Theory; rules of probability; conditional probability; Bayes Theorem; probability trees	
3	Random variables; expected values; probability distributions; joint probability distributions; mean, variance, and covariance; discrete and continuous distributions; binomial, poisson, and normal distributions.	Quiz 1
4	Decision making under uncertainty; decision trees	
5	Decision making under uncertainty cont.; value of information	
6	Decision making with multiple objectives (AHP); decision making in competitive situations – introduction to Game Theory	
7	Simulation models	Midterm Exam
8	Revisiting robability distributions; statistical inference; sampling distributions and estimation	
9	Sampling distibution and estimation; introdution to hypothesis testing	
10	Hypothesis testing	
11	Introduction to regression analysis	Quiz 2
12	Multiple Regression Models	

13	Regression models – special cases	
14	Forecasting; review	Final Exam

Attendance/Class Policy
See template.

Decision Sciences Department
Project Management Program

DNSC 6267: Project Planning and Scheduling
3 credit hours
Version 2.0, Spring 2011

Course Description
Projects are the mechanism that organizations use to implement change. That change may take place in the form of installation of a new manufacturing facility, upgrading a management information system, developing and marketing of a new product or launching of an election campaign. The first part of the course looks at a major part of project management process i.e. planning and the second part addresses scheduling and control. The course focuses on techniques for project planning and scheduling with specific emphasis on: strategic planning and projects; defining a project planning process; defining project scope; breaking the scope into manageable packages and activities; developing a project plan and presenting it with a network (WFD, AOA,AON, PDM); designing and developing a plan for the project management process; and planning for control.

The second part of the course looks at managing the time, cost and resource components of projects by focusing on techniques for project scheduling and control with specific emphasis on deterministic and probabilistic project scheduling; unlimited and limited resource project scheduling; developing an optimal baseline project schedule while considering time, cost, quality, and scope; incorporating and integrating cost and budget into the schedule; and schedule management. Some specific techniques covered are CPM, PERT, simulation, multiple heuristics for resource allocation, linear programming modeling of time and cost, and Earned Value Management.

Pre-Requisites
DNSC 6261 Introduction to Project Management
DNSC 6202 Statistics for Managers

Course Objectives
To have students develop a thorough grounding on advanced concepts and techniques needed to plan, schedule and control a complex project. The course will build on topics covered in DNSC 6202 Statistics for Managers and DNSC 261 Introduction to Project Management. By the end of the course the students should have acquired the following skills:

1) Developing a Plan, a WBS and a Network Diagram
2) Developing a project control system
3) Deterministic Project Scheduling
4) Probabilistic Project Scheduling
5) Unlimited and limited Resource Project Scheduling

6) Developing an Optimal baseline project schedule while considering Time, Cost, Quality and Scope into account.
7) Incorporating and Integrating cost and budget into the schedule.
8) Schedule management
9) Performance measurement and control

Reading Assignments
See template.

Text and Software

Required Text	**None or Instructor Decision**
Optional Text	Hinze, J. W., *Construction Planning and Scheduling*, 2007 (3rd Edition). Kerzner, H., *Project Management: A Systems Approach* (any edition) Mantel, Meredith, Shafer, Sutton (2007), Project Management in Practice, 4nd Edition, John Wiley & Sons, Inc. *Project Management Body of Knowledge (PMBOK),* Project Management Institute, 2000.

Assignments
Exams, case studies, research paper, class project.

The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	Points	Effort
Exam(s)	400	Individual
Group Case Study(ies)	300	Team
Group Semester Assignment (GSA)	300	Team

Syllabus and Deliverables for Project Planning and Scheduling

Session	Part 1:Subject/Topic	Deliverable Due
1	Planning as a management function	
2	Projects, Programs, and Portfolios as implementation arm of Strategic Planning	
3	Feasibility Studies and Project Selection	
4	Planning for Projects, project initiation, scope development, scope definition (deliverable work breakdown structure, DWBS), work flow	

	diagrams, network diagrams	
5	Estimation theory, productivity, time, cost and resources estimates, first project plan (FPP)	
6	Planning for managing projects, project management office (PMO), project management organization, roles and responsibilities, communication plan	
7	Planning for control, theory of control, time , cost, quality, scope and risk control, design of a control system	

Session	Part 2: Subject/Topic	Deliverable Due
8	Planning and scheduling as a system Network Analysis, deterministic scheduling	
9	Probabilistic scheduling and simulation	
10	Unified Scheduling Method USM an integrated approach	
11	Resource-based project scheduling: Case of unlimited resources	
12	Resource-based project scheduling: Case of limited resources	
13	Multi-project multi-resource project scheduling	
14	Optimal baseline development: a multi-objective approach integrating time, cost and quality and scope	

Applicable Policies & Other Information

See template.

THE GEORGE WASHINGTON UNIVERSITY
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Decision Sciences Department
Project Management Program

DNSC 6268 Cost Estimation and Control
1.5 credit hours
Version 2.0, Spring 2011

Course Description
This course addresses the concepts, theories, procedures and methods of cost estimation and control relevant to projects and project management. The course covers methods of developing project estimates during the planning stages, and updating the estimates throughout the life of the project; tools and techniques used in monitoring, reporting, controlling, and managing project cost; procedures used in managing project resources to optimize the cost of the project; relationships between project cost and other project parameters including scope, time, quality, reliability of the estimates, and procurement risk.

Pre-Requisites
DNSC 6261 Introduction to Project Management
DNSC 6202 Statistics for Managers

Course Objectives
1) Develop knowledge and skill in various methods of project cost estimating, forecasting and updating of estimates throughout the project life cycle.
2) Strengthen skill in using tools and techniques for monitoring, controlling, and managing project cost.
3) Develop knowledge and skill in procedures used in managing project resources to optimize cost of the project, setting contingency taking reliability of the estimates into account.
4) Enhance understanding of the relationships between project cost and other project parameters including scope, time, quality and risk.

Reading Assignments
See template.

Text and Software

Required Text	*Cost Analysis and Estimating for Engineering and Management*, Ostwald and McLaren, by Pearson/Prentice Hall, 2004
Optional Text	Heinze, Kurt. ***Cost Management of Capital Projects***. New York, NY: Marcel Dekker, Inc., 1996. Kerzner, H., *Project Management: A Systems Approach* (8th edition)

	Navarrete, Pablo. ***Planning, Estimating, and Control of Chemical Construction Projects***. New York, NY: Marcel Dekker, Inc., 1995. Rad, Parviz F. ***Project Estimating and Cost Management***. Vienna, VA: Management Concepts, Inc., 2002. *Skills and Knowledge of Cost Engineering* 5th Edition, AACE International

Grading
See template.

Assignments
Exams, case studies, research paper & class project

The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	**Points**	**Effort**
Group Semester Assignment	400	Team
Group Case Study	300	Team
Final Exam	300	Individual

Due Dates
See template.

Syllabus and Deliverables for Cost Estimation and Control

Session	**Subject/Topic**	**Deliverable Due**
1	Review of Estimation Theory: an Introduction	
2	Project Cost Estimating Classifications and Methods: Analogous Estimating, Parametric Estimating	
3	Bottom-up Estimating, Work Breakdown Structure, Productivity and Budgeting	
4	Costs Categorization, Integration and Optimization, Pricing Process, Systems and Contract Pricing	
5	Project Cost Reporting and Control, Earned Value Analysis Method, Implementation of the Earned Value Method	
6	Probabilistic Cost Estimation: Simulation and Analytic Models and Approaches	

7	Project Cost Contingency and Management Reserve, Cost Estimation and Control as part of PM System A Reflective Analysis	Group Project, Final Exam

Applicable Policies & Other Information
See template.

THE GEORGE WASHINGTON UNIVERSITY
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Decision Sciences Department
Project Management Program

DNSC 6266 Risk Management
1.5 credit hours
Version 2.0, Spring 2011

Course Description
This course will provide a thorough study of the nature of risk in decision making and of decision modeling techniques that are used in analyzing and understanding risk. The course will also provide an understanding for how to identify and manage risk in a project.

Pre-Requisites
DNSC 6261 Introduction to Project Management
DNSC 6202 Statistics for Managers

Course Objectives
Upon completion of this class, the student should be able to:

1) Analyze and model complex decision contexts
2) Understand risk management approaches used in a project and possess a good understanding of recommended risk management practices during planning and execution of a project.
3) Be familiar with a range of qualitative and quantitative risk analysis techniques with the ability to apply the common approaches.
4) Familiarity with research topics in risk management in recent literature.
5) Assess risk management approaches used in a project.

Reading Assignments
See template.

Text and Software

Required Text	Kendrick, Tom, *Identifying and Managing Project Risk*, AMACOM, 2003. *A Guide to the Project Management Body of Knowledge (PMBOK® guide)*, Project Management Institute, 3rd or 4th ed., 2004 or 2008.

Grading
See template.

Assignments
The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	Points	Effort
Project 1	500	Team
Final Exam	500	Individual

Due Dates
See template.

Syllabus and Deliverables for Risk Management

Session	Subject/Topic	Deliverable Due
1	Introduction to Risk Management, Strategic Risk Management	
2	Risk Management Infrastructure, Risk Management Planning	
3	Risk Identification	
4	Quantitative and Qualitative Risk Analysis	
5	Risk Response Planning, Monitoring, and Control	
6	Risk Reporting, Risk Management Applications, The Real World of Risk	
7	Final Group Project	Group Project, Final Exam

Applicable Policies & Other Information
See template.

THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF BUSINESS

Decision Sciences Department
Project Management Program

DNSC 6290 Optimization Models for Decision Making
1.5 credit hours
Version 2.0, Spring 2011

Course Description
The course provides an introduction to optimization techniques for decision making with spreadsheet implementation. Topics covered include linear programming; sensitivity analysis; networks; integer programming; goal programming and multiple objective optimization; and nonlinear and evolutionary programming. Models discussed span all business disciplines including finance, marketing, operations, and project management. Throughout the course, learning is reinforced via hands-on computer experience using problems and cases.

Pre-Requisites
DNSC 6202 Statistics for Managers

Course Objectives
Upon completion of this class, the student will gain the following:

1) Understanding of the value of using optimization models for analyzing problems in all business domains
2) Experience in designing and implementing readable and reliable spreadsheet models
3) Effective optimization spreadsheet modeling techniques
4) Valuable experience in modeling business complex problems from scratch
5) Valuable experience in interpreting the results from optimization models and assessing the implications for the business context being modeled
6) Understanding of the different classes of optimization models along with their associated computational difficulty
7) Understanding of the limitations of optimization models via spreadsheet, and when it would be necessary to seek external expertise for modeling and solving optimization problems

Reading Assignments
See template.

Text and Software

Required Text	Winston, Wayne L and S. Christian Albright (2009). *Practical Management Science 3rd Ed*, South-Western / Cengage Learning.

Grading
See template.

Assignments
Questions and cases will support lecture material presented or will allow practice with techniques discussed and there will be a final take-home exam.

The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	Points	Effort
Three (3) Homework Assignments	200 each	Team or Individual
Final Exam	400	Individual

Due Dates
See template.

Syllabus and Deliverables for Optimization Models for Decision Making

Session	Subject/Topic	Deliverable Due
1	Spreadsheet Modeling/ Decision Modeling	
2	Optimization Modeling/Linear Programming Models	Finalize groups collaboration on assignments
3	Linear Programming Models	Homework I
4	Linear Network Models nteger Models	
5	Linear Integer Models	Homework II
6	Non-linear Models	
7	Evolutionary Solver/Multi-Objective Optimization	Homework III

Applicable Policies & Other Information
See template.

THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF BUSINESS

Decision Sciences Department
Project Management Program

DNSC 6252 Risk Analysis for Decision Making
1.5 credit hours
Version 2.0, Spring 2011

Course Description
This course provides an introduction to probabilistic modeling techniques for decision-making with spreadsheet implementation. Special focus is placed on the concept of risk and methods for analyzing it. Topics covered include: influence diagrams; risk analysis; risk attitudes; utility theory; subjective and empirical probability distribution assessment; simulation models; queuing theory; Markov chains; and game theory. Models discussed span all business disciplines including finance, marketing, operations, and project management. Throughout the course, learning is reinforced via hands-on computer experience using problems and cases.

Pre-Requisites
DNSC 6202 Statistics for Managers

Course Objectives
Upon completion of this course, the student will gain the following:

1) Understanding the value of using probabilistic models for analyzing problems involving uncertainty in all business domains.
2) A more thorough understanding of decision analysis including the use of influence diagrams, deterministic and stochastic dominance, and utility functions.
3) Experience in building simulation models for various business contexts and interpreting the results in terms of both expected performance and associated risk.
4) Ability to develop use queuing models to assess the performance of structured business processes that involve uncertainty.

Reading Assignments
See template.

Text and Software

Required Text	**Winston, Wayne and S. Christian Albright (2009). *Political Management Science* (3rd ed.). South-Western/Cengage Learning.**
Optional Text	**Clemen, Robert T. and Terence Reill (1997). *Making Hard Decisions with Decision Tools* (1st ed.). Cengage Learning.**

Grading
See template.

Assignments
Questions and case studies, exam.

The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	Points	Effort
Two Assignments	250 each	Team or Individual
Final Exam	500	Individual

Due Dates
See template.

Syllabus and Deliverables for Risk Management

Session	Subject/Topic	Deliverable Due
1	Influence Diagrams; Review of Decision Trees; Decision Strategies and Risk Profiles; Deterministic & Stochastic Dominance; Sensitivity Analysis; Review of Value Information	
2	Multi-criteria Decision Making; AHP, Value Functions, Goal Programming; Risk Attitudes, Utility Functions	Finalize Groups
3	Overview of Simulation with @Risk; Confidence Intervals; Subjective, Theoretical and Empirical Probability Distributions	Homework 1
4	Operations Models; Financial Models	
5	Marketing Models; Games of Chance; Using TopRank with @Risk	
6	Project Management Models	Homework 2
7	Understanding Queues; Queuing Simulation Models	

Applicable Policies & Other Information
See template.

THE GEORGE WASHINGTON UNIVERSITY
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Decision Sciences Department
Project Management Program

DNSC 6290 Project Portfolio Management
1.5 credit hours
Version 2.0, Spring 2011

Course Description
This course will cover management of an organization's portfolio of projects for the overall welfare and success of the enterprise and alignment of projects with an organization's strategy and goals and consistency with values and culture.

Pre-Requisites
DNSC 6290 Executive Decision Making

Course Objectives
You will learn about:

1) The role of governance in PPM
2) Designing projects to address an organization's strategic objectives
3) Prioritizing strategic objectives
4) Evaluating project alignment and anticipated benefits
5) Determining an optimum combination of projects
6) Evaluating alternative portfolios given different scenarios
7) Measuring the performance of individual projects
8) Synthesizing individual project performance into measures of portfolio performance at various levels within the organization

Reading Assignments
See template.

Text and Software

Required Text	Forman, Ernest H. & Mary Ann Selly: *Decision by Objectives: How to Convince Others That You Are Right,* World Scientific Press, 2001, ISBN 9810241437. Levine, Harvey A. *Project Portfolio Management: A Practical Guide to Selecting Projects, Managing Portfolios, and Maximizing Benefits* 2005, Josey-Boss, San Francisco

Grading
See template.

Assignments
Lectures, projects, and student presentations; students will learn by applying concepts and theory to cases and real projects.

The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	Points	Effort
Portfolio Optimization Group Project (Project A)	400	Team
Research Report (Project B)	400	Individual
Participation	200	Individual

Due Dates
See template.

Syllabus and Deliverables for Project Portfolio Management

Session	Subject/Topic	Deliverable Due
1	Introduction to Project Teams	
2	Driving Role of Strategy; Controlling Role of Governance	
3	Project Portfolio Management Applications: IT and New Product Development; Risk Analysis and Risk Assessment	
4	Project Portfolio Management Best Practices	Project B Abstract
5	Project A Initial Presentations	Outline of Project B
6	Project Portfolio Management Performance Measurement	
7	Project A Presentations	Project B

Applicable Policies & Other Information
See template.

THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF BUSINESS

Decision Sciences Department
Project Management Program

DNSC 6262 Directed Computational Project Management
3 credit hours
Version 2.0, Spring 2011

Course Description
Projects are the mechanism that organizations use to effect change. That change may take shape in the form of a new manufacturing facility, an upgraded information management system, or a new product. However, all projects share some common characteristics. They have a finite duration and require resources to accomplish the project. To meet objectives, projects must be finished in some specified time frame and consume specified resources. This course looks at managing the time components of projects. It focuses on techniques for project planning, schedule development, and control in the following areas:

1) Defining a complete project scope and breaking the scope into manageable packages and activities.
2) Developing a baseline project schedule while considering the limitations of available resources.
3) Determining activity duration and conduct time-cost tradeoff to incorporate project budget into the schedule.
4) Learning resource allocation and leveling technique to manage limited resources.
5) Applying earned value analysis/management techniques to control project.
6) Understanding dispute resolution and litigation using CPM diagram.
7) Reporting progress.

Pre-Requisites
DNSC 6267 Planning & Scheduling
DNSC 6290 Risk Management
DNSC 6290 Cost Estimation and Control

Course Objectives

1) To have students develop a thorough grounding on advanced concepts and techniques needed to plan, schedule, and control a complex project
2) In a structured, directed way, to become familiar with the sequential numerics of project management through a semester-long examination of a project
3) To achieve some familiarity with real-world cost estimates in the students' fields of interest
4) To become proficient in a project management software
5) To understand the tradeoffs and changes that occur as a project proceeds, emphasizing basic numerical project data
6) To understand the shortcomings of project management technology when making decisions in real-life projects.
7) To enjoy the class and have spirited, knowledgeable debates with classmates and instructors, whether in a classroom or virtually.

Reading Assignments
See template.

Text and Software

Required Text	Hinze, J, *Construction Planning and Scheduling*, Pearson 3rd Edition, Prentice Hall, 2007.

Grading
See template.

Assignments
Projects, research, and participation. This homework and software intensive course contains a research component and a real-life project.

The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	Points	Effort
Group Formation and Charter	Required	Team
6 Individual Assignments	50 each	Individual
Mid-Term Exam	300	Individual
Group Project (Term Project Paper)	400	Team

Due Dates
See template.

Syllabus and Deliverables for Directed Computational Project Management

Session	Subject/Topic	Deliverable Due
1	Introduction and Course Overview, History of Planning and Scheduling	
2	Work Breakdown Structure, Developing a Network Model	
3	Precedence Diagram, Network Calculation	
4	Determining Activity Duration	
5	Resource Allocation and Leveling	
6	Money and Network Schedules	
7	Linear Scheduling	
8	Earned Value Management (EVM)	
9	EVM, Project Monitoring and Control	

10	Exam	
11	Short Interval Schedule	
12	Time in Contract Provisions, CPM in Dispute Resolution and Litigation	
13	Project Reporting and Communication	
14	Final Group Presentations	

Applicable Policies & Other Information
See template.

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Decision Sciences Department
Project Management Program

DNSC 6269 Project Management Applications
3 credit hours
Version 2.0, Spring 2011

Course Description
In this course participants must demonstrate the ability to integrate the knowledge accumulated in prior course-work as well as produce new information. Participants will apply their knowledge by writing part of a project management handbook; by analyzing, evaluating, and suggesting improvements in specific project environments; through a case study; and by analyzing some best practices in project management.

Pre-Requisites
DNSC 6269, the MS in Project Management (MSPM) program's capstone, must be the last course taken in the MSPM graduate degree sequence. Confirmation and approval must be obtained from the Program Director.

Course Objectives
1) To integrate project management knowledge previously acquired and to acquire further knowledge through class presentations and extensive class discussions
2) To apply the full spectrum of project management skills and knowledge in analyzing project management problems in a variety of settings; material for the applications will be drawn from the project management literature and workplace settings
3) To apply this integrated knowledge in formulating industry-specific project management procedures
4) To discover and compare some best practices
5) To write clear, coherent and concise professional project management reports and make correspondingly crisp professional presentations based upon them

Reading Assignments
See template.

Text and Software

Required Text	
Optional Text	Cioffi, D. F. (2003). *Project Management Integration.* Management Concepts. Cleland, D. I. (Editor). (2004). *Field Guide to Project Management,* (2nd Ed.). New York, NY: John Wiley & Sons. Kerzner, H. (2006). *Project Management: A Systems*

	Approach to Planning, Scheduling, and Controlling, (9th Ed.) and accompanying *Project Management Workbook.* New York, NY: John Wiley & Sons. Kerzner, H., *Advanced Project Management: Best Practices on Implementation,* John Wiley & Sons, 2004. Meredith, J. R. and Mantel, Jr., S. J. (2006). *Project Management: A Managerial Approach*, (6th Ed.). New York, NY: John Wiley & Sons. Project Management Toolbox: Tools and Techniques for the Practicing Project Manager, Milosevic, Wiley & Sons Inc, 2003 (available online through the GWU library) *A Guide to the Project Management Body of Knowledge (PMBOK® Guide),* (4th Ed.). Newtown Square, PA: Project Management Institute, 2008.

Grading
See template.

Assignments

1) As part of a team, create a chapter of a project management handbook.
2) As an individual, reflect on the above-mentioned handbook and prepare an industry-specific presentation.
3) Again as part of a team, study one case, analyzing the performance of a project as it evolves through the different project phases.
4) Bring individual workplace (or research) information into your team for a comparison and selection of a promising/best practice among different procedures within a common area.
5) Make in-class presentations for all of the above.

All students taking the course in the distance mode ***must*** attend a Residency Week on campus at the end of the semester.

The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	**Points**	**Effort**
Field-Specific Comparison	100	Individual
Handbook Chapter*	300	Team
Case Study*	300	Team
Best Practice Study*	300	Team

* Presentations are included in these assignments, each of which is worth 25% of the grade.

Due Dates
See template.

Syllabus and Deliverables for Project Management Applications

Session	Subject/Topic	Deliverable Due
1	Introduction	
2	Team Formation and Charters	
3	Discussion of Handbook Topic	
4	Inception Chapter Discussion	
5	Inception Chapter, Development Chapter Discussions	
6	Development Chapter, Implementation Chapter Discussions	
7	Implementation Chapter, Closeout Chapter	
8	Closeout Chapter	
9	Continued	
10	All Revised Chapters, Field-Specific Comparisons Presentations	
11	Case Studies	
12	Continues	
13	Best Practices	
14	Revised Case Studies, Revised Best Practices	
15	Residency Week for Distance Section: - All presentations by students in the distance section; on campus participants are invited to attend Graduation Events for all graduating students	

Applicable Policies & Other Information
See template.

THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF BUSINESS

Decision Sciences Department
Project Management Program

DNSC 6290 Executive Decision Making
1.5 credit hours
Version 2.0, Spring 2011

Course Description
This course covers concepts and methods for making complex decisions in business, government, and not-for-profit organizations; for identifying objectives and alternatives; for setting priorities; and for making group decisions.

Pre-Requisites
DNSC 6261 Introduction to Project Management
DNSC 6202 Statistics for Managers

Course Objectives
To enable students to:

1) Structure complex decision problems
2) Identify alternatives
3) Identify objectives
4) Identify constraints
5) Define goals
6) Incorporate both quantitative and qualitative information in the decision process
7) Deal with competing factors
8) Investigate sensitivity of decisions
9) Communicate recommendations and rationale
10) Deal with group decisions and conflict
11) Learn how to communicate better both orally and in writing
12) Learn how to critique and improve the work of others
13) Make effective presentations

Reading Assignments
See template.

Text and Software

Required Text	Forman, Ernest H. & Mary Ann Selly: *Decision by Objectives: How to Convince Others That You Are Right*, World Scientific Press, 2001, ISBN 9810241437.
Optional Text	Thomas L. Saaty, *Decision Making for Leaders*, RWS Publications, Pittsburgh, PA. 2001. Vol II, AHP Series Thomas L. Saaty, *Fundamentals of Decision Making and Priority Theory with The Analytic Hierarchy Process*, Vol VI, AHP Series, RWS Publications, Pittsburgh, PA.

	2000.
Software	Expert Choice (available via free download)

Grading
See template.

Assignments
Projects, research, and participation

The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	Points	Effort
Participation	200	Individual
Project A: Real World Decision Project	400	Team
Project B: Research Report	400	Team

Due Dates
See template.

Syllabus and Deliverables for Executive Decision Making

Session	Subject/Topic	Deliverable Due
1	Course and Syllabus Overview, Introduction to Decision Making	
2	Intuition, Logic and Decision Traps; Introduction to AHP	
3	Complex Choice Models I	
4	Complex Choice Models II	
5	Project A Presentations	
6	Group Decision Making	
7	Project B Presentation	

Applicable Policies & Other Information
See template.

THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF BUSINESS

Decision Sciences Department
Project Management Program

DNSC 6290 Organization, Management & Leadership
3 credit hours
Version 2.0, Spring 2011

Course Description
Successful project managers (PMs) know how to initiate and maintain an environment that allows people to flourish while achieving project goals and objectives. The most important ingredients of any project organization are the people. In this course, the new project manager learns how to invest in people to achieve project success. The course covers the fundamentals of project human resource management and provides the tools and techniques to achieve success in managing and leading people in projects.

Pre-Requisites
None

Course Objectives
By the end of the course, you should be able to:
1) Use the basic and advanced organization and management terms
2) Identify, define, analyze and propose workable solutions to manage project teams in organizations
3) Judge the appropriateness of the processes, tools and communication skills applied on project teams
4) Classify different authors in the field or organization and management.

The second objective aims to contribute to your scholarly skills. You should be able to:
1) Identify the character of the most important journals in the field of organization and management
2) Translate the findings of research into practice
3) Write and present a research paper in these topics.

Reading Assignments
See template.

Text and Software

Required Text	Thompson, Leigh, *Making the Team: A Guide for Managers*, third edition, Prentice-Hall Publishing (2008) ISBN 0-13-186135-2./ 978-0-13-186135-0

Grading
See template.

Assignments
Exams, case analysis, project, papers, and participation

The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	Points	Effort
Mid-term	150	Individual
Final Assessment	250	Individual
Case Analysis	200	Team
Team Paper and Presentation	300	Team
Participation	100	Individual

Due Dates
See template.

Syllabus and Deliverables for Project Organization: Management and Team Performance

Session	Subject/Topic	Deliverable Due
1	Organization, Management & Leadership: Course Integration	
2	History of Management Thought – A survey of human performance philosophies and the key assumptions that inform management and leadership behavior	
3	The Project Organization – The nature and dynamics of a project-based organization. The strengths, weaknesses and issues related to working in a project world	
4	Virtual and Global Teams – Applying appropriate information and decision technologies and developing processes and procedures to the cultural and distance challenges presented by virtual and global teams	
5	Project and Team Performance – Identifying and understanding the elements that define performance in a project environment	
6	Leading & Building Effective Teams - Tools and techniques that allow for monitoring, assessing, adjusting, and reporting on team performance, work performance, and the preparation of associated documentation	
7	Case Study – A capstone exercise that synthesizes all previous concepts, tools, and techniques in the first half of the course	Case Study
8	Team Communications and Collective Knowledge – Communications planning, distribution of information, performance reporting, and stakeholder management	
9	Networking and Social Capital – Applying planning and skill to create and maintain powerful social networks and build social capital for project	

	relationships	
10	Cooperation and Conflict – Application of tools and techniques in various situations that foster cooperation and mitigate or eliminate unnecessary conflict	
11	Project Decision Making – Using effective tools and techniques that maximize optimal decisions in a project environment	
12	Creativity: Strategies for High Performance – Building and maintaining a high-performance team environment that encourages people to take smart risks in solving project challenges	
13	Team Presentations - A capstone exercise that synthesizes all previous concepts, tools, and techniques	Team Presentation
14	Team Presentations - A capstone exercise that synthesizes all previous concepts, tools, and techniques	Team Presentation

Applicable Policies & Other Information
See template.

THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF BUSINESS

Decision Sciences Department
Project Management Program

DNSC 6290 Project Management Finance
3 credit hours
Version 2.0, Spring 2011

Course Description
Project Management Finance is a one-semester course designed to introduce students to the basic terminology, concepts, and principles of financial accounting and managerial finance. This course will enhance the decision making capability of project and operations managers by providing them with the accounting and finance methods and tools to understand and evaluate a firm and the business environment in which it operates. Topics include: financial statement analysis; the time value of money; capital budgeting; risk assessment; financial forecasting; and working capital management.

Pre-Requisites
None

Course Objectives
By the end of the semester, students should be able to:
1) Understand basic financial and accounting principles.
2) Apply accounting and finance methods to project decision making.
3) Understand and evaluate the business environment.

Reading Assignments
See template.

Text and Software

Required Text	Higgens, Robert, *Analysis for Financial Management*, 8th ed., 2007. Weaver, Samuel and Weston, Fred, *Finance and Accounting for Non-Financial Managers*, 2001.

Grading
See template.

Assignments
Exams and papers

The total course grade of 1000 points will be determined by the following assignments:

Assignment/Quiz	Points	Effort
Course project	200	Individual
Mid-Term Exam	400	Individual
Final Exam	400	Individual

Due Dates
See template.

Syllabus and Deliverables for Project Management Finance

Session	Subject/Topic	Deliverable Due
1	Introduction to Accounting and Financial Markets	
2	Accounting Principles, Financial Statement, and Cash Flow I	
3	Accounting Principles, Financial Statements, and Cash Flow II	
4	Financial Statement Analysis: Evaluating Performance I	
5	Financial Statement Analysis: Evaluating Performance II	
6	Financial Forecasting and Budgeting	
7	Working Capital Management	
8	Time Value of Money	
9	Capital Budgeting I	
10	Capital Budgeting II	
11	Cost of Capital and Risk Analysis I	
12	Cost of Capital and Risk Analysis II	
13	Financing – Long-term I	
14	Financing – Long-term II	

Applicable Policies & Other Information
See template.