

# DEI 623: Digital Media Solutions 2: Project Management

University of Waterloo – Stratford Campus

University of Waterloo Masters of Digital Experience Innovation (MDEI)

Winter Term 2016

Tuesdays 4:00pm – 6:50pm; room 3129

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Office Hours: By Appointment

**Brief Course Overview:** The primary instructional approach to this course is experiential learning; specifically, the course will be case-based. This means that students will interact with a single case and/or multiple case scenarios that demonstrate “Agile Project Management” methods and processes in a real-world context. These may include simulations, authentic examples from a company using Agile Project Management methodologies, and/or text-based accounts. Conceptual material, in the form of instructor commentary, will punctuate these exercises, so that students make the link between the experience and the concept under investigation. Students are expected to apply what they’ve learned in a digital media project which will be due at the end of the course. Students will complete authentic (i.e., real-world) activities throughout the semester to compile the final project.

“Agile Project Management” is a new evolving form of project management. It is typically used for complex iterative projects in the IT space. In contrast to traditional project management approaches it requires and encourages flexibility. At the present time there are many different approaches to “Agile Project Management.” The “Scrum” approach will be highlighted in this course because it is used by several companies based in the Region of Waterloo, (including SAP and D2L), and incorporates a common “Agile” approach in which deliverables are submitted in stages (refs. 1, 2 and 3), with delivery times set in weeks, not months or years. Agile Methods are briefly discussed the Project Management Body of Knowledge (PMBOK® Guide) under the Project Lifecycle definition, which is as follows: “A project life cycle, also known as change-driven or agile methods, is intended to facilitate change quickly and requires a high degree of ongoing stakeholder involvement. Adaptive life cycles are also iterative and incremental, but differ in that iterations are very rapid (usually 2-4 weeks in length) and are fixed in time and resources,” (ref.4).

## References:

1. **Executive Brief, Which Life Cycle Is Best For Your Project?**  
<https://www.projectsmart.co.uk/which-life-cycle-is-best-for-your-project.php>
2. <https://www.apm.org.uk/sites/default/files/The-Practical-Adoption-of-Agile-Methodologies.pdf>

3. **Essential Scrum – A Practical Guide to the Most Popular Agile Process; Kenneth S. Rubin, Addison Wesley, 2013**
4. **Project Management Institute, A guide to the Project Management Body of Knowledge (PMBOK® Guide), Fifth Edition.**

**Course Objectives:**

1. Provide an understanding of major subject matter elements of agile project management.
2. Provide an understanding of the responsibilities of the Project Manager and the various team members when moving a group project forward using agile project management.
3. Gain an understanding of the importance of stakeholders and how the project team should work with them.
4. Examine systematic approaches that will positively engage all major stakeholders.
5. Examine systematic approaches to group projects that will result in the project's successful conclusion.
6. Provide an understanding of the basis of ethics in business and its importance in everyday operations.
7. Initiate and complete a group project.

The format of the course will be lecture/discussion.

**Suggested Learning Materials:**

Sutherland Jeff; "The Art of Doing Twice the Work in Half the Time" and Phillips, Joseph; "Project Management Professional Study Guide," Third Edition (2011): Osborne, or equivalent (e.g. PMP/PMI course book). Note the knowledge and practices described in these books are applicable to most projects most of the time. Both books identify what is generally recognized as good practice. Good practice means that there is general agreement that the correct application of these skills, tools and techniques can enhance the chances of success over a wide range of different projects.

**Proposed Weekly Schedule:**

**Week 1:**

Topic: What is Agile?

- 1) Traditional approaches to project management
- 2) The Project Management Body of Knowledge (PMBOK)
- 3) The "Waterfall" approach
- 4) The Agile Manifesto and Principles
- 5) Why becoming agile is becoming more difficult to distinguish between the Project Management Body of Knowledge, Waterfall and other "Agile" project management approaches.
  - Examples of Traditional and Agile approaches
  - Strengths and weaknesses of each approach

Reading: "Agile Project Management: Steering from the Edges", Augustine S., Communications of the ACM, December 2005/Vol. 48, No 12, Project Management website.

Students complete a self-assessment questionnaire aimed at showing what they know about Waterfall project management approaches, with the expectation that they have a certain understanding before they proceed with the rest of the course

- Activity 1: "Agile or Waterfall?" - Design a marketing piece for the Stratford MDEI programme.  
Activity 2: How to complete a case analysis – a brief PowerPoint overview  
Activity 3: Details of the final group project and collaborating organization provided  
Project teams formed; teams start process of assigning roles  
Teams create a team operating agreement (e.g., email versus face-to-face)

## **Week 2:**

Topic: Agile Project Management Environment and Behaviours

- Understanding the key characteristics of an agile environment.
- Agile behaviours; team philosophy; communications
- Agile roles
- Agile values
- Designing a communications plan for an agile project

Activity 1: Guest Speaker - "interactive introduction" to an "agile" methodology that can be used to "manage and control" software and product development. Overview provided on the following subjects:

- The development team
- The scrum master
- The product owner
- The agile champion
- The agile mentor
- The project stakeholders

Activity 2: Group activity

Activity 3: Group discussion – Suggested interview discussion points/topics;  
1. What do you see as the advantages and disadvantages of agile?  
2. Why did your organization choose Agile? Why the move away from Waterfall? What problems or challenges are you expecting or hoping Agile will solve (that Waterfall didn't)?

## **Week 3:**

Topic: Agile Project Planning?

Reading: "Alignment at the Top: A Case Study Investigating This Critical Factor in Project Implementation," Engineering Management Journal, March 2007

Activity 1: Review project outline provided by project sponsor. Discuss the project outline. Form groups and prepare short bios of each team member.

Discuss Product vision and product roadmap, planning releases and sprints

- Create an agile product vision
- Create an agile product roadmap
- Describe and use agile planning releases and sprints
- Teams finalize their project

- Teams create a product vision and roadmap for final project
- Interview scrum master on how s/he plans releases and sprints.

Activity 2: Work through an example of the creation of a product vision and product roadmap for planning a family vacation

Activity 3: Initiate/launch the Project Plan that has been discussed with the project sponsor.  
Produce a weekly progress report scheme for the project sponsor.

#### **Week 4:**

Topic: Project Execution/What is Strategy?

Reading: Linda Rising; "Putting frequent, short meetings to work for your team, STQE Magazine, May/June 2002; <http://web.lindarising.info/uploads/STQE.pdf> "Agile Meetings", STQE May/June 2002; <http://web.lindarising.info/uploads/STQE.pdf>  
PowerPoint presentation on "What is Strategy?"

#### The Release

- Daily processes used in an agile project
- The daily scrum
- Sprint backlog and use the sprint burn down
- The importance of showcasing project work
- How feedback is used in agile projects
- Product release – the release sprint

Activity 1: Teams will participate in scrum meeting

- Teams showcase their initial work
- Teams complete first phase of project
- Video of a daily scrum from start to finish
- Video examples of showcasing (and feedback)
- Interview questions on the product release (specifics to come)

Activity 2: Work on the Project Plan that has been agreed with the project sponsor. Produce a weekly progress report for the project sponsor.

#### **Week 5:**

Topic: Who are the Stakeholders? Managing Social, Economic and Environmental project influences.

Activity 1: Group exercise (details to be provided in class).

Activity 2: Work on the Project Plan that has been agreed with the project sponsor. Produce a weekly progress report for the project sponsor.

Activity 3: Question project sponsor/scrum master on managing stakeholders and social, economic and environmental factors

#### **Week 6:**

Topic: Agile Processes 1 - Project Scope

## Project Procurement

- The agile approach to managing project scope
- How to manage scope changes throughout a project
- Processes used in agile project procurement
- How to select and manage relationships with vendors to a project
- Closing a contract
- Interview questions (for scrum master):
  1. How do you manage project scope?
  2. Describe how you undertake project procurement

Activity 1: Work on the Project Plan that has been agreed with the project sponsor. Produce a weekly progress report for the sponsor.

Activity 2: Mid Term Examination

## Week 7:

Topic: Agile Processes 2 - Managing Project Time and Costs

Project Time

Project Cost

- Agile project time management processes
- How to manage project velocity
- How to manage multiple teams in a large project environment
- The use of agile artifacts for time management
- How to effectively manage project costs
- How to create an initial project budget
- Teams produce a project schedule; e.g., Iteration backlog or Kanban chart

Activity 1: Work through an example of the creation of a product vision and product roadmap for planning a party and/or a family reunion

Activity 2: Question project sponsor/scrum master on managing project time and costs

Activity 3: Work on the Project Plan that has been agreed with the project sponsor. Produce a weekly progress report for the sponsor.

## Week 8:

Topic: Agile Processes 3 – Team Dynamics, Communication and Behavior.

Reading: Communicating Effectively in Agile Development Projects [article]

By Payson Hall - March 19, 2014; <http://www.stickyminds.com/article/communicating-effectively-agile-development-projects?>

Agile Projects

Team Dynamics

Team Communication

- Leading a self-managing and self-organizing team
- Understanding the role of the servant-leader
- Managing collocated and dislocated teams

- Creating the culture that supports agile project management
- Managing team conflict
- Effective project communications
- Design project status and progress reporting systems
- Team interview – ask team members about what it is like to work in an agile team? Ask scrum master how they feel about managing an agile team? Ask everyone how they would describe the culture of the project team?

Activity 1: General discussion; team members discuss their perspectives on using agile – what they think it brings to their group; their productivity etc.

Activity 1: Group activity/Interactive case: details to be provided in class.

Activity 2: Work on the Project Plan that has been agreed with the project sponsor. Produce a weekly progress report for the sponsor.

### **Week 9:**

Topic: Agile Processes 4 – Managing Change and Risk.

Reading: Paper/case: 10 Principles of Change Management; Published: April 15, 2004 (originally published by Booz & Company); ORGANIZATIONS & PEOPLE; Tools and techniques to help companies transform quickly; by John Jones, DeAnne Aguirre, and Matthew Calderone <http://www.strategy-business.com/article/rr00006?gko=643d0>

Activity: Work on the Project Plan that has been agreed with the project sponsor. Produce a weekly progress report for the sponsor.

### **Week 10:**

Topic: Building the Foundation; Recruiting Project Team Members

Reading: “Project Teams, How Good Are They?” Guttman, H.M., Longman A, Quality Progress, February 2006.

Activity: Work on the Project Plan that has been agreed with the project sponsor. Produce a weekly progress report for the sponsor.

### **Week 11:**

Topic: Review of Concepts/Preparation of final report

Activity: Prepare a final report for the Project Sponsor that summarizes how the MDEI team addressed and completed the project objectives. Prepare your group presentation.

### **Week 12:**

Topic: Student Project Presentations on campus in Flex-Lab, Dana Porter Library, Room 329.

### **Evaluation:**

The overall grade for this course will be a composite of performance on a number of evaluation items summarized in the table below:

## Evaluation Requirements:

### Grading:

#### Evaluation Item Weight

Participation/Individual Contribution	30%
Mid-term Examination	15%
Project Review Presentation (Group)	25%
Project report	30%
<b>TOTAL</b>	<b>100%</b>

Broad specifications for each of the required evaluation items are highlighted in this outline. Students are encouraged to talk to the instructor if they have any questions or are in need of further clarification.

(1) **Individual contribution/participation** (35% of the final grade) – each student is expected to read supporting material and other designated papers/cases and to be able to discuss topic questions. Regular attendance in class is required, as is participation in the discussions. Participation marks will be based on the overall preparedness of the student for each class and the quality of contributions to class discussions. Each student will be graded on the following: (1) participation in class discussion and participation in the question period for presentations; (2) quality of feedback on presentations using the forms provided; (3) quality of the class reflections related to the course objectives. A class contribution assessment form, or equivalent, will be provided to keep track of all three component of the individual contribution/participation grade. Both quantity and quality affect participation grades, i.e. one particularly insightful question or comment counts the same as many “marginally constructive” questions or comments. Daily participation is calculated using the following scale:

5 = Exceptional contribution

4 = Good contribution

3 = Fair contribution

2 = Minimal contribution

1 = Present but no contribution

(2) **Mid-Term examination** (15%)

(3) **Project Review Presentation** (25% of the final grade) - this is a team/group project and will be based on an assessment of the agile project undertaken in the course. The project review must include how the team approached and implemented the project. Groups will be asked to deliver the project review

presentation in class. Each team is expected to make a maximum 20 minute presentation (plus 10 minutes for questions and answers). The presentations will be delivered in the last two classes of the course. Both the professor and students will evaluate each presentation on the basis of clarity, relevance and class engagement. The student ratings will be input for the professor who is solely responsible for assigning the grade.

(4) **Project Report** – this is an individual assignment. The report should discuss all aspects of the agile project; from how it was set up, the process, how individuals/the team addressed and completed objectives, the lessons learned and recommendations for the future. Note: It is recommended that any business case analysis is based on one or more of the following five areas of interest: (1) Planning an agile project; (2) Organizing an agile project; (3) Motivating teams/communications strategies; (4) Directing a project and (5) Controlling an agile project.

#### **UNIVERSITY POLICIES:**

**Academic integrity:** In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. [Check the Office of Academic Integrity for more information.]

**Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4. When in doubt, please be certain to contact the department's administrative assistant who will provide further assistance.

**Discipline:** A student is expected to know what constitutes academic integrity to avoid committing an academic offence, and to take responsibility for his/her actions. [Check the Office of Academic Integrity for more information.] A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate associate dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline. For typical penalties, check Guidelines for the Assessment of Penalties.

**Appeals:** A decision made or penalty imposed under Policy 70 (Student Petitions and Grievances) (other than a petition) or Policy 71 (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) [www.adm.uwaterloo.ca/infosec/Policies/policy72.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm).

**Note for students with disabilities:** Access-Ability Services, located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with Access-Ability Services at the beginning of each academic term.



