### Class Schedule:

<table>
<thead>
<tr>
<th>CRN</th>
<th>Section</th>
<th>Time</th>
<th>Day</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>16394</td>
<td>001</td>
<td>3:30-4:45</td>
<td>T/TH</td>
<td>ESB-E G78A</td>
</tr>
</tbody>
</table>

### Format:

In-class lecture, class activities and group projects

### Credit Hours:

3

### Description:

This course provides an introduction to processes, tools, and techniques used to manage engineering projects within the context of an organization. It provides an overview of the engineering project management process, groups, and knowledge areas defined by the Project Management Institute and introduces Microsoft Project as a project planning tool.

### Prerequisite:

ENGR 102

### Instructor

Nelson F. Rekos, ME, MBA, PMP.
Office: ESB 337  
Email: nfrekos@mix.wvu.edu  
Hours: Tuesday & Thursday 2-3:30 pm, or by appointment  
Phone Number: (304) 376-5539

### Required Textbooks, Software, and Materials

- Project Management: The Managerial Process (6th Edition) – Erik Larson and Clifford Gray,  
  - Available Online or in the WVU Bookstore
- Microsoft Project 2013 (2010 and 2016 versions will also work)
  - **FREE 60-DAY TRIAL VERSION AVAILABLE WITH A NEW TEXTBOOK (LARSON) OR ONLINE – NOTE THAT THE TRIAL LENGTH IS SHORTER THAN THE COURSE LENGTH; **DO NOT DOWNLOAD OR INSTALL THE TRIAL UNTIL FEBRUARY 9TH.**
  - THIS SOFTWARE IS ONLY AVAILABLE FOR WINDOWS-BASED PCs [HTTPS://WWW.MICROSOFT.COM/EN-US/EVALCENTER/EVALUATE-PROJECT-PROFESSIONAL-2016/]
- Microsoft Office – Word, Excel, PowerPoint. Available at a discounted rate through WVU ([https://oit.wvu.edu/software/](https://oit.wvu.edu/software/))
- Access to a computer that meets MS Project and eCampus requirements, **and can be brought to class for exams and MS Project exercises.**

### Recommended Materials

  - Available Online or in the WVU Bookstore. Note that a free digital copy is available with the purchase of a PMI Smart Start Package or PMI Student Membership (approximately $35). Visit [http://www.pmismartstart.org](http://www.pmismartstart.org) for details on both of these options.
  - If you plan on pursuing a Project Management Certification such as the CAPM or PMP, this purchase is strongly recommended.
- PMI Smart Start Package  
  - Students in this course have the option to purchase a Smart Start package from the Project Management Institute that combines a PMI Student Membership with the CAPM exam application fee. The combined fee for both is approximately $260 (compared to ~$350 regular price), and will allow you to earn your Certified Associate in Project Management designation after completing the course and passing the CAPM exam. [http://www.pmismartstart.org](http://www.pmismartstart.org).
• While this course covers the most of the material tested on the CAPM exam, further detailed study is recommended prior to taking the exam. The exam relies heavily on memorization of the specific processes, inputs, outputs, tools, and techniques presented in the PMBOK, and we are covering the material at a much higher, more application-based level. There are many study materials and practice exams available online and through bookstores if you wish to prepare further for the exam.

Course Learning Outcomes

Upon completion of this course, the student will be able to:
• Describe the benefits that a structured project management approach provides to engineering organizations.
• Define projects, describe the role of an engineering project manager, illustrate what is meant by the project life cycle, and explain the impact of environmental factors on project management.
• Model a project management framework, based on the PMBOK, that takes into account various inputs, tools, and techniques, and provides outputs to make decisions about the efficacy of project management processes.
• Assess the purpose and importance of project management processes.
• Analyze the project management processes from a real-world case study, using Microsoft Project where appropriate.
• Relate the similarities between engineering project management and engineering design.

Detailed learning outcomes for each week can be found at the beginning of the course modules. The textbook readings and course materials are designed to provide the knowledge needed to meet these outcomes, and course discussions, assignments, and exams/ quizzes are designed to evaluate your mastery of these outcomes.

Course Relationship to Program Educational Outcomes

The course relates strongly to the following student outcomes for the Department of Industrial and Management Systems Engineering:

• Outcome 3: Students will be able to develop project management strategies with measurable organization results that are communicated effectively.
• Outcome 4: Students will be able to identify strategies for managing stakeholders from other disciplines.
• Outcome 6: Students will be able to differentiate impacts that projects have on internal and external stakeholders.
• Outcome 8: Students will be able to demonstrate proficiency in project documentation and project planning that are expected of an experienced engineer.
Course Policies

- **Communication to Students:** The instructor will communicate to the class via eCampus Course Announcements and WVU e-mail. Please check these daily to receive updates on the course.
- Tentative dates for Labs, Exams, and Homework assignments (HW) are on the course schedule. There may be additional HW added during the course.
- Exams will be accessed through eCampus. Exams will be available only for a designated time and will not be re-opened after the deadline for completion has passed. No make-up exams are permitted, except by prior arrangement with the instructor, at the sole discretion of the instructor.
- Assignments are due at the beginning of class on the due date assigned. It is expected that assignments will be printed out before class starts and handed in on time. Additionally, electronic copies of assignments may be requested. These electronic copies must also be submitted prior to the start of class. **Late assignments will not be accepted or graded.**
- This course contains both team and individual grading elements. All homework and exams are considered individual assignments. Anyone found to be cheating on any individual assignment will be disciplined according to the University’s policy on Academic Integrity.

- **Assignment Submission:** All electronically submitted homework or Labs assignments must be via the course website. No email submissions will be accepted unless the instructor grants permission in advance.
  - Assignments that deviate from the assigned file format or naming convention are subject to a grade reduction of 10%.
  - Assignments that do not represent a professional-quality work product suitable for presentation to a senior manager will be subject to a reduction of no less than 10%.
  - Students must ensure that their electronic submissions are free of any viruses, malware, spyware, etc.

- **Academic Dishonesty:** The integrity of the classes offered by any academic institution solidifies the foundation of its mission and cannot be sacrificed to expediency, ignorance, or blatant fraud. Therefore, I will enforce rigorous standards of academic integrity in all aspects and assignments of this course. For the detailed policy of West Virginia University regarding the definitions of acts considered to fall under academic dishonesty and possible ensuing sanctions, please see the Student Conduct Code. Should you have any questions about possibly improper research citations or references, or any other activity that may be interpreted as an attempt at academic dishonesty, please contact me before the assignment is due to discuss the matter. Unless otherwise indicated, **all graded course components are to be completed independently.**

**Statement on Social Justice**

The West Virginia University community is committed to creating and fostering a positive learning and working environment based on open communication, mutual respect and inclusion. I concur with that commitment.

If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this course, you must make appropriate arrangements through Disability Services (293-6700). They will identify the nature of the accommodation your disability requires.
**Course Structure**
This course meets twice per week. At the beginning of each week, you are expected to review the week’s learning outcomes, complete a reading assignment in your textbooks, and review the course materials in eCampus. The course includes a formal lecture on the appropriate chapter from the textbook, individual and team assignments in class. It is expected that you will participate in the exercises and class discussion portion.

**Grading Elements, Weighting, and Scale**
- **Participation/Attendance** – To promote student to student and student to instructor interaction, students will respond to weekly questions posed by the instructor. Questions posed may be based on the reading assignments, homework or team assignments. Non responsive or consistent absences will be noted/counted*.
  *Attendance will be taken (sign-in sheets) for a minimum of (10) classes.
- **Labs** – Lab 1 will be individual assignment, Lab 2 & 3 will be Team assignments (2-member/team) utilizing the Microsoft Project software. Detailed instructions and a grading policy for each lab assignment will be posted on eCampus. Note that each team member needs to be able to work with the MS Project software since the MS Project Proficiency Exam will incorporate all the techniques used to complete the Lab 2 & 3.
- **Assignments/Homework** - will be a mixture of be individual and/or team submittals.
- **Exams** - Students will be given 4, non-cumulative exams throughout the term. Exams will focus on textbook reading, project management theory, and technical knowledge. The 3rd exam will test your proficiency with MS Project Software. The Final Exam will be cumulative.

**Grading**
Grades are based upon student performance on assignments, quizzes, and projects, as well as upon student participation in required activities, such as study labs and a variety of outside of class experiences designed to show students more about the engineering profession. Each assessment tool is weighed as follows:

- 30% Labs [3@ 10% / each]
- 40% Exams [4@10% / each]
- 20% Final Exam
- 5% Assignments [team assignments, homework]
- 5% Class Participation/Attendance

**Grading Scale**
Letter grades are assigned according to the following scale:

- A 90% – 100%
- B 80% – 89%
- C 70% – 79%
- D 60% – 69%
- F Below 60%
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Book Chapters And Sources</th>
<th>Assignments &amp; Deliverables</th>
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<tbody>
<tr>
<td>1 Jan 8-12</td>
<td>Modern Project Management Organization: Structure &amp; Culture</td>
<td>L/G: Chaps 1,3</td>
<td>Internet Search</td>
</tr>
<tr>
<td>2 Jan 15-20</td>
<td>Organization Strategy &amp; Project Selection Understanding the PMBOK framework</td>
<td>L/G: Chap 2</td>
<td></td>
</tr>
<tr>
<td>3 Jan 22-26</td>
<td>Defining the Project Scope</td>
<td>L/G: Chap 4</td>
<td>Lab 1 Start</td>
</tr>
<tr>
<td>4 Jan 29 –Feb 2</td>
<td>Estimating Project Times and Costs</td>
<td>L/G: Chap 5</td>
<td>Exam 1 (chaps 1-4) Lab 1 Due</td>
</tr>
<tr>
<td>5 Feb 5-9</td>
<td>Learning Curves for Estimating Sequencing the Project Activities</td>
<td>L/G Appendix 5.1 and Chap 6</td>
<td>Install MS Project Lab 2 Start</td>
</tr>
<tr>
<td>6 Feb 12-16</td>
<td>MS Project Introduction</td>
<td>MS Project videos</td>
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<tr>
<td>7 Feb 19-23</td>
<td>Managing Risk</td>
<td>L/G: Chap 7</td>
<td>Lab 2 Due</td>
</tr>
<tr>
<td>8 Feb 26-Mar 2</td>
<td>Scheduling Resources and Cost</td>
<td>L/G: Chap 8</td>
<td>Lab 3 Start</td>
</tr>
<tr>
<td>9 Mar 5-11</td>
<td>MS Project tutorial #2, Reducing Project Duration</td>
<td>MS Project videos LG: Chap 9</td>
<td>Exam 2 (chaps 5-8)</td>
</tr>
<tr>
<td>Mar 12-16</td>
<td>Spring Break</td>
<td></td>
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<tr>
<td>10 Mar 19-23</td>
<td>Monitoring and Controlling the Project</td>
<td>L/G: Chap 13</td>
<td>Lab 3 Due</td>
</tr>
<tr>
<td>11 Mar 26-30</td>
<td>Leadership &amp; Effective Manager</td>
<td>L/G: Chap 10</td>
<td>MS Project Exam 3</td>
</tr>
<tr>
<td>12 Apr 2-6</td>
<td>Managing Project Teams</td>
<td>L/G: Chap 11</td>
<td>MS Project 60-day trial period ends</td>
</tr>
<tr>
<td>13 Apr 9-13</td>
<td>Procurement: Outsourcing Project Components</td>
<td>L/G: Chap 12</td>
<td>Exam 4 (chaps 9, 10, 11, 13)</td>
</tr>
<tr>
<td>14 Apr 16-20</td>
<td>A: Project Closure B: Agile Project Management</td>
<td>L/G: Chaps 14, 17</td>
<td></td>
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<tr>
<td>15 Apr 22-27</td>
<td>CAPM Exam Preparation &amp; Practice Tests</td>
<td>PMBOK Review</td>
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<tr>
<td>Wed/May 2</td>
<td>Final Exam 8-10am</td>
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*Mid-Semester*