MODIFIED SYLLABUS

BSCI 7030/ DBLD 7030
Construction Information Management

Credit Hours: 3 Credits

Texts/ Resources:


Software Imaged for CADC, Design Build, School of Architecture and McWhorter School of Building Science

In addition, the course will rely heavily on specialized software imaged by the CADC ITO for the Design Build program, the School of Architecture and the McWhorter School of Building Science.

Course Description: The overall purpose of this course is to explore, discover and create applications of advanced information technology in construction.

Course Objectives:

- Be able to develop well-thought out strategies in solving problems relating to IT in construction.
- Become familiar with the advanced features of a relational database and entity-relationship modeling, as applicable to construction.
- Be able to integrate and manage data from various stages of construction and software.
- Become familiar with concepts and utilization of 5D-CAD modeling and Building Information Modeling (BIM)
- Work in a team to explore new computer application areas. Student must communicate with team members, with instructor and with class members, using the computer as a demonstration, teaching and learning tool.

Course Content:

Class sessions will consist of lecture, demonstration, and hands-on guided instruction on the computer.

Week 1 State of IT in Construction
Weeks 2 – 10 Building Information Modeling
Weeks 11 – 12  Strategies for IT in Construction Estimating and Scheduling
Week 13  Strategies for IT in Project Management
Week 14  Database Concepts for Construction
Week 15  Data Integration and Management in Construction

Requirements/Evaluation:

Each student will be expected to prepare for in-class discussion on the following topics as assigned through the course:

1. The role of IT in construction?
2. How to create IT strategies construction.
3. Maintaining broadband communications down to the job-site in a volatile market. What are the most economical solutions?
4. Experts on Demand. Hosting and implementing an on demand training solution for a construction company. IT Training in general for a construction company. Knowledge management’s place in the construction industry.
6. Return on investment formulas and analysis in construction.
7. Jobsite observation and remote management. Is it possible to do away with a construction jobsite filed office and remotely manage a project? What solutions are available to achieve this today?
8. Microsoft Mobile Information Server and handhelds.
10. Off-the-shelf software Vs in-house software development. Which method works for a construction industry?
11. XML solutions for the construction industry. Are we there yet?
12. How does a project management web-site work?
14. Case Studies in construction IT.

Assignments 40%
Tests (2 at 20% each) 40%
Final Project 20%

Grading Scale:

A = 90-100
B = 80-89.99
C = 70-79.99
D = 65-69.99
F = <65
Course Policies:

**Attendance:** Attendance in class is mandatory. Students are allowed one unexcused absence with no effect on their grade. Each additional unexcused absence will lower the final grade by two points.

**Excused Absences:** Students are granted excused absences from class for the following reasons: illness of the student or serious illness of a member of the student’s immediate family, the death of a member of the student's immediate family, trips for student organizations sponsored by an academic unit, trips for University classes, trips for participation in intercollegiate athletic events, subpoena for a court appearance, and religious holidays. Students who wish to have an excused absence from this class for any other reason must contact the instructor in advance of the absence to request permission. The instructor will weigh the merits of the request and render a decision.

When feasible, the student must notify the instructor prior to the occurrence of any excused absences, but in no case shall such notification occur more than one week after the absence. Appropriate documentation for all excused absences is required. Please see the *Tiger Cub* for more information on excused absences.

**Academic Honesty Policy:** All portions of the Auburn University student academic honesty code (Title XII) found in the *Tiger Cub* will apply to this class. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

**Disability Accommodations:** Students who need special accommodations in class, as provided for by the American Disabilities Act, should arrange a confidential meeting with the instructor during office hours the first week of classes - or as soon as possible if accommodations are needed immediately. You must bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have these forms but need accommodations, make an appointment with The Program for Students with Disabilities, 1244 Halley Center, 844.2096 (V/TT) or email: scw0005@auburn.edu

**Justification for Graduate Credit:** This course will be graded on a 10-point scale; feedback and evaluation will incorporate rigorous professional standards and will be provided by faculty holding graduate faculty status.

**Existing syllabus follows (see p. 4)**
EXISTING SYLLABUS

BSCI 7030
Construction Information Management

Credit Hours: 3 Credits

Texts/ Resources:  


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Course Description: Advanced computer and information management systems applied in the construction industry. Topics include: network systems, EDI, voice recognition, bar coding/other ID systems, imaging, etc. Independent projects, research, and homework assignments.

Course Objectives:

- Be able to develop well-thought out strategies in solving problems relating to IT in construction.
- Become familiar with the advanced features of a relational database and entity-relationship modeling, as applicable to construction.
- Be able to integrate and manage data from various stages of construction and software.
- Become familiar with concepts and utilization of 3D-CAD modeling and Building Information Modeling (BIM)
- Work in a team to explore new computer application areas. Student must communicate with team members, with instructor and with class members, using the computer as a demonstration, teaching and learning tool.

Course Content:  
Class sessions will consist of lecture, demonstration, and hands-on guided instruction on the computer.

Week 1  State of IT in Construction
Weeks 2 – 10  Building Information Modeling

Weeks 11 – 12  Strategies for IT in Construction Estimating and Scheduling

Week 13  Strategies for IT in Project Management

Week 14  Database Concepts for Construction

Week 15  Data Integration and Management in Construction

Requirements/Evaluation:

Each student will be expected to prepare for in-class discussion on the following topics as assigned through the course:

15. The role of IT in construction?
16. How to create IT strategies construction.
17. Maintaining broadband communications down to the job-site in a volatile market. What are the most economical solutions?
18. Experts on Demand. Hosting and implementing an on demand training solution for a construction company. IT Training in general for a construction company. Knowledge management’s place in the construction industry.
20. Return on investment formulas and analysis in construction.
21. Jobsite observation and remote management. Is it possible to do away with a construction jobsite filed office and remotely manage a project? What solutions are available to achieve this today?
22. Microsoft Mobile Information Server and handhelds.
23. Evaluating self hosting Vs “Application Service Provider” solutions.
24. Off-the shelf software Vs in-house software development. Which method works for a construction industry?
25. XML solutions for the construction industry. Are we there yet?
26. How does a project management web-site work?
28. Case Studies in construction IT.

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