



PROJECT PROCUREMENT MANAGEMENT

ENCE 602 Course Syllabus

CATALOGUE DESCRIPTION

ENCE 602. Project Procurement Management (3) This course presents fundamental concepts and techniques for project acquisition and procurement. Students are introduced to the PMBOK Guide four-step procurement process and expected to develop an in-depth understanding of project evaluation, planning, financing, contracting, negotiation, and procurement execution. The course will also cover emerging methods, principles, and practices in infrastructure project procurement, including Public-Private Partnerships, Carbon project procurement, and Clean Development Mechanism, etc.

TEXTBOOKS

Course Cases, lecture notes and suggested references
(Course cases can be purchased through HBS publishing website,
<http://cb.hbsp.harvard.edu/cb/access/12373532>

Case studies covered this semester include: 1) Texas High-Speed Rail Corporation; 2) Southport Minerals Inc; 3) The Value of Flexibility at Global Airlines; 4) Orangia Highways; 5) Athens Ring Road; 6) Timberjack Parts: Packaged Software Selection Project; 7) Integrated Project Delivery at Autodesk; 8) NM44 project; 9) Alvarez Industries, Inc. 10) Hydro-Quebec and the Great Whale Project; 11) Building and Energy; 12) Petrolera Zuata, Petrozuata C.A; 13) The Knight Management Center; 14) The Fox Islands Wind Project

COURSE OBJECTIVE

Upon successful completion of this course, the student will be able to understand the core principles of project procurement management, consistent with the PMBOK Guide; demonstrate hands-on expertise in project evaluation, procurement planning, contract strategy; practice effective techniques for successfully delivering projects and allocating risks; develop collaborative procurement arrangements, and recognize and promote ethic practice in project finance, acquisition and procurement.

LOGISTICS

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| <i>Time & Location</i> | 3:30 to 6:00pm on Wednesday Room ITV 1100 <i>For PM01 students, video conference is scheduled at 8-9 pm every Wednesday (subject to change as requested by the majority of the class)</i> |
| <i>Instructor</i> | Qingbin Cui, cui@umd.edu, 1157 Martin Hall TEL – x5-8104; FAX – x5 2585 |
| <i>Office Hours</i> | By appointment |
| <i>Graduate Assistant</i> | Rob Young robyoung1000@gmail.com |
| <i>Learning Management System (LMS)</i> | Blackboard (Bb) is the current system. All assignments for this course are posted on Bb as well as lecture slides/notes and other materials. Answers to homework problems as well as practice tests are posted. We use Bb for all examinations. Bb can be used for team sites, wiki's, blogs, and emails to the class, groups, or individuals. http://bb.eng.umd.edu |
| <i>Videoconferences</i> | For our On-Line students, weekly videoconferences are required. They are an integral element of the On-Line course paradigm. The conferences encourage the students to ask clarifying questions and to get to know one another. The software we are using is Scopia and it may be accessed at http://emeeting.eng.umd.edu/scopia/entry/index.jsp . The meeting room is 60 plus the course number: 60602. Campus students may use Wimba in Bb for video conferencing. |

POLICIES

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| <i>Grading</i> | Grading is based on comprehension and mastery of the material. Homework 40%, Term project and presentation 30%, pop quiz and class participation 30%. |
| <i>On Time Delivery</i> | We expect all deliverables to be on time or early. Despite the best laid plans, life does sometimes intervene. We can be flexible in assignment due dates as long as the student makes arrangements in advance. After the fact submissions, without prior approval, will not be accepted. |
| <i>Individual Extra Work</i> | The answer is no! We cannot permit extra work for additional credit in hopes of earning a higher grade because it simply is not fair to the other students. This is firm. |
| <i>Students w/ Disabilities</i> | The University has a legal obligation to provide appropriate accommodations for students with disabilities. Please inform the instructor of any accommodations needed relative to disabilities. |

CODE OF ACADEMIC INTEGRITY

The course is subject to the Code of Academic Integrity and Honor Pledge available on the web at <http://www.studenthonorcouncil.umd.edu/index.html>. They prohibit students from cheating on exams, plagiarizing papers, submitting the same paper for credit in two courses without authorization, buying papers, submitting fraudulent documents, and forging signatures. The instructor is not reluctant to assign the grade “F” for the course should any of the above apply.

TOPICS

| | Topic |
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| 1 | Project procurement processes |
| 2 | Project evaluation : Discounted Cash Flow |
| 3 | Project financing plan |
| 4 | Project evaluation : Real Options Theory |
| 5 | Project delivery methods |
| 6 | Competitive bidding |
| 7 | Risk allocation and management |
| 8 | Integrated project delivery |
| 9 | Contract negotiation and engineering |
| 10 | Public private partnerships |
| 11 | Renewable energy project and carbon credits |
| 12 | Term paper presentation |

Note: This syllabus is a plan and is subject to change!

| Date | Topics | Reading Material |
|---|---|---|
| Project Planning and Finance | | |
| Jan 25 | Introduction to Project Procurement | 1 PMBOK Guide, 4th Edition 2 GSA-General Services Administration Acquisition Manual |
| Feb 1 | Project evaluation I : FCF vs. ECF Case Study: Texas High-Speed Rail Corporation | 1 Finnerty, J.D. Project Financing: Asset-based Financial Engineering. ---- CHAPTER 9 2 Esty, B.C. “Improved Techniques for Valuing large scale projects”, Journal of Project Finance, Spring 1999 3 Is it real or is it nominal |
| Feb 8 | Project Financing Plan Case Study: Southport Minerals Inc <Self-study this week> | 1 An Overview of Project Finance and Infrastructure Finance 2 Project Financing: Asset-Based Financial Engineering, 2nd Edition. |
| Feb 15 | Project evaluation II : Real Options Case Study : The Value of Flexibility at Global Airlines | 1 Copeland, T. E., “Making Real Options Real”. The McKinsey Quarterly, No. 3, 1998 2 Kodukula, P. 2006. Project valuation using real options : a practitioner’s guide, J. Ross Publishing Inc 3 Mun, J. 2002. Real Options Analysis: Tools and Techniques for Valuing Strategic Investments and Decisions, Wiley. 4 Trigeorgis, L. 1996. Real options: Managerial flexibility and strategy in resource allocation. Cambridge, MA: MIT Press (available in UMD library) |
| Project Delivery Methods and Process | | |
| Feb 22 | Project deliver methods and process Case Study: Alvarez Industries, Inc | 1 CII publication, Project Delivery and Contract Strategy 2 Trauner 2007, Construction project delivery systems and procurement practices 3 Touran, Ali 2009, A Guidebook for the Evaluation of Project Delivery Methods, Transportation Research Board |
| Feb 29 | Project Delivery Methods Case Study: Timberjack Parts: packaged Software Selection Project | Reading materials are on Blackboard |
| Mar 7 | Competitive Bidding Case Study: Orangia Highways | FHWA Contract Administration website http://www.fhwa.dot.gov/programadmin/contracts/ |

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| Mar 14 | Case Study: Integrated Project Delivery at Autodesk, Inc Guest Speaker | Design Build Guidelines from FHWA and state DOTs http://www.fhwa.dot.gov/construction/cqit/desbuil.d.cfm |
| Risk and Contract Negotiation | | |
| Mar 21 | Spring break | |
| Mar 28 | Procurement Planning and Risk Sharing Case Study: Petrolera Zuata < Guest Speaker on Design-Build > | CII Best Practice (on Blackboard) PDRI 3 rd Equitable Risk Allocation |
| Apr 4 | Contract Negotiation Case Study: Hydro-Quebec and the Great Whale Project | 1 Danny Ertel, 1999. "Truning Negotiation into a Corporate Capability, HBR, May-June 1999. 2 Gregory Garrett, Contracting Negotiations. CCH |
| Apr 11 | Contract Evaluation and Design Case Study : New Mexico 44 Highway Project (on Blackboard) | 1 Identification of Real Options "in" Projects, by Wang and de Neufville |
| Special Topics | | |
| Apr 18 | Public Private Partnerships Case Study : Athens Ring Road | 1 Value for Money Analysis I-595 Corridor Roadway Improvements 2 Value for Money Analysis in U.S. Transportation Public-Private Partnerships 3 E.R. Yescombe 2007. Public Private Partnerships: Principles of Policy and Finance 4 AECOM Consult. 2007. User Guidebook on Implementing Public Private Partnerships for Transportation Infrastructure Projects in the United States. (available online) |
| Apr 25 | LEED Project Procurement Case: Genzyme Center | 1 USGBC LEED Rating System 2 FHWA INVEST and Greenroad 3 Guiding the green way |
| May 2 | Renewable Energy Project and Credits Case : The Fox Islands Wind Project | 1 The Carbon Market 2 the US carbon market: the green card for the carbon markets? 3 UNCFFF CDM project database. |
| May 9 | Term paper presentation | |
| May 14 | Term Paper submission | |