

**From:** [noreply@wsu.edu](mailto:noreply@wsu.edu)  
**To:** [curriculum.submit](#)  
**Subject:** 175 473899 Engineering and Technology Management Requirements Revise - Revise or Drop Graduate Certificate  
**Date:** Wednesday, November 28, 2018 1:13:58 PM  
**Attachments:** [2018.11.28.13.13.47.95.FormData.html](#)  
[2018.11.28.13.13.45.35.currentCatalogFile\\_Systems\\_Engineering\\_Management\\_Grad\\_Cert\\_Justification.docx](#)  
[2018.11.28.13.13.45.35.currentCatalogFile1\\_Current\\_Requirements\\_Grad\\_Cert\\_in\\_Systems\\_Engineering\\_Mgt.docx](#)  
[2018.11.28.13.13.45.35.currentCatalogFile2\\_EM565SyllabusSpring2019.pdf](#)

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Patricia Elshafei has submitted a request for a major curricular change. His/her email address is: [pelshafei@wsu.edu](mailto:pelshafei@wsu.edu).

**Requested change:** Revise or Drop Graduate Certificate

**Title:** Systems Engineering Management

**Requested Effective Date:** Fall 2019

**Revise certificate requirement:** Yes

**Dean:** Field, David - Assoc Dean - VCEA - Grad,

**Chair:** Zentz, Kim,

\_\_\_\_\_  
Catalog Subcommittee  
Approval Date

\_\_\_\_\_  
AAC, PHSC, or GSC  
Approval Date

\_\_\_\_\_  
Faculty Senate  
Approval Date

**From:** [Field, Dave](#)  
**To:** [curriculum.submit](#); [Zentz, Kim](#)  
**Subject:** Re: 175 473899 Engineering and Technology Management Requirements Revise - Revise or Drop Graduate Certificate  
**Date:** Wednesday, November 28, 2018 1:56:58 PM

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I approve this in its current form.

Dave Field

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**From:** curriculum.submit@wsu.edu <curriculum.submit@wsu.edu>  
**Sent:** Wednesday, November 28, 2018 1:13:48 PM  
**To:** Zentz, Kim; Field, Dave  
**Subject:** 473899 Engineering and Technology Management Requirements Revise - Revise or Drop Graduate Certificate

Zentz, Kim,  
Field, David - Assoc Dean - VCEA - Grad,  
Patricia Elshafei has submitted a request for a major curricular change.  
**Requested change:** Revise or Drop Graduate Certificate  
**Title:** Systems Engineering Management  
**Requested Effective Date:** Fall 2019  
**Revise certificate requirement:** Yes

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Both Chair and Dean approval is required to complete the submission process. Please indicate that you have reviewed the proposal by highlighting one of the statements below and **reply all** to this email. ([curriculum.submit@wsu.edu](mailto:curriculum.submit@wsu.edu).) [Details of major change requested can be found in the attached supplemental documentation]

1. I approve this proposal in its current form.
2. I approve this proposal with revisions. Revisions are attached.
3. I do not approve this proposal. Please return to submitter.

If you do not respond within one week, you will be sent a reminder email. If no response is received within three weeks of the submission date, the proposal will be returned to the submitter.

Thank you for your assistance as we embark on this new process. If you have any questions or concerns, please let us know [wsu.curriculum@wsu.edu](mailto:wsu.curriculum@wsu.edu).

Suzanne Lambeth, Assistant Registrar  
Graduations, Curriculum, & Scheduling  
Washington State University  
Registrar's Office  
PO Box 641035  
Pullman WA 99164-1035  
509-335-7905  
slambeth@wsu.edu

**Note:** Please use the attachments to this email rather than the link below to view the supporting documentation.

**From:** [Zentz, Kim](#)  
**To:** [Field, Dave](#); [curriculum.submit](#)  
**Subject:** RE: 175 473899 Engineering and Technology Management Requirements Revise - Revise or Drop Graduate Certificate  
**Date:** Wednesday, November 28, 2018 4:24:43 PM  
**Attachments:** [image003.png](#)

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I approve this proposal in its current form.

Kim Zentz



**Kim Zentz, P.E., MEM, Director**  
**Engineering and Technology Management**  
Voiland College of Engineering and Architecture  
Washington State University  
PO Box 1495 | CCRS 232 | Spokane, WA 99210-1495  
[kzentz@wsu.edu](mailto:kzentz@wsu.edu) | 509-358-2030 | cell 509-995-5287  
[etm.wsu.edu](http://etm.wsu.edu)

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**From:** Field, Dave  
**Sent:** Wednesday, November 28, 2018 1:57 PM  
**To:** [curriculum.submit](#) <[curriculum.submit@wsu.edu](mailto:curriculum.submit@wsu.edu)>; Zentz, Kim <[kzentz@wsu.edu](mailto:kzentz@wsu.edu)>  
**Subject:** Re: 473899 Engineering and Technology Management Requirements Revise - Revise or Drop Graduate Certificate

I approve this in its current form.

Dave Field

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Suzanne Lambeth, Assistant Registrar  
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## Systems Engineering Management Graduate Certificate Change:

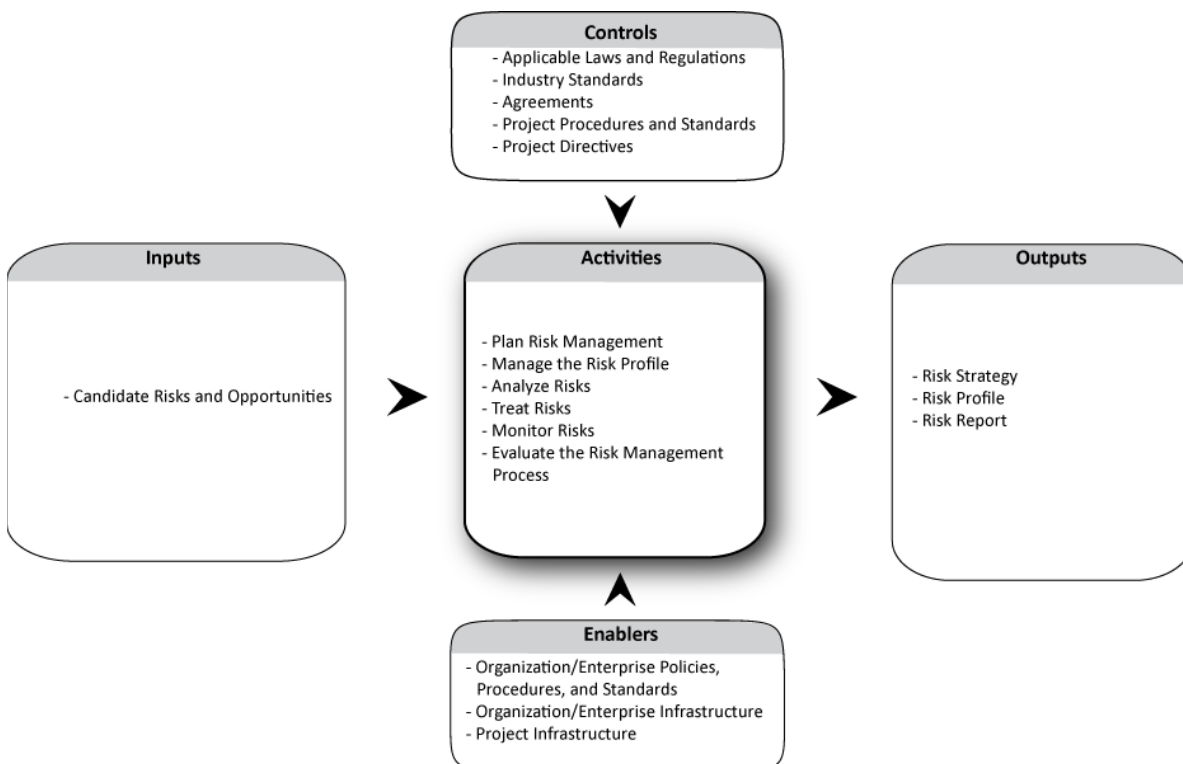
- E M 565 Introduction to Systems Management (drop EM 564)
- E M 566 Systems Analysis and Practice
- E M 568 Risk Assessment and Management (drop EM 530)
- E M 569 Systems Architecting

The Systems Engineering Management graduate certificate will be comprised of the four courses listed above. The decision by the ETM department faculty to make E M 565 Introduction to Systems Management a core course under the Managing Projects area was approved by a unanimous vote of department faculty at our Fall 2018 program meeting. The EM565 course will address a systems approach to project management in addition to the systems engineering management skills critical for managing complex projects as systems, and projects dealing with complex engineering systems. Therefore, EM564 Project Management is no longer needed as course option for the Systems Engineering Management graduate certificate. We need to present a solid body of knowledge germane to current and upcoming requirements as identified by the following internationally recognized Associations. This mandates that we remove extraneous coursework that, while supporting the umbrella of Systems Engineering Management, could allow a student to graduate without the needed information.

The International Council on Systems Engineering (INCOSE) launched the “Systems Engineering Body of Knowledge” (SEBOK) in 2013.

[http://sebokwiki.org/wiki/Guide\\_to\\_the\\_Systems\\_Engineering\\_Body\\_of\\_Knowledge\\_\(SEBoK\)](http://sebokwiki.org/wiki/Guide_to_the_Systems_Engineering_Body_of_Knowledge_(SEBoK))

For SEBOK, risk management (EM 568) falls under the umbrella of Systems Engineering Management. The purpose of risk management is to reduce potential risk to an acceptable level before they occur, throughout the life of the product, project, or service. It is considered an integral part of the systems engineering management process. The SE risk management process includes the basic activities- risk planning, risk identification, risk analysis, risk handling, and risk monitoring. The figure below shows a typical risk management process from the view of systems engineering-



EM569 Systems Architecting was specifically designed to better align with the systems engineering handbook - SEBOK and the systems engineering body of knowledge. A core area in the systems-based series, EM 569, addresses the principles and techniques used in architecting modern, complex systems. System architecting is a required initial step in complex system designs such as computer and information systems, command and control systems, space systems, transportation systems, agricultural systems, and health management systems, to name a few. The bottom line is that engineering managers and technical leaders require hands-on experience in the art and science of systems architecting to manage and lead development of individual systems, systems of systems, and federations of systems

We are removing the option for EM530 Applications of Constraint Management. In general, students of constraints management complete the Constraints Management graduate certificate. Tailoring the certificate to a prescriptive set of requirements ensures all students will have the specific tools they need.

In the end, the four courses represent a solid overview of systems engineering management and topics specific to understanding systems engineering principles, concepts, and practice, managing complex systems, and developing a systems thinking mindset. Updating the Systems Engineering Management graduate certificate to be comprised of EM565, EM566, EM568, and EM569 was approved by a unanimous vote of department faculty at our Fall 2018 post ballot faculty meeting.

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**Graduate Certificate in Systems Engineering Management**  
**Approved 10/18/18; Effective Fall 2019**

1. Credit Hours: 12 credit hours total
2. Required Courses
  - a. ~~E\_M 564~~ or EM 569
  - b. E\_M 565
  - c. E\_M 566
3. Selective Courses
  - a. ~~E\_M 530~~ or E\_M 568
4. GPA requirement: Cumulative GPA may not fall below a 3.0

**Graduate Certificate in Systems Engineering Management**  
**Current Requirements**

1. Credit Hours: 12 credit hours total
2. Required Courses
  - a. E\_M 564
  - b. E\_M 565
  - c. E\_M 566
3. Selective Courses
  - a. E\_M 530 or E\_M 568 or E\_M 590
4. GPA requirement: Cumulative GPA may not fall below a 3.0

## EM565: Introduction to Systems Management Syllabus

**Instructor:** Dr. Alice F. Squires

**Email:** [alice.squires@wsu.edu](mailto:alice.squires@wsu.edu)

**Communication Methods:** We use tools within the Blackboard Learn online classroom (<http://learn.wsu.edu>), including Blackboard Collaborate (for real-time weekly lectures), online discussions (for homework), and Course Email (sends to @wsu.edu email). Students must log into the course to use these methods. However, students also need to check their WSU assigned email (@wsu.edu) daily for communications from the Engineering Technology Management (ETM) department, your faculty advisor, course instructors, and Blackboard Learn.

**Prerequisites:** Graduate Standing

### Course Description

This course integrates project management and systems engineering management in the development, manufacture, and operation of complex systems. Complex systems, encumbered with schedule and cost constraints while pushing state of the art technology, present a challenge to today's managers and require a systems approach to project planning, leading, organizing, directing, and monitoring. The course is designed to assist engineering leaders and managers, systems engineers and architects, technical project or program managers, and hardware, software, electrical, mechanical and manufacturing engineers with projects involving complex system planning and development. The course includes case studies to relate concepts to real world practice and demonstrate how projects can succeed with a formalized systemic approach to project and systems engineering management. This course is a core Managing Projects course in the ETM master's degree, a required course for the systems engineering management graduate certificate, and is available for continuing education.

### Course Objectives

This course teaches the fundamental elements and concepts of project management and systems engineering management. Its specific objectives are:

1. To provide a general understanding of the interdependent relationships between project planning, leading, organizing, directing, and monitoring, and system development, build, operation, and sustainment;
2. To develop key concepts and principles usable by technical managers to plan a complex project across the systems life cycle;
3. To provide some practice using analytical tools to plan for the development of an affordable total system solution that addresses the right problem;
4. To clarify, improve and broaden one's personal philosophy of project management, systems concepts, system design and development, requirements management, change management, and engineering ethics;
5. To strengthen the students' communication and research abilities by exploring current societal needs addressable with a system solution;



## EM565: Introduction to Systems Management Syllabus

- To provide the student with opportunities to utilize critical thinking skills to analyze and solve complex problems.

### Link of Objectives to Graded Items:

<b>Objective #</b>	<b>Measured by:</b>
1	Class Activities and Online Discussions, Exams
2	Final Individual Project
3	Case Analyses, Exams
4	Class Activities and Online Discussions, Exams
5	Team Project, Final Individual Project
6	Case Analyses, Team Project, Final Individual Project, Exams

### Student Learning Outcomes:

Upon satisfactory completion of the course, the learner should be able to:

- Understand the interdisciplinary processes critical to complex system development including the integrative management of projects and systems, situation analysis, team building and team interactions, requirements management and allocation, system architecture, feasibility analysis, logistics and maintenance support concepts, life cycle cost analysis, systems synthesis, analysis, and design optimization, design integration, test and evaluation, production, operations, sustainment, and system retirement and disposal.
- Identify a current deficiency, problem, or opportunity that can be addressed with the design of a system solution; develop a clear succinct need statement for the system in the domain and language of the stakeholder; and complete the system concept selection process.
- Define a comprehensive set of system design requirements for the system solution that span the entire system life cycle and incorporate the essential design engineering disciplines.
- Understand how to facilitate design and supplier review and evaluation through formal design reviews for the system requirements, conceptual system/system design, preliminary system design, equipment/software design, and detailed/critical design and development.
- Develop a Project Management Plan (PMP) and Systems Engineering Management Plan (SEMP) for a complex system that includes cost, schedule and technical considerations, project and system requirements, integration of engineering specialties, risk management, change management, and management of outsourcing and global relationships.
- Understand how to build a successful systems focused organizational culture.

## EM565: Introduction to Systems Management Syllabus

### Approaches to Achieve Learning Outcomes:

- Readings from the Eisner textbook, the Guide to the Systems Engineering Body of Knowledge (sebokwiki.org), the United Nations' 2030 Agenda for Sustainable Development, and additional instructor provided readings provide guidance and formal examples of how organizations deal with various project and systems engineering management issues.
- Class Activities and Online Discussions reflect on the assigned work and allow students to explore how experienced engineering managers tailor their leadership and management toolkit based on the systems context.
- Case study analyses demonstrate the student's ability to assess the application of project and systems engineering management approaches and tools to various situations and capture the student's reflection on readings and case examples. ***These assignments are submitted by students individually.***
- A group (or individual) research project applies concepts learned in the course to the development of an abbreviated Project Management Plan (PMP) presentation. **There is one team (or individual) presentation required during the semester.** The team defines a project in support of the 2030 Agenda for Sustainable Development published by the United Nations, and develops an initial Project Management Plan that supports the project, incorporating lessons learned from the readings, discussions, assignments, and independent research. ***The team assignment is submitted by one designated (by the team) member of the team.***
- The development of a Systems Engineering Management Plan (SEMP) demonstrates the student's ability to plan and manage a complex systems project and the student's mastery of the course concepts. ***This assignment is submitted by students individually but can be built for the project defined for the team project.***

### Course Approach

Class meets Wednesdays from 5:15pm to 7:45pm Pacific time in Blackboard Collaborate using the link provided in the Blackboard Learn online classroom. Class is held according to the WSU Academic Calendar (no real-time class on WSU holidays or break week). Course Content is posted to appropriately labeled sections of the online classroom. Class participation, online and in-class discussions, homework, quizzes, and team and individual assignments successively build capability and confidence in the course material.

To convey course content the instructor:

- Facilitates "live" class sessions that include lectures, discussions, and other class activities that are recorded for on demand access;

## EM565: Introduction to Systems Management Syllabus

- Posts recordings, presented slides, and whiteboards from class sessions;
- Provides additional supplemental material and references as feasible which may include external web links, standards documents, handbooks and reference guides, pertinent articles, course content recordings created outside of the 'live' class, additional written course content guidance, etc.;
- Assigns reading, online discussion homework topics, and open-book exams;
- Assigns individual and team assignments;
- Responds to student questions in a timely manner; and
- Provides timely and detailed feedback on assignments.

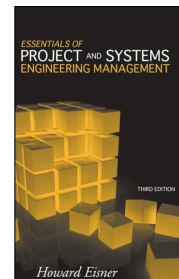
Students are required to perform the following by the due date and time:

- Attend and participate in "live" class sessions OR listen to the recorded class session;
- Complete in-class activities either in-class or posted to the online discussion after reviewing the recorded session;
- Complete assigned reading, and study and review material;
- Post to and respond to other students in the online discussions;
- Complete open-book exams;
- Meet with team members to discuss content and work on team work;
- Complete individual and team assignments and review feedback;
- Participate in a live or recorded project presentation; and
- Demonstrate mastery of the course by completing a final individual project.

See the Grading Policy section for more detail including late assignment policy. In the case of an unexpected life event, please contact the instructor.

### Required Textbook

- Howard Eisner, "Essentials of Project and Systems Engineering Management", 3rd Edition, John Wiley & Sons, ISBN: 978-0-470-12933-3. March 2008. 512 pages.



### Other Resources Used in the Class

- Systems Engineering Body of Knowledge wiki: [www.sebokwiki.org](http://www.sebokwiki.org)
- United Nations' "Transforming our world: the 2030 Agenda for Sustainable Development", downloadable from <https://sustainabledevelopment.un.org/post2015/transformingourworld>
- "Visualizing Project Management" by Kevin Forsberg, Hal Mooz, Howard Cotterman, 3<sup>rd</sup> Edition (2005), downloadable from [http://dbmanagement.info/Books/MIX/Visualizing\\_Project\\_Management\\_Models\\_And\\_Frameworks\\_For\\_Mastering\\_Complex\\_Systems.pdf](http://dbmanagement.info/Books/MIX/Visualizing_Project_Management_Models_And_Frameworks_For_Mastering_Complex_Systems.pdf)
- Student Guide to Academic Integrity at WSU, see: <https://conduct.wsu.edu>

## EM565: Introduction to Systems Management Syllabus

- Guidance for avoiding plagiarism, see: <http://www.wsulibs.wsu.edu/library-instruction/plagiarism/how-avoid-it>

### Office Hours (by Request)

I check my WSU email nearly every day; and meet with individuals or teams, by request, at pre-agreed to times. I encourage students to be proactive in getting questions answered early through the many available methods.

### Tips for Being Successful in an Online Program

For each hour of lecture equivalent, students should expect to have 3 - 4 hours of work outside class. This equates to 7 - 10 hours per class. For a twice a week condensed summer class, the time demands are nearly double. The most important step for being successful in an online graduate course is to schedule at least the required number of hours per week for class work – spread over multiple days. Please block out this time on your calendar. This time is needed for completing the assigned reading, meeting with team members, completing open-book online tests, performing research, completing homework, participating in online discussions, completing individual and team assignments and reviewing feedback. Taking the class online saves commute time but it's up to the student to dedicate up to 150 hours outside of class time per graduate course, to be successful. Other tips include learning from each other; keeping an open mind about and becoming an advocate for online learning; and building a support structure of folks who help you achieve your learning goals.

### In-Class Activity

Students earn up to 1 point per class session for completing the in-class activity for each of the 15 class sessions, including “recorded only” sessions (as applicable). Students participate in “live” class sessions according to the course schedule or listen to the archived lectures of the “live” class sessions. Class sessions consist of a brief discussion of the text materials and additional material from real-life experience or other references, and students complete an in-class activity during the class session. Students attending the “live” class session earn credit for the in-class activity if completed during the “live” class. Students submit class activities not completed during the appropriate time in the class session to the appropriate discussion thread in the BB Learn online classroom to earn up to 1 point credit for the in-class activity for that class. Students earn the following points per class:

- 0 points for in-class activities that are not completed or are not substantive in nature, completed either during the “live” class or posted to the online discussion thread;
- 1 point for completing substantive in-class activities either during the “live” class or posted to the online discussion thread by the due date.

Students should complete assigned reading in advance of “live” class session.

## EM565: Introduction to Systems Management Syllabus

### Online Discussions: Homework Topic

Students earn up to 1 point per class for participation in the online discussion topic assigned for that class for the first 14 class sessions. Students post a response to the question posted in order to view responses posted by other students; students then read through the discussion as it develops and post one substantive response to another student's posting. Students earn the following points per class discussion:

- 0 points for no responses to the assigned discussion question and no response to another student's posting by the due date;
- 0.5 points for posting a substantive yet concise response to the question posted by the due date;
- 1 point for posting two substantive responses – one with responses to the assigned discussion question and one to another student's response, by the due date.

Please review assigned reading and attend or listen to the recording of the related class session in advance of responding to the assigned discussion question. Due to class size, please post concise but thoughtful responses to each question and only post one response to another student in each discussion.

### Open-Book Online Exams

Students complete open-book online exams that cover the course content. Please complete the reading, attend or review the class sessions and corresponding recorded lectures, and complete other assigned work as applicable, before you complete the related exam. Exams are evaluations of the learners' overall understanding of the principles that support the knowledge areas covered in the course. The schedule for the exams is given in the Course Schedule.

Students earn up to 5 points per exam; exams are graded as the best 4 out of 5 exams for up to 20 total points earned. Questions for exams submitted on time are marked either correct or incorrect with feedback provided, leaving it up to the student to research the correct response for those questions marked incorrect. Exams contain multiple-choice, true/false, multiple answer, fill in the blank, matching, and other types of questions.

Exams are due by midnight Pacific time on the due date. Exams cannot be opened after the due date and time, and incomplete (not submitted) exams are not accepted after the due date and time (unless prior arrangements are made).

### Individual and Team Assignments

Individual and team assignments successively build capability and confidence in the course material. Assignment should be error-free and visually effective in communicating the intended message. Work submitted in this course should satisfy general professional expectations as well as be appropriate for the specific purpose and audience for which the communication is intended. Quality of work is reflected in the assignment scores. Ensure that proper grammar, sentence

## EM565: Introduction to Systems Management Syllabus

structure, and material citations are included for maximum point consideration. Note that Wikipedia may not be a suitable reference source due to the editable nature of the material found there that raises concerns about veracity and validity of content; therefore, please do not cite or list Wikipedia in your references for any assignments in the class.

Assignments are due by midnight Pacific time the night before the next regularly scheduled day of class, on the due date. Instructor feedback and grades are posted by midnight up to a week later.

### ***Team Presentation***

Students earn up to 10 points for a team presentation that presents a Project Management Plan (PMP) for a project that supports the United Nations' (UN) "Transforming our world: the 2030 Agenda for Sustainable Development" goals. The team researches and defines a specific project, identifies the stakeholders and their needs, defines the system context, and develops an initial abbreviated project management plan, incorporating lessons learned from the readings, discussions, assignments, and independent research.

The UN global goals address large complex issues that may be overwhelming; please do not try to tackle a broad complex problem; instead select a small well-defined and bounded project that supports the overall goals. You are not trying to solve world hunger or achieve sustainable world peace. The intent of the classroom assignment is to apply project management concepts and principles (and later systems engineering management in your individual project) to develop a PMP for a project that supports the overall problem space. Typical PMP outlines are provided for guidance and should be tailored to the selected project. Focus on defining a bounded project (with a specific start and end) that will help make progress in addressing a real but 'reasonable' problem within the problem space domain. That is, please be sure to properly define the problem domain to be a narrow problem in the problem space. For example, you should pick a specific topic area within a goal, and then apply to a specific region of the world such as a small community, and develop a real-life PMP for a project that addresses a real problem, but can be reasonably completed within the timespan of the course.

The team assignment is augmented with research of literature from peer-reviewed and credible sources such as those found in the WSU library (<https://libraries.wsu.edu/>). The team presentation is due by midnight PST the night before the first scheduled team presentation. The team presentation takes place during the class session shown on the Course Schedule. Instructor feedback and grades are posted by midnight PST up to one week later after all class presentations are complete and the self and team assessments are turned in.

Teams are required to provide a set of "quiz" questions (one per team member) based on the information presented and ask them to the class following the completion of their presentation. Quiz questions must include the correct answer on a separate slide from the question itself. Additional detailed requirements for the team assignment are posted in the Assignment area in the online course.



## EM565: Introduction to Systems Management Syllabus

Team assignments are submitted by the team lead, or team lead's delegate, by clicking on the Assignment title and proceeding through the submission process.

Effective time management is crucial to ensure that teams complete the parts of the team assignment on time and to keep the course on schedule for all participants. To facilitate this, each team should meet weekly once the teams are formed. Each team selects a team leader to: a) post the initial team plan, b) arrange team meetings and facilitate team discussions ensuring participation from each member, c) verify that the team's assignment is accurate and complete, and d) post the assignment by the required time. Once teams are assigned, the team leader posts the team's overall plan including the names of the team members, the topics selected for the team project, and the plan that the team has agreed on for working together in the course (please include planned meeting method and frequency) to the appropriate Discussion Forum. Although there is a team lead, all team members are expected to contribute equally to the success of the team. Changes made to the team's leader or plan during the course are posted as updates to the team's plan. Teams are provided a team discussion forum and Blackboard Collaborate team room for their private use.

### **Self and Team Assessments**

Students earn up to 1 point for completing the self/team assessment after the team presentation is complete. To promote full team member participation, students assess the contribution of members of the team, including themselves, prior to the final team project grading. While team members usually receive the same grade, team members may earn a lower grade due to a lower contribution to the team's work. The self and team assessment is found in the Assignment area in the online course. Assignments are submitted in the course by clicking on the Assignment title and proceeding through the submission process.

### **Individual Case Analyses**

Students complete individual case analyses on four (4) assigned cases provided by the instructor. For each case analysis, students include a title page with a title, name, date, the case study being analyzed, and the academic integrity pledge. The case study analyses are divided into three parts that students are required to complete:

- **Part I: Case Synopsis:** Provide a concise relevant summary of the case that includes a summary of the problem, the analysis process, and the analysis results. Limit the synopsis to 350 words.
- **Part II: Q&A:** Discuss and answer the assigned questions, submitted **as numbered Q&A**. Limit each question response to 250 words (not including graphs, charts, equations, tables, etc.) unless a different word limit is specifically noted.
- **Part III: Student Recommendation and Experience:** Provide a student opinion of the case that demonstrates mature understanding of the situation; discuss what you agree and disagree with, include one or more

## EM565: Introduction to Systems Management Syllabus

recommendations for what needs to be done going forward, and relate the situation described to similar work or community experience, going beyond the obvious and digger deeper into the implications of the case. Limit the student opinion to 500 words (not including graphs, charts, equations, tables, etc.).

Students earn up to 5 points per case study analysis for up to 20 total points earned. Assignments are submitted in the course by clicking on the Assignment title and proceeding through the submission process.

### ***Individual Final Project: SEMP***

Students earn up to 20 points on their final SEMP project which is a written paper. For the final individual project for this course, students build on their team assignment work, or select a new project of their choice (and repeat the work needed to develop the same project management artifacts developed for the team presentation) and follow through the system process to complete an abbreviated System Engineering Management Plan (SEMP) that is successively built throughout the course.

Students apply weekly lessons and exercises to their project, documenting as they go, while also incorporating research outside of the class in the form of peer-reviewed literature and other credible sources such as those found in the Washington State University (WSU) library (<https://libraries.wsu.edu/>), as well as input from subject matter experts. The paper should not contain company proprietary information. Typical outlines are provided for guidance. The outline should be tailored to the project selected. Students should incorporate the work completed and feedback received for the team presentation (if applicable) and in the online or class discussions, into their assignment. Detailed requirements for the assignment are posted in the assignment description found in the Assignment area in the online course. Assignments are submitted in the course by clicking on the Assignment title and proceeding through the submission process.

### **Library Access**

All students enrolled in WSU distance courses can use the WSU Libraries online databases at <https://libraries.wsu.edu/>. Login with your WSU username and password when prompted (on campus users may not be prompted to login). Students may also receive reference and research assistance from the online university services and borrow books and other material and receive photocopies of journal articles.

### **Information Technology (IT) Help Desk**

For any technical issues with Blackboard Learn or Blackboard Collaborate please contact support at [wsuonline.support@wsu.edu](mailto:wsuonline.support@wsu.edu) or call 509-335-4320. To receive notifications about Blackboard outages please visit <http://lists.wsu.edu/join.php> and select the Blackboard-alerts option from the dropdown menu.



## EM565: Introduction to Systems Management Syllabus

### Course Schedule

#	Class Date	Reading Before Class	Class Topics	Assigned – due dates in BB Learn
1	Jan 9		Introduction to Course; <b>PMP Outline, SEMP Outline</b>	- Online Disc: Topic 1 - In-class activity 1
2	Jan 16	Eisner: Ch 1 and 2	Ch 1: Systems, Projects, and Management; Ch 2: Overview of Essentials	- Online Disc: Topic 2 - In-class activity 2
3	Jan 23	Eisner: Ch 3	Ch 3: The Project Plan	- Online Disc: Topic 3 - In-class activity 3 <b>- Exam 1: Sessions 1 - 3</b>
4	Jan 30	Eisner: Ch 4	Ch 4: Schedule, Cost, and Situation Analysis	- Online Disc: Topic 4 - In-class activity 4 <b>- Case Analysis 1</b>
5	Feb 6	Eisner: Ch 5	Ch 5: The Project Manager and Leadership	- Teams Charters posted - Online Disc: Topic 5 - In-class activity 5
6	Feb 13	Eisner: Ch 6	Ch 6: Team Building and Team Interactions	- Online Disc: Topic 6 - In-class activity 6 <b>- Exam 2: Sessions 4 - 6</b>
7	Feb 20	Eisner: Ch 7	Ch 7: The Thirty Elements of Systems Engineering	- Online Disc: Topic 7 - In-class activity 7 <b>- Case Analysis 2</b>
8	Feb 27	Eisner: Ch 8	Ch 8: Requirements Analysis and Allocation	- Online Disc: Topic 8 - In-class activity 8
9	Mar 6	Eisner: Ch 9	Ch 9: System Architecting Principles	- Online Disc: Topic 9 - In-class activity 9 <b>- Exam 3: Sessions 7 - 9</b>
		Mar 11 – Mar 15	SPRING BREAK	
10	Mar 20	Eisner: Ch 10	Ch 10: Software Engineering	- Online Disc: Topic 10 - In-class activity 10 <b>- Case Analysis 3</b>
11	Mar 27	Eisner: Ch 11	Ch 11: Selected Quantitative Relationships	- Online Disc: Topic 11 - In-class activity 11 <b>- Team Presentation due 4/2</b>
12	Apr 3		<b>Team Project Presentations with Qs</b>	- Online Disc: Topic 12 - In-class activity 12 <b>- Exam 4: Sessions 10 - 12</b>
13	Apr 10	Eisner: Ch 12	Ch 12: Systems/Software Engineering and Project Management Trends	- Online Disc: Topic 13 - In-class activity 13 <b>- Case Analysis 4</b>
14	Apr 17	Eisner: Ch 13	Ch 13: Selected New Perspectives	- Online Disc: Topic 14 - In-class activity 14 <b>- Individual SEMP due 4/23</b>
15	Apr 24	Eisner: Ch 14	Ch 14: Integrative Management	- In-class activity 15
	May 1		FINALS, No Class	<b>- Exam 5: Sessions 13 - 15</b>

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### Grading Distribution

Additional details are found in the online course. Grading distribution is:

1. In-Class Activity (15)	15%
2. Online Discussions (14) plus Self/Team Assess(1)	15%
3. Online Open-Book Exams (best 4 of 5)	20%
4. Individual Case Analyses (4)	20%
5. Team PMP Presentation, Quiz Qs (1)	10%
6. Final Individual SEMP (can be based on Team Topic) (1)	20%
<b>TOTAL</b>	<b>100%</b>

Please note that assignments in this class may be submitted to a web-based anti-plagiarism system for an evaluation of their originality.

### Grading Policy

Final course grades are based on the student's performance as follows:

A	94 - 100	C	73.5 - 77.4
A-	90 - 93.9	C-	70 - 73.4
B+	87.5 - 89.9	D+	67.5 - 69.9
B	83.5 - 87.4	D	63.5 - 67.4
B-	80 - 83.4	D-	60 - 63.4
C+	77.5 - 79.9	F	0 - 59.9

No credit is earned for late assignments unless explicitly stated as policy in the online classroom or in cases where the student has arranged an extension ahead of time with me (and that is quite possible, I am flexible with everyone's challenging circumstance and time constraints); with rare exceptions based on individual circumstances (inability to communicate with me ahead of time based on an emergency, for example).

### Incomplete Policy

An incomplete (I) grade is given to a student who, for reasons beyond the student's control, is unable to complete the course requirements within the enrolled semester. An incomplete will only be considered if at least 50% of point assignments required in the course are completed and submitted by the end of the enrolled semester. The incomplete must be cleared and completed within one year following the semester in which the "I" grade was assigned. If the incomplete is not completed and a grade change is not submitted by the deadline, the grade will automatically change to an "F". A student may not simply repeat the course to remove an Incomplete grade. A student must have a written permission from their faculty advisor to register for future semesters if the student has two or more Incomplete grades on their transcripts. A student will not be allowed to graduate with an Incomplete grade on their transcript.

A student who desires an Incomplete grade must:

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- (1) Notify the professor in writing,
- (2) Provide sufficient reason for the incomplete request,
- (3) Complete and submit an Incomplete Grade Agreement Form found at <http://registrar.wsu.edu/ropubs>.

### Copyright Notice

The content of this program and the video transmissions of the classes are the property of Washington State University and are to be viewed and used only by persons currently enrolled in this course. The materials provided in this program are copyrighted and unauthorized duplication is not allowed without permission of the copyright holders. Any other use requires the express written consent of the Instructor.

### Professional Oral and Written Presentations

The WSU ETM Master's degree is a professional graduate program; student work should be presented neatly and with correct English spelling, grammar and punctuation. There are numerous software packages available to help students. Also, the WSU Writing Program ([writingprogram.wsu.edu](http://writingprogram.wsu.edu) or 509-335-7959 (undergraduates)/509-335-3413(graduates)) can assist with both writing and proactive assignment design that minimizes academic dishonesty.

### American Disability Act (ADA) Accommodations

Reasonable accommodations are available in online classes for students with a documented disability. If you have a disability and need accommodations to fully participate in this class, please either visit or call the Access Center or Disability Services for your home campus to schedule an appointment with an Access Advisor. All accommodations MUST be approved through the Access Center or Disability Services. For more information contact a Disability Specialist on your home campus. **Students are responsible for initiating requests for reasonable accommodations and services that they need.**

### Requesting Reasonable Accommodations

Students with identified disabilities should contact the Access Center before the semester that they plan to attend and initiate the accommodations process. Accommodations are unique for each individual and some require a significant amount of time to prepare for, so it is essential that students notify the Access Center as far in advance as possible. Students with a disability that is identified during the semester should contact the Access Center as soon as possible to arrange for an appointment and a review of their documentation by an Access advisor. Contact information for the Access Center at each campus can be found at the following websites:

- **Pullman or WSU Online:** 509-335-3417, Washington Building 217; website: <http://accesscenter.wsu.edu>, email: [Access.Center@wsu.edu](mailto:Access.Center@wsu.edu)
- **Spokane:** <https://spokane.wsu.edu/studentaffairs/disability-resources/>
- **Tri-Cities:** <http://www.tricity.wsu.edu/disability/>

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- **Vancouver:** 360-546-9138  
<http://studentaffairs.vancouver.wsu.edu/student-resource-center/disability-services>

All students requesting reasonable accommodation must meet with the instructor prior to or during the first week of the course to review all proposed accommodations in relation to course content and requirements. Exceptions to this timeframe will be granted only upon a showing of good cause.

### Academic Honesty

Academic integrity is the cornerstone of higher education. As such, all members of the university community share responsibility for maintaining and promoting the principles of integrity in all activities, including academic integrity and honest scholarship. Academic integrity will be strongly enforced in this course. Students who violate WSU's Academic Integrity Policy (identified in Washington Administrative Code (WAC) 504-26-010(3) and -404) will earn a zero on the assignment; further consequences range from failing the course, being placed on academic probation, or being dismissed from WSU. Students will not have the option to withdraw from the course pending an appeal, and will be reported to the Office of Student Conduct. Cheating includes, but is not limited to, plagiarism and unauthorized collaboration as defined in the Standards of Conduct for Students, WAC 504-26- 010(3). Students need to read and understand all of the definitions of cheating: <http://app.leg.wa.gov/WAC/default.aspx?cite=504-26-010>. If a student has any questions about what is and is not allowed in this course, ask the course instructor before proceeding.

If you wish to appeal a faculty member's decision relating to academic integrity, please use the form available at [conduct.wsu.edu](http://conduct.wsu.edu).

Examples of issues include: not quoting/citing directly copied and pasted text; collaborating on individual work (collaborate on team work only); presenting another person's work as your own; rephrasing another person's work without citing; or turning in work where a majority is someone else's work even when properly quoted and cited.

ETM requires students to including the following statement on exams and other course assignments as required by the instructor:

*I commit myself to Washington State University's high standards to uphold academic honesty and scholarly values as established by the [WSU's Standards of Conduct](#). I affirm that I have not given or received any unauthorized assistance on this assignment/ examination, that the work product presented here is the work of the author(s) [myself or all team members listed], and that all materials from other sources (including books, articles, Internet, or other media), whether quoted or paraphrased, have been properly cited.*

\_\_\_\_\_  
Typing or electronically signing my name above serves as my signature

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### WSU Safety Statement (if/when on campus)

WSU is committed to maintaining a safe environment for its faculty, staff, and students. Safety is the responsibility of every member of the campus community and individuals should know the appropriate actions to take when an emergency arises. In support of our commitment to the safety of the campus community the University has developed a Campus Safety Plan, <http://safetyplan.wsu.edu>. Before visiting campus, please also visit the University emergency management web site at <http://oem.wsu.edu> to become familiar with the information provided.

Classroom and campus safety are of paramount importance at Washington State University, and are the shared responsibility of the entire campus population. WSU urges students to follow the “Alert, Assess, Act,” protocol for all types of emergencies and the “Run, Hide, Fight” response for an active shooter incident. Remain ALERT (through direct observation or emergency notification), ASSESS your specific situation, and ACT in the most appropriate way to assure your own safety (and the safety of others if you are able). Please sign up for emergency alerts on your account at MyWSU. For more information on this subject, campus safety, and related topics, please view the FBI’s Run, Hide, Fight video (see: <https://oem.wsu.edu/emergency-procedures/active-shooter/>) and visit the WSU safety portal: <https://oem.wsu.edu/about-us/>.

### Washington State University Student Grievance Process

If a WSU Online student has a complaint or problem, the University offers several remedies as outlined below.

See: <http://online.wsu.edu/nonResidentComplaintProcess.aspx>

### Academic Complaint Procedures (Academic Rule 1 04)

Students having complaints about instruction or grading should refer them first to the instructor. If the complaint is not resolved, then the student may refer the complaint in writing to the chairperson of the department in which the course is offered by the end of the last day of the following semester (excluding summer term). The chair's decision shall be rendered within 20 business days. After the chair's decision, the student or the instructor may appeal to the Dean's Office. Complaints must be presented in writing to the dean within 20 business days of the chair's decision. The written statement should describe the complaint, indicate how it affects the individual or unit, and include the remedy sought from the dean. The decision of the dean is the final step and shall be made within 20 business days. The University Ombudsman is available at any stage for advice or assistance in resolving academic complaints. At the branch campuses, the procedure is identical except that the academic area coordinator shall substitute for the department chair and the campus dean shall substitute for the college dean.

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**Policy Prohibiting Discrimination and Sexual Harassment** (*Faculty Manual*, p. 30).

This policy expresses WSU's commitment to maintaining an environment free from discrimination, including sexual harassment. This policy applies to all students, faculty, staff, or others having an association with the University. The faculty manual is located at:

[http://facsen.wsu.edu/faculty\\_manual/](http://facsen.wsu.edu/faculty_manual/)

Additional information may be found in the Code WAC 504-26-220, -222, and -227. In addition, complaints about discrimination/sexual harassment can be directed to WSU's Office for Equal Opportunity: <http://chr.wsu.edu>

WSU is accredited by the Commission on Colleges of the Northwest Association of Schools and Colleges. The commission's complaint process is here: <http://www.nwccu.org/Complaints/ComplaintProcess.htm>

There's a separate process for WSU graduate students: <http://www.gradsch.wsu.edu/Documents/Pdf/GrievanceProcedures.pdf>

Online students also have protections and processes specific to their state of residence. See: <http://online.wsu.edu/nonResidentComplaintProcess.aspx> for links to State Grievance Processes.