ΠΠΜ 515: Προχωρημένα Θέματα Διεύθυνσης Κατασκευαστικών Έργων

Εαρινό Εξάμηνο 2007
Πέμπτη 6:00 μμ – 9:00 μμ

Advanced and contemporary topics in construction project management. The topics include, among other, offerings on Fully Integrated and Automated Project Processes (FIAPP), 3D/4D computer-aided modeling of construction processes, decision-support systems in construction, construction and the law, etc. The course is taught based on a real-life construction project and entails heavy use of specialized software (Primavera Project Planner, AutoCAD/Microstation, MS-Project, NavisWorks, MS-Excel, MS-Access).

το πάροδο των τεχνικών και επιστημονικών απαιτήσεων και την προσαρμογή του εργαστηρίου στις ανάγκες των εργαζομένων

(6 π.μ. ECTS:3-0-8)

Τα θέματα διδάσκονται με βάση συγκεκριμένο κατασκευαστικό έργο και με σημαντική χρήση λογισμικών (Primavera Project Planner, AutoCAD/Microstation, MS-Project, NavisWorks, MS-Excel, MS-Access).

Το μάθημα θα περιλαμβάνει αγγλική ορολογία και βιβλιογραφία.

Καθηγητής
Δρ. Συμεών Χριστοδούλου
Τηλ. : 22-892270,
e-mail : schristo@ucy.ac.cy

Ώρες Γραφείου
Τρίτη, 11:00μμ – 12:00μμ
Πέμπτη, 5:00μμ – 6:00μμ, ή με ραντεβού

Ιστοσελίδα Μαθήματος
http://www.eng.ucy.ac.cy/schristo/CEE515.htm

25/1/2007 Σέλιδα 1 από 6
ΠΠΜ 515: Παρχηματικά Θέματα Διεύθυνσης Κατασκευαστικών Εργών

25/1/2007
Σέλιδα 2 από 6
Recommended Textbooks

None available

References

Instructor's Notes

Software

Primavera Project Planner (MS-Project), NavisWorks, AutoCAD/Microstation, MS-Excel, MS-Access, MonteCarlo, Stroboscope.
Course Requirements:
Produce a professional quality proposal for FIAPP-Based CM/GC services consisting of (1) an estimate and a schedule for the term project; (2) a project control system with examples; and (3) 3D/4D animations of proposed construction sequences.

Course Evaluation/Grading:
Students will work in teams of 3-4. Each team will submit two deliverables. The first involves the submission of a bid and a schedule for the term-project. The second is a proposal for managing the construction of the project, including all relevant information on the firm’s competence in FIAPP. The team grade is based on the quality of the proposals and meeting of the deadlines.

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<tr>
<th>Evaluation Method</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Participation</td>
<td>5 %</td>
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<tr>
<td>Individual Assignments</td>
<td>15 %</td>
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<tr>
<td>Midterm Exam</td>
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<tr>
<td>Term Project</td>
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<tr>
<td>Part A</td>
<td>20 %</td>
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<td>Part B</td>
<td>25 %</td>
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<td>Part C</td>
<td>10 %</td>
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<tr>
<td>Final Exam</td>
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<td>Presentation</td>
<td>10 %</td>
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### Sequence of Lectures:

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<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Reference</th>
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| 1    | Th. 25-Jan | Introduction to FIAPP. Introduction to Term Project.  
- Evolution of FIAPP, integration and automation, data-centric vs. data-as-component models | Instructor’s Notes  
HWK 1 (individual): Literature Review on FIAPP/FIATECH |
| 2    | Th. 01-Feb | Project Scheduling  
- The project plan & principles of project scheduling  
- Computer-based project scheduling (Primavera) | Instructor’s Notes, Term Project  
HWK 2 (individual): |
| 3    | Th. 08-Feb | Computer-based project scheduling (Primavera) | Instructor’s Notes  
HWK 3: Primavera (Individual)  
Term Project (Group) |
| 4    | Th. 15-Feb | Introduction to relational databases.  
- Data structures, relational databases, primary/secondary keys, client-server applications, queries, SQL, reports, interface development, event-driven applications, ODBC. | Instructor’s Notes  
HWK 4 (individual): MS-Access |
| 5    | Th. 22-Feb | Term Project: Traditional Construction Management  
- Quantity takeoff  
- Bill of materials/Estimating  
- Scheduling  
- Project Controls | Instructor’s Notes  
HWK 5 (group): Term Project (scheduling, cost estimating) |
| 6    | Th. 01-Mar | Term Project: FIAPP  
- Quantity takeoff  
- Bill of materials/Estimating  
- Scheduling  
- Project Controls  
Relational databases (workshop).  
- Development of project databases (tables, modules, primary keys, relationships) | Instructor’s Notes |
| 7    | Th. 08-Mar | Relational databases (workshop continued).  
- Project Scheduling: Process definition, data definition, and development of database structures.  
- Cost Estimating: Process definition, data definition, and development of database structures. | Instructor’s Notes  
HWK 6 (group): Term Project Database system |
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| 8    | Th. 15-Mar | Introduction to 4D Modeling  
○ From 3D to 4D, Enterprise Navigator and Schedule Simulator. | Instructor’s Notes               |
| 9    | Th. 22-Mar | Group Work (workshop)                                                 | HWK 7 (group): Term Project 4D simulation (ES/LS) |
| 10   | Th. 29-Mar | Legal issues, dispute resolution and construction claims              | Guest Lecturer                   |
|      | Th. 05-Apr | SPRING BREAK                                                          |                                  |
|      | Th. 12-Apr | SPRING BREAK                                                          |                                  |
| 11   | Th. 19-Apr | Risk Analysis and construction claims (MonteCarlo for P3)            | Instructor’s Notes               |
| 12   | Th. 26-Apr | Equipment selection, productivity analysis  
● Cycle time analysis, computer-aided simulation (Stroboscope) | Instructor’s Notes               |
| 13   | Th. 03-May | FIAPP, Putting it all together (workshop)                             | Instructor’s Notes               |

**END OF CLASSES** 04-May

**Study Period**

**EXAMS PERIOD** 12-May – 27-May

**Term Project Presentations**