**M.E. Rinker Sr., School of Construction Management**

**University of Florida**

**Semester Course Outline**

**BCN 4720 - Construction Planning & Control** **Fall 2025** **3 credits**

**INSTRUCTOR:**  Aaron Costin, PhD, PE, 324 Rinker Hall, [aaron.costin@ufl.edu](mailto:aaron.costin@ufl.edu) 352-273-2121

**PREREQUISITES:** BCN 3224C, BCN 3611C, Senior standing

**METHOD:** The course consists of 3 hours of classroom time per week including in-class assignments, workshops, and take-home exercises. Students will work on example problems, homework assignments, and assigned projects outside of class.

Students will work individually unless a specific project calls for team assignments.

**DESCRIPTION:** The planning, control, and monitoring of construction projects including the use of the Critical Path Method (CPM).

**TEXT/SOFTWARE:**

*DO NOT PURCHASE ANY SCHEDULING SOFTWARE AT THIS TIME*

Students MUST have a laptop computer available for use in class.

**STUDENT LEARNING OUTCOMES:**

**1** Create written communications appropriate to the construction discipline (CLO 4).

**2** Create oral presentations appropriate to the construction discipline (CLO 7).

**5** Create construction project schedules (CLO 2, 3, 4, & 6).

**7** Analyze construction documents for planning and management of construction processes (CLO 1).

**10** Apply electronic-based technology to manage the construction process (CLO 5).

**14** Understand construction accounting and cost control (CLO 8).

**COURSE LEARNING OUTCOMES:**

1. Analyze construction documents for planning and management of construction processes. (ACCE SLO 7)
2. Assign and analyze resource requirements of a project (ACCE SLO 5)
3. Prepare, analyze, and update bar charts and critical path method networks (ACCE SLO 5)
4. Prepare various construction scheduling reports (ACCE SLO 1 & 5)
5. Apply state-of-the-art computer tools for project planning, scheduling, and control (ACCE SLO 10)
6. Perform time/cost trade-off analyses (ACCE SLO 5)
7. Create oral presentations of construction schedules (ACCE SLO 2)
8. Understand earned value method for project schedule and cost control (ACCE SLO 14)

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Assessment | CLO 1 | CLO 2 | CLO 3 | CLO 4 | CLO 5 | CLO 6 | CLO 7 | CLO 8 | SLO 5 | Target |
| Test 1 |  |  | X |  |  |  |  |  |  | At least 80% receive C- or better |
| Test 2 |  |  |  |  |  |  |  |  | X | At least 80% receive C- or better |
| EVMS Homework |  |  |  |  |  |  |  | X |  | At least 80% receive C- or better |
| Resource Homework |  | X |  |  |  |  |  |  |  | At least 80% receive C- or better |
| Time Cost Homework |  |  |  |  |  | X |  |  |  | At least 80% receive C- or better |
| P6 assignment |  |  |  |  | X |  |  |  |  | At least 80% receive C- or better |
| Group Project |  |  |  | X |  |  |  |  |  | At least 80% receive C- or better |
| Group Presentation |  |  |  |  |  |  | X |  |  | At least 80% receive C- or better |
| Final Project | X |  |  |  |  |  |  |  |  | At least 80% receive C or better |

**UF Policies and Resources:**

**Accessing University Academic Policies and Campus Resources**

To support consistent and accessible communication of university-wide student resources, please use this link to academic policies and campus resources: <https://go.ufl.edu/syllabuspolicies>.

**CANVAS:**

This course utilizes Canvas as a repository for all course material including lecture notes, quizzes, forms, tutorials, and grades. It is the student’s responsibility to take advantage of the university resources to learn how to utilize Canvas.

Periodically the instructor will communicate with the class via e-mails and announcements from Canvas. Please note: Do not communicate via canvas, and to ensure efficient communication, use the instructor’s e-mail.

**ONLINE COURSE RECORDED MATERIAL POLICY:**

Although the course is planned to be taught face to face, our class sessions may be audio visually recorded. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

**EXPECTATIONS:**

BCN 4720 is a Senior 1 course. The instructor expects that students will be able to learn and assimilate materials on their own. Students are also expected to comport themselves in a professional manner. Specific expectations for students include:

1. Students should review course material on their own outside of class.
2. Students should be on time for the virtual lectures and actively contribute to the course or participate in the course weekly discussion board.
3. Students should work on class assignments as if they were job assignments.

**Instructor Response Time:**

The instructor will routinely check the course for postings or emails, Monday – Friday (8 am - 11 am) and sometimes on the weekend. You can anticipate a 24 to 48 hour response, Monday –Thursday for communication with the instructor. If it appears to be taking longer, feel free to send a reminder email. However, to ensure delivery of emails that don’t end up in a spam folder, ensure that you send them from the website or your UFL account.

The instructor normally grades assignments and provides feedback once a week within a week of the assignment completion date. Extra Credit is graded at the end of the week that it is submitted.

**ATTENDANCE and CLASS PARTICIPATION:**

Attendance is part of the overall grade. Random attendance quizzes will be taken throughout the course. Only documentation to validate excused absence will be permitted as an alternative to attending the course.

Requirements for class attendance and make-up exams, assignments, and other work in the course are consistent with university policies (See section UF Policies and Resources)

**GROUP PROJECTS**: There will be one major group project in which 10 teams of students will analyze a project and present their results to the class. You will be assigned into a group randomly. The team is free to establish their preferred method for communicating with each other. Two class periods will be set aside for the class presentations.

**GRADE CALCULATION:**

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| --- | --- |
| Project related grades | 300 points |
| Workshops/homework | 100 points |
| Attendance | 100 points |
| Tests | 200 points |
| Final Team Project | 150 points |
| Final Individual Project | 150 points |
| Total | 1000 points |

**GRADING:**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| The point value for each assignment will be clearly indicated when assigned. | | | | | | | | | | | | |
| Letter Grade | A | A- | B+ | B | B- | C+ | C | C- | D+ | D | D- | F |
| Total Points | 930-1000 | 900-929 | 870-899 | 830-869 | 800-829 | 770-799 | 730-769 | 700-729 | 670-699 | 630-669 | 600-629 | 0-599 |
| Quality Points | 4.0 | 3.67 | 3.33 | 3.0 | 2.67 | 2.33 | 2.0 | 1.67 | 1.33 | 1.0 | 0.67 | 0.0 |

**There is no rounding up of grades.**

**LATE WORK:**

Allowing some persons extra time to complete assignments while others are on time is inherently unfair. Therefore: Late work may be penalized.

* -10% for each class period late. For example, if an assignment is due on Wednesday, and you do not turn it in, you have until the beginning of the next class (Monday) to turn it in for a -10% reduction. However, it is always better to turn in work late than not at all.
* Extenuating circumstances will be evaluated by the instructor on a case by case basis. Please contact the course professor as soon as you realize you have a concern.

**PLAGIARISM:**

This course has been taught for many years and as a result there may be a temptation to “rely on the work of others.” Should the instructor determine that a student’s work is substantially similar to that of another (either past or present) the student may be subject to a rejection of that assignment and will be cited with an honor court violation. Similarly, the use of materials, worksheets, or data from previous semesters is considered cheating. The student understands that their work is subject to electronic verification by Turnitin® or other technologies.

**AI USAGE POLICY:**

AI tools are encouraged to enhance efficiency, clarity, and creativity in your work. However, all tools must be used **responsibly**, **ethically**, and **transparently**.

* **Originality & Authenticity:** All submitted work must be your own. Any assistance from AI tools must be properly acknowledged.
* **Responsible Use**: Use AI tools to support—not replace—your critical thinking and personal contribution.
* **Attribution**: Clearly indicate which AI tools were used and how they contributed to your work.
* **Academic Integrity**: Unauthorized use of AI tools or submission of AI-generated content without disclosure will be considered plagiarism and may result in disciplinary action.

By using AI tools, you agree to uphold these standards and contribute to a culture of integrity and innovation.

**Class Demeanor or Netiquette:**

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. Appropriate actions described by UF Policy will by taken if any improper behavior occurs.

**STUDENT EVALUATIONS:**

A mid semester survey will be provided during the middle of the semester to determine how the material and course are being presented. The survey announcement will be sent by Gator Evals to allow you to log in provide your feedback. This should provide the instructor information on the effectiveness of the teaching methodology and give time to make adjustments.

**Schedule\*:**

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| Week | Topics |
| 1 | Introduction to Scheduling |
| 2 | Understanding Logic |
| 3 | CPM CALCULATIONS |
| 4 | RESOURCE PLANNING |
| 5 | PRECONSTRUCTION & PROCUREMENT SCHEDULES |
| 6 | BUDGETING & CASH FLOW ANALYSIS |
| 7 | WEATHER DELAYS |
| 8 | EXAM 1 |
| 9 | GENERAL CONDITIONS |
| 10 | EARNED VALUE ANALYSIS |
| 11 | P6 |
| 12 | GROUP PRESENTATIONS |
| 13 | CRASHING THE SCHEDULE |
| 14 | LINEAR SCHEDULING |
| 15 | TIME/COST TRADE-OFF |
| 15 | EXAM 2 |

\*Disclaimer: This syllabus represents the current plans and objectives.  As we go through the semester, those plans may need to change to enhance the class learning opportunity.  Such changes, communicated clearly, are not unusual and should be expected. The instructor reserves the right to modify the course schedule and modules as deemed fit. If any questions, issues, or concerns about the course (assessment, policies, schedule, etc.), please contact the instructor to remedy any issue.