COURSE SYLLABUS

CE 567 – Risk and Financial Management in Construction
Lecture Time and Place: T-Th, 8:30am – 9:45am, MN 425

INSTRUCTORS:

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

• Dr. Michael L. Leming
  212 Mann Hall
  Phone: 515 7823, email: leming@eos.ncsu.edu
  Office Hours:  As posted outside Mann 212

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

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, sureties,
insurance, and project finance 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, effects
of risk in project delivery methods and contract types, risk effects in project financing including a review of financing
sources, considerations for financing local and international projects, 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. Apply time value of money and cash flow principles in construction projects
2. Interpret financial statements and metrics in construction.
3. Explain formal methods of risk assessment in construction.
4. Evaluate the features and benefits of bonding and insurance as risk management tools in construction
5. Differentiate project delivery methods by the type of risk exposure and apply suitable contract types for a given set of
   project characteristics.
6. Identify the needs, constraints and processes of financing projects in local and international environments.
7. 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 references:
Other References:
- Any book on Construction Accounting, Managerial Finance.

COURSE ORGANIZATION AND SCOPE:  Please refer to the attached table (tentative)

COURSE REQUIREMENTS:
The course requirements include two 75-minute exams, one final exam, a number of short problem sets and project assignments, and a 10-page paper on any instructor-approved topic risk and financial management applied to construction engineering and management.

Project and Homework Assignments: 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. Working in groups for the homework assignments is strongly encouraged. In addition, each student will prepare a paper during the semester.

Paper: 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 at least 10 pages, double-spaced, 12 pt. font, 1 inch margins, and properly formatted (e.g. in-text citations and references. The paper must be an original effort, not a rewrite of something written for another purpose. Papers can be on fundamental (e.g., risk assessment) or applied topics (e.g., financing residential development projects) in construction engineering and management. Topics should be approved by the instructor.

GRADING:
Exams (2 at 25% each)  50%
Final Exam   25%
Homework   15%
Paper    10%
Participation additional bonus and/or curve points
TOTAL    100%

Grading Scale (The instructor reserves the right to adjust letter grades, upward only, based on class participation and attendance, if the numerical grade warrants such consideration):

<table>
<thead>
<tr>
<th>Numerical</th>
<th>Letter</th>
<th>Numerical</th>
<th>Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>96.6 to 100</td>
<td>A+</td>
<td>76.6 to 79.9</td>
<td>C+</td>
</tr>
<tr>
<td>93.3 to 96.5</td>
<td>A</td>
<td>73.3 to 76.5</td>
<td>C</td>
</tr>
<tr>
<td>90.0 to 93.2</td>
<td>A-</td>
<td>70.0 to 73.2</td>
<td>C-</td>
</tr>
<tr>
<td>86.6 to 89.9</td>
<td>B+</td>
<td>66.6 to 69.9</td>
<td>D+</td>
</tr>
<tr>
<td>83.3 to 86.5</td>
<td>B</td>
<td>63.3 to 66.5</td>
<td>D</td>
</tr>
<tr>
<td>80.0 to 83.2</td>
<td>B-</td>
<td>60.0 to 63.2</td>
<td>D-</td>
</tr>
<tr>
<td>0.0 to 59.9</td>
<td>F</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
COURSE POLICIES AND PROCEDURES:
1. There will be two exams throughout the semester and one comprehensive final exam. These exams are closed-book exams. The final will be given during the regularly scheduled exam period and will be an open-book exam.
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 for a detailed description of the University's attendance regulations.
3. Homework will be due at the beginning of the class period on the assigned due date.
4. 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.
5. Attendance is critical to the success of this class and counts towards (but not replaces) class participation. Written attendance records will be maintained. A student that accumulates three or more unexcused absences will not be eligible for additional curve points (if any).
6. All late submissions (homework, project, paper) will carry a 50% deduction of the maximum grade.

PREREQUISITES, COREQUISITES:
ACC 220 and CE 463. 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.

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). 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/.