Course Syllabus
T54 PRJM 525, Project Management the Agile Way, Fall 2019
Master of Project Management
The Henry Edwin Sever Institute | James McKelvey School of Engineering
Washington University in St. Louis

COURSE OVERVIEW

In this course you can expect to understand the multiple Agile Frameworks and when to use the appropriate framework. You will be exposed to the fast-growing SAFe framework with hands on program increment simulation as well as participating in the SCRUM team roles. You can also expect to learn about the industry trends such as DevOps and Human Centered Design. This course will provide you with the history of Agile and the Lean concepts used to achieve success.

INSTRUCTOR OVERVIEW

Mike Fortin,
PMP, PMI-ACP, CSM, SAFe
mfortin@wustl.edu | 618-556-9093

Mike has 25 years of experience in managing and rescuing business critical projects. His experience spans IT, Manufacturing, Retail, Aerospace, Automotive, Metal-Rolling, Industrial Construction and Healthcare industries. He is a leader in delivering Lean concepts, tools and process to fortune 500 companies. The experience he acquired through implementing Lean in manufacturing has transitioned into the IT Agile development methodologies as well as advanced project, program and portfolio management techniques. He was instrumental in successfully standing up and managing three IT Portfolio Offices, a Program and Project Management office. He also managed several multimillion dollar cross functional programs. Mike has a Masters in Information Management (MIM) and a Masters in Project Management (MPM) from Washington University. He is a member of the Project Management Institute (PMI), Scrum Alliance, and holds the following certifications, Project Management Professional (PMP), Agile Certified Practitioner (ACP), Scrum Alliance Certified Scrum Master (CSM), Scaled Agile Framework (SAFe) SA, ITIL Service Management, and Six Sigma Green Belt. He brings practical experience in the teachings of the material throughout the course.

LEARNING OBJECTIVES

Understand the multiple Agile frameworks and the correct usage for improve the likelihood of success and business value.

- Understand the beginnings of the Agile Movement
- Understand the Multiple Agile Frameworks
- Understand the industry trends
- Understand the different funding models for Agile projects
- Understand the multiple layers of the SAFe Framework
- Insight into DevOps
- Learn how to leverage and build an enterprise maturity model
CLASS MEETING

- **Time:** Thursday, 6:00PM – 9:00PM
- **Location:** Lopata Hall, Room 103

CLASS TEXTS / MATERIALS / TOOLS

Required:
- Agile Almanac: Book 2: Programs with Multi- and Virtual-Team Environments
- Gartner Research

GRADE COMPOSITION

<table>
<thead>
<tr>
<th>Major Coursework Components</th>
<th>Component Proportion</th>
<th>Coursework Subcomponent</th>
<th>Sub-component Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>20%</td>
<td>Team Contribution</td>
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</tr>
<tr>
<td>Homework Assignments</td>
<td>40%</td>
<td>Reports</td>
<td>10%</td>
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<tr>
<td></td>
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<td>Assignments</td>
<td>10%</td>
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<td></td>
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<td>Presentations</td>
<td>10%</td>
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<td>Team Lead</td>
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<tr>
<td>Tests</td>
<td>30%</td>
<td>Mid Term</td>
<td>15%</td>
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<tr>
<td></td>
<td></td>
<td>Final</td>
<td>15%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
<td>Online</td>
<td>-</td>
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</table>

COURSEWORK COMPONENTS DESCRIPTIONS

Agile, SCRUM, Kanban, ScrumBan, SAFe - these are some of the key concepts covered in this course. Agile as a mindset, a skillset, and a toolset are all critical in our fast-paced world. This course uses texts, case studies, and varying practical assignments. Students will come away with a solid understanding of the core agile concepts, frameworks and practices that are shown to deliver great business value and are taking the industry by storm. Prerequisite: graduate standing.

GRADING POLICIES

- Late Assignments
  - Assignments are due at the beginning of class on the day specified. This is especially important because some assignments will be presented and/or discussed in class. Failure to submit the assignment on time will result in being under-prepared for class discussion, which will impact your grade.
  - The grading for late work will be deducted one letter grade increment (from a A to a B, for example) for each day late. Late assignments will be accepted with penalty up to one week after the due date. It is up to you to determine the version of your assignment to be graded. You must weigh the late penalty against the completeness of your assignment. No work can be accepted after the final day of
class since grades must be turned into the university. Assignments completed during class time cannot be made up.
  o Instructor-granted extensions can be considered only in exceptional situations. Such extensions are granted rarely.

- **Attendance**
  o You are part of a professional, graduate program. Because much of this course involves in-class demonstrations and team activities, participation constitutes a significant portion of the course grade. Therefore, attendance is expected and is a large factored into your final grade. Missing in class activities will have a negative impact on your final grade. If you know you are going to be absent, contact the instructor in advance.

- **Extra Credit**
  o Extra credit is not available in the course. Students are provided with significant time to prepare the write ups and presentations.

**Grading Scale:**

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>%</th>
<th>Points Toward GPA</th>
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</thead>
<tbody>
<tr>
<td>A+</td>
<td>≥ 97%</td>
<td>4.0</td>
</tr>
<tr>
<td>A</td>
<td>93% - 97%</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>90% - 92%</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>87% - 89%</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>83% - 86%</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>80% - 82%</td>
<td>2.7</td>
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</table>

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<thead>
<tr>
<th>Letter Grade</th>
<th>%</th>
<th>Points Toward GPA</th>
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<tbody>
<tr>
<td>C+</td>
<td>77% - 79%</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>73% - 76%</td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>70% - 72%</td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td>67% - 69%</td>
<td>1.3</td>
</tr>
<tr>
<td>D</td>
<td>65% - 66%</td>
<td>1.0</td>
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<tr>
<td>F</td>
<td>&lt; 65%</td>
<td>0.0</td>
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## COURSE SCHEDULE

<table>
<thead>
<tr>
<th>WK</th>
<th>Topic</th>
<th>Focus</th>
<th>Learning Objective</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction History</td>
<td>Edward Deming The Toyota Model</td>
<td>Introduce the students to the course expectations and where the Agile Wave actually began</td>
</tr>
<tr>
<td>2</td>
<td>Manifesto for Agile Software Development</td>
<td>The 12 Principles of Agile Software Guiding Principles Scrum</td>
<td>The beginning of Agile Software Movement Why the manifesto was signed What the manifesto means and often misquoted</td>
</tr>
<tr>
<td>3</td>
<td>SCRUM</td>
<td>Ceremonies Roles Certifications</td>
<td>What is SCRUM Why it’s the most popular of all the frame works What the ceremonies mean and how to facilitate them The different certifications offered by the SCRUM Alliance</td>
</tr>
<tr>
<td>4</td>
<td>Kanban &amp; ScrumBan</td>
<td>Kanban ScrumBan</td>
<td>What Kanban and ScrumBan are and the appropriate use for each</td>
</tr>
<tr>
<td>5</td>
<td>XP, LSD, &amp; FDD Crystal, AUP, DSDM, &amp;TDD</td>
<td>XP Programming The Case Against XP The Agile Toolkit Feature Driven Development Crystal Agile Unified Process Dynamic System Development Method) Test Driven Development</td>
<td>The background on these frameworks, why they were developed and when they should be used</td>
</tr>
<tr>
<td>6</td>
<td>SAFe (Scaled Agile Framework)</td>
<td>Team and Technical Agility Business Solutions and Lean Systems</td>
<td>There are 4 distinct layers in the SAFe model. Students will learn the workings and roles of the Team and Technical Agility as well as Business Solutions and Lean Systems Layers</td>
</tr>
<tr>
<td>7</td>
<td>SAFe (Scaled Agile Framework)</td>
<td>Lean Portfolio Management PI Planning</td>
<td>Students will learn the workings and roles within the Lean Portfolio Layer of the SAFe model as well as planning and facilitating a SAFe Pre-PI and PI session</td>
</tr>
<tr>
<td>8</td>
<td>Large Frameworks</td>
<td>DAD (Disciplined Agile Delivery) Less (Large Scale Scrum) SCARE (Sustainable, Cultural Agile Release for the Enterprise)</td>
<td>Students will learn about the other large Agile frameworks and the appropriate use for each</td>
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<tr>
<td>Week</td>
<td>Topic</td>
<td>Activity</td>
<td>Description</td>
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<td>--------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>9</td>
<td>Fast Agile (Organic Collaboration)</td>
<td>Development Operations, Deployment Structure, DevOps and Release on Demand</td>
<td>Students will learn about the last layer of Safe and the movement of organizations to adopt DevOps. Continuous Exploration, Continuous Integration, Continuous Deployment, Release on Demand</td>
</tr>
<tr>
<td>10</td>
<td>DevOps</td>
<td>Product Owner Role, Stories, Features, Epics, VSM (Value Stream Mapping)</td>
<td>Students will learn the role of the product owner and how to write stories, features, and epics to use in the Agile Structure</td>
</tr>
<tr>
<td>11</td>
<td>Product Owner Role and Agile Structure</td>
<td>Team Development, Self-Directed Self-Managed Teams, Multipliers, Servant Leadership, Leaders Eat Last</td>
<td>Students will learn how teams are different in an agile workspace as well as how leadership needs to change to support the Agile self-directed teams</td>
</tr>
<tr>
<td>12</td>
<td>Teams Leadership</td>
<td>Multiple Agile Frameworks, Combination of Traditional and Agile Frameworks, Examples and Why they should be developed</td>
<td>Students will learn what it means to have a hybrid model, how to develop one and how, when and why a maturity model will benefit the organization as well as developing an enterprise specific model</td>
</tr>
<tr>
<td>13</td>
<td>Hybrid Maturity Model</td>
<td>Critical Metrics for Agile Shift to Product Funding Transformation Success and Challenges</td>
<td>Funding in organizations change with the adoption of Agile. Students will learn the difference between project and product funding and how to collect metrics to support their organizations model. Students will also learn the challenges associated with transforming an organization</td>
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<tr>
<td>14</td>
<td>Final Week</td>
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I. POLICIES TO BE INCLUDED AT THE INSTRUCTOR’S DISCRETION

Use of Laptop Computers and Electronic Devices in the Classroom
Laptop & tablet computers, smart phones and other electronic devices can be helpful in taking notes, providing tools for course exercises and referencing course related materials. However, they can also be distracting when used for non-course related activities such as emailing & texting, posting on social media, reading news sites, shopping online, or looking at YouTube videos. Some students have even been observed working on class assignments for the same or other courses. As common sense suggests, and a March 2013 study by Faria Sana, Tina Weston and Nicholas J. Cepeda confirmed, students who are multitasking during class have less understanding and recall of what’s being discussed. The study also found that “participants who were in direct view of a multitasking peer scored lower on a test compared with those who were not.” *

As mentioned earlier this course is part of a professional, graduate program. Consequently, it is expected that students conduct themselves in a professional manner. This includes being engaged in the class proceedings, by attentive listening, critical thinking, asking appropriate questions and participating in active discussion. Your attendance and participation in class is important for the class and is expected to be more than just physical attendance. Engaging in non-class related activities during class time is not acceptable and disrespectful of the lecturer and other students.

* Reference the Wall Street Journal article: I’m Banning Laptops from My Classroom, July 10, 2016 by Stuart Green
* Reference the WashU Teaching Center Article https://teachingcenter.wustl.edu/resources/course-design/developing-course-policies-on-laptops-mobile-devices/

Privacy and Security
Recording of class sessions either audio or video is prohibited without permission from the instructor and the other class members.

Collaboration:
With the exception of your team projects, all assignments are to be completed on your own. You are encouraged to discuss ideas and techniques broadly with other class members, but all written or presentation work, whether in preliminary or final form, is to be generated by you working alone. If in doubt - ask.

Language Sensitivity
When in the classroom, all students should speak English at all times. While meeting with classmates on a classroom project, speak a language that every student present (in your group) understands, without exception.

Professionalism:
You are part of a professional, graduate program. Consequently, it is expected that your fellow students conduct yourselves in a professional manner. This includes being on time for classes and meetings, being prepared, and participating in class discussions, group activities, projects, etc. The level of professionalism you exhibit throughout the course will impact your final grade. It directly affects the participation portion of the grade but is also taken into consideration in all other aspects of the course as it reflects the overall quality of professional performance.
II. SEVER/UNIVERSITY POLICIES

Ethics of Academic Integrity (SEAS)
All students in the School of Engineering & Applied Science are expected to conform to high standards of conduct. This statement on student academic integrity is intended to provide guidelines on academic behaviors which are not acceptable.

Engineering courses typically have many problem sets assigned as homework. You are not allowed to collaborate when solving homework problems, performing lab experiments, writing or documenting computer programs, or writing reports unless the instructor specifically states otherwise.

It is dishonest and a violation of academic integrity if:

1. You turn in work which is represented as yours when in fact you have significant outside help. When you turn in work with your name on it, you are in effect stating that the work is yours, and only yours.
2. You use the results of another person’s work (exam, homework, computer code, lab report) and represent it as your own, regardless of the circumstances.
3. You request special consideration from an instructor when the request is based upon false information or deception.
4. You submit the same academic work to two or more courses without the permission of each of the course instructors. This includes submitting the same work if the same course is retaken.
5. You willfully damage the efforts of other students.
6. You use prepared materials in writing an in-class exam except as approved by the instructor.
7. You write on or make erasures on any test material or class assignment being submitted for re-grading.
8. You collaborate with other students planning or engaged in any form of academic dishonesty.
9. You turn in work, which is represented as a cooperative effort, when in fact you did not contribute your fair share of the effort.
10. You do not use proper methods of documentation. For example, you should enclose borrowed information in quotation marks; acknowledge material that you have abstracted, paraphrased or summarized; cite the source of such material by listing the author, title of work, publication, and page reference.
III. WASHINGTON UNIVERSITY IN ST LOUIS SUPPLEMENTAL RESOURCES

1. **Disability Resources**: If you have a disability that requires an accommodation, please speak with instructor and consult the Disability Resource Center at Cornerstone (cornerstone.wustl.edu). Cornerstone staff will determine appropriate accommodations and will work with your instructor to make sure these are available to you.

2. **English writing support**: For additional help on your writing, consult the expert staff of The Writing Center (writingcenter.wustl.edu) in Olin Library (first floor). It can be enormously helpful to ask someone outside a course to read your essays and to provide feedback on strength of argument, clarity, organization, etc.

   The Engineering Communication Center (http://engineering.wustl.edu/current-students/student-services/Pages/default.aspx) offers students in the School of Engineering and Applied Sciences help with oral presentations, writing assignments, and other communications projects, as well as job-search documents such as resumes and cover letters.

3. **English competence**: Students are encouraged to check their grammar and spelling before submitting their written works. Although, students are free to choose whatever tools best fit their need, some of the common tools for grammar, spelling, and citing references can be found in the list below.
   d. http://www.citationmachine.net – Citation Machine [Free & Paid Service]

4. **Bias reporting**: The University has a process through which students, faculty, staff and community members who have experienced or witnessed incidents of bias, prejudice or discrimination against a student can report their experiences to the University’s Bias Report and Support System (BRSS) team. See: brss.wustl.edu

5. **Mental health service**: Mental Health Services’ professional staff members work with students to resolve personal and interpersonal difficulties, many of which can affect the academic experience. These include conflicts with or worry about friends or family, concerns about eating or drinking patterns, and feelings of anxiety and depression. See: shs.wustl.edu/MentalHealth

6. **Sexual Harassment**: Sexual harassment is a form of discrimination that violates university policy and will not be tolerated. It is also illegal under state and federal law. Title IX of the Education Amendments of 1972 prohibits discrimination based on sex (including sexual
harassment and sexual violence) in the university's educational programs and activities. Title IX also prohibits retaliation for asserting claims of sex discrimination. The university has designated the Title IX Coordinator identified below to coordinate its compliance with and response to inquiries concerning Title IX.

For more information or to report a violation under the Policy on Discrimination and Harassment, please contact:

**Discrimination and Harassment Response Coordinators**
- Apryle Cotton, Asst. Vice Chancellor for Human Resources
  - Section 504 Coordinator
  - Phone: 314-362-6774
  - Email: apryle.cotton@wustl.edu
- Leanne Stewart, Employee Relations Manager
  - Phone: 314-362-8278
  - Email: leannerstewart@wustl.edu

**Title IX Coordinator**
- Jessica Kennedy, Director of Title IX Office
  - Title IX Coordinator
  - Phone: 314-935-3118
  - Email: jwkennedy@wustl.edu

You may also submit inquiries or a complaint regarding civil rights to the United States Department of Education's Office of Civil Rights at 400 Maryland Avenue, SW, Washington, DC 20202-1100 or by visiting the U.S. Department of Education website or calling 800-421-3481.