COURSE SYLLABUS
Applicable to both, Distance Learning (DL) and Live (LV) Students
CE 567 – Risk and Financial Management in Construction
Lecture Time and Place: T-TH, 10:15am – 11:30am, Daniels Hall, Room 331

INSTRUCTOR:
• Roberto A. Nuñez, P.E., MBA.
  214 Mann Hall
  Phone: 515 8408, email: ranunez@ncsu.edu  *Office Hours: As posted outside Mann 214

• Guest Speakers.
  Students will also interact with distinguished professionals from the construction industry that share their experiences in risk and finance issues associated with Civil and Construction Engineering and Management.

OFFICE HOURS:
  LIVE Students: As posted by me, outside my office, Mann 214. Please note that my extension activities are varied and intense. Therefore is better to e-mail me and make an appointment.
  DL Students: Please e-mail me, or call my office (919-515 8408) if you need to contact me. Typically I will be available in my office on T’s and TH’s from 9 am to 11 am.

TEACHING ASSISTANT:
• Idris Jeelami
  email: idrisj@ncsu.edu

COURSE GOAL:
The overall goal of this course is to provide students with the background to understand the fundamentals of risk and financial management in construction and the applications of cash flow, accounting, financial analysis, operations planning, cost and financial control, sureties, insurance, and project financing principles to minimize risk and to develop strategic planning processes in a construction environment.

COURSE OBJECTIVES:
CE 567 prepares students to use fundamental risk and financial principles and tools to analyze important issues and processes in construction engineering and management. The course reviews fundamental concepts in financial and risk analysis in construction and a detailed review of: accounting and financial metrics in construction, risk assessment and risk management in construction including the cost of risk, decision making strategies, the role of sureties and insurance companies, effects of risk in project delivery methods and contract types, risk in financing construction company operations, and the impact of financial and risk management in strategic planning in construction.

At the completion of the course, students will be able to:
1. Identify Risks in a typical construction project, and develop an understanding of various tools to mitigate, transfer, and reduce the risk
2. Differentiate project delivery methods by the type of risk exposure and apply suitable contract types for a given set of project characteristics.
3. Explain formal methods of risk assessment in construction.
4. Apply time value of money and cash flow principles in construction projects.
5. Interpret “external” financial statements for financing, investing, and operational metrics in construction.
6. Develop “internal” metrics to assess both project and corporation performance.
7. Evaluate the features and benefits of bonding and insurance as risk management tools in construction.
8. Distinguish key legal issues that can affect the risk exposure of a construction company
9. Identify the needs, constraints, and various processes associated with financing construction company operations
10. Use risk and financial management tools in developing strategic plans for a construction enterprise.
**TEXTBOOKS:**
Any construction accounting/finance text is a valuable tool.
Selected reference: REQUIRED
Other “good”, professional references (NOT REQUIRED, but suggested for actual professional practice):
-Any book on Construction Accounting and/or Managerial Finance.

**COURSE ORGANIZATION AND SCOPE:** Please refer to the attached course schedule table (please note, this is a tentative schedule, subject to change)

**COURSE REQUIREMENTS:**
The course requirements include two (2) 75-minute exams (one is in-class, another test MAY BE ASSIGNED AS A TAKE HOME EXAM and will be noted in the syllabus), one (1) final 180-minute exam, a number of short “homework/problem” sets, various “student activities”, and a 10-page paper on an instructor-approved topic risk and financial management applied to construction engineering and management.

**Homework Assignments:** will be graded; a number of homework and short project assignments will be given throughout the course of the semester with due dates indicated on each homework set; individual submittals are required. Homework should be typed and prepared professionally.

“**Student Activity**” Assignments: will not be graded; a number of short student activity assignments will be given throughout the course of the semester, the student is encouraged to work in these non-graded assignments which will be designed to enhance the learning experience in this course.

**Paper:** will be graded; the paper should be a state-of-the-art review of any topic in risk and financial management in construction with at least 10 references. The paper should be maximum 10 pages long (excluding a cover sheet, a table of contents, a list of references, and an appendix); double-spaced, 12 pt. font, 1 inch margins, properly formatted and containing properly cited referenced (e.g. MUST INCLUDE proper text citations and references). The paper must be an original and individual research effort, (i.e., it cannot be a composite of internet downloads). The topic for the course paper will be assigned on January 12, 2016 and is due at 10:15am on April 14th 2016. Papers and/or Exams showing ANY EVIDENCE of PLAGIARISM (i.e., improper use of references will be considered plagiarism and will have a grade of 0/100).

**Exams:** There will be two (2) mid-term exams throughout the semester, and one (1) comprehensive final exam. The mid-term exams will be cumulative and will cover course material up to the last class (prior to the exam). Exams will be closed books and closed notes (unless noted otherwise); but students will be allowed to bring/have a one (1) reference sheet 8 ½ x 11 (both sides filled with any reference information); additionally, students can bring/have standard interest tables, and a calculator (smart phones not permitted as a calculator). The final exam will be an open-book, open notes exam (but no computers or cell phones will be allowed).

**GRADING:**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Mid-Term Exam (2)</td>
<td>50% (25% each), One test MAY BE issued as “Take Home”</td>
</tr>
<tr>
<td>Final Exam (1)</td>
<td>25%</td>
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<tr>
<td>Homework</td>
<td>10%</td>
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<tr>
<td>Paper</td>
<td>15%</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
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Grading Scale. Grades are not “curved” in this course. “What you earn is what you get”. The instructor reserves the right to adjust letter grades, upward only, based on class participation (i.e., self-controlled attendance submittals by DL students) and quality of submitted work in case the numerical grade warrants such consideration.
Numerical | Letter | Numerical | Letter
--- | --- | --- | ---
96.6 to 100 | A+ | 76.6 to 79.9 | C+
93.3 to 96.5 | A | 73.3 to 76.5 | C
90.0 to 93.2 | A- | 70.0 to 73.2 | C-
86.6 to 89.9 | B+ | 66.6 to 69.9 | D+
83.3 to 86.5 | B | 63.3 to 66.5 | D
80.0 to 83.2 | B- | 60.0 to 63.2 | D-
0.0 to 59.9 | F

COURSE POLICIES AND PROCEDURES:
1. Exams:
   (LV students): Unless specifically noted otherwise, exams will be in the classroom, during regular classroom hours, on dates noted on this syllabus, and at a classroom location assigned for this course. One exam may be assigned as “Take Home” for which specific instructions will be given upon release.
   (DL students): Proctored exams must be arranged with NCSU-EOL and can be taken anytime, up to 72 hours BEFORE the exam scheduled date, as noted in the syllabus.
2. If a student misses his/her exam without a valid excuse, a zero will be averaged into his/her grade. See [http://www.ncsu.edu/policies/academic_affairs/pols_regs/REG205.00.4.php](http://www.ncsu.edu/policies/academic_affairs/pols_regs/REG205.00.4.php) for a detailed description of the University’s attendance regulations.
3. Homework
   (LV students) will be due at the beginning of the scheduled class period on the assigned due date.
   (DL students) will be due on-or before the beginning of the scheduled class period on the assigned due date. All homework must be submitted electronically to Homework_EOL@ncsu.edu or sent via fax to 919.515.8415. Students should make a copy of their homework before it is faxed to EOL for clarity of work. All pages must be numbered with the student’s name on each page.
4. All late submissions (homework, project, paper) will carry a 50% deduction of the maximum grade.
5. The student is responsible for studying all reading assignments and class handouts whether or not the material has been covered in class or specifically listed in the course syllabus.
6. Attendance:
   (LV students): attendance is critical to the success of this class and counts towards (but not replaces) class participation. Written attendance records will be maintained by the instructor. A student that accumulates two or more unexcused absences will not be eligible for additional curve points (if any).
   (DL students): self-controlled attendance is critical to the success of this class and counts towards (but not replaces) class participation. All DL students must maintain a self developed spreadsheet noting the date, the lecture number, and the number of hours spent on each lecture. This record must be submitted to NCSU-EOL (Homework_EOL@ncsu.edu or sent via fax to 919.515.8415) on or before April 26, 2016. Non-submittal renders the student not eligible for curve points (if any).

PREREQUISITES, COREQUISITES:
The course assumes that the student has an accounting course as background, such as ACC 220 (or equivalent) and CE 463 (or equivalent). This class is intended for students pursuing a Masters or Doctoral degree in Civil Engineering with a specialty in Construction Engineering and Management. This course may also be appropriate for advanced seniors or students in other disciplines who have adequate academic background and experience as approved by the instructor.

ACADEMIC INTEGRITY STATEMENT:
Students are expected to adhere to the guidelines for academic integrity as outlined in the NC State University Code of Student Conduct ([http://www.fis.ncsu.edu/ncsulegal/41.03-codeof.htm](http://www.fis.ncsu.edu/ncsulegal/41.03-codeof.htm)). Cheating and plagiarism will result in loss of credit for the test or assignment in question.

STUDENTS WITH DISABILITIES:
If you have a disability that may affect your participation in this class, please notify the instructor so that any necessary adjustments can be made. You may also contact the NC State Disability Services for Students Center regarding campus services at Suite 1900, Suite 1900 Student Health Services Center or on the web at [http://www2.ncsu.edu/ncsu/stud_affairs/counseling_center/dss/](http://www2.ncsu.edu/ncsu/stud_affairs/counseling_center/dss/).