

SYLLABUS - aps1001h PROJECT MANAGEMENT, Summer 2019

INSTRUCTOR: Keith Farndale (keith.farndale@utoronto.ca)

PREREQUISITE: None.

FORMAT OF COURSE: Asynchronous online, with final exam on St George campus.

COURSE DATES: September 9 (nominal start) to December 15 (deadline for last online submission), 2019.

COURSE OVERVIEW: Project management (PM) has evolved from being an accidental job title into being a chosen profession, especially for engineers. (This course started as an offering to MEng and MASc students; we now also welcome students in other masters degrees with STEM undergrad degrees.) Even if you choose to follow a strictly technical career path, you will almost certainly be working on projects, and this course can help you understand that context. Employers very much value competence in project management. This course covers most of the knowledge areas and processes of the globally recognized PM Body of Knowledge: integration, scope, cost, time, risk, human resources, stakeholders, communication and procurement management (but not quality management). We take a practical, applied approach. This online course includes video lectures, video guest speakers, reference to web pages, text readings. We will have team papers on “lessons learned” from actual projects. We attract a mix of part-time students from the working world of projects, together with full-time students with little work experience.

INSTRUCTOR CONTACT INFO AND OFFICE HOURS: First contact is best via Quercus or email (see above). Then I can be quite available by telephone, Skype, WhatsApp, but not usually in person. *Si Ud. está cerca de Guadalajara, México, podemos encontrarnos para tomar un café. (If you are near Guadalajara, Mexico, we can get together for a coffee.)*

COURSE OBJECTIVES:

- Understand the common framework and terminology of project management.
- Be better able to fit into a formal project environment, or to manage your own less formal projects.
- Add techniques to your PM “toolbox”, increasing your value to your organization and the marketplace.
- Increase your own PM “lessons learned” by sharing experiences with others.
- Gain exposure to Microsoft Project software.
- Optional: With further reading, be prepared to take a project management designation examination.

MARKING SCHEME:

0% mid-term exam: it is self-marked by you

3% for team WBS and schedule: submitted as an MPP file.

25% team project: See more info about the team project below.

5% participation in discussion boards, possibly other methods to be advised.

3% your review and comments on previous papers

60% final exam: In person, paper-based, at St George campus short answer and long answer, a few multiple-choice, bullet points are encouraged.

4% for completion of the multiple-choice tests. Note that your actual scores on the tests do not matter.

In order to pass the course, you must attain a minimum of 70% on the final exam, and a minimum of **B-** (70%) overall as calculated above.

MID-TERM EXAM: Mid-term exam will be take-home, self-graded. Your score will not count toward the grading, but it will indicate how you are doing, and will be in a style similar to the final exam.

FINAL EXAM: Final exam is paper-based, on St George campus. Short answer and long answer, a few multiple choice, bullet points are encouraged. Closed book.

If you would like to discuss writing at a distant location, first find a local university or college which offers “external exam services”, then contact the instructor.

TEAMS: Three to four students in a team. It is best for students to self-form into groups very early in the course. But because of possible drop-outs, we cannot finalize teams until just after the course drop date.

REQUIRED TEXTBOOK: *A Guide to the PM Body of Knowledge (PMBOK® Guide) 6th ed*, Project Management Institute, 2017. It is always available in the UofT bookstore, but you may prefer to buy in advance from on-line bookstores. A PDF file can be downloaded from the UofT libraries.

OTHER M.ENG. COURSES RELEVANT TO PROJECT MANAGEMENT: I recommend one of the MEng leadership courses (iLead program), Management of Innovation, Human Resources Management. Financial Engineering or Financial Management is useful for understanding the business case supporting a project.

OUTLINE: Note that modules 5, 7, and 9 have significantly more content than the others. The textbook and other readings are listed at the beginning of the notes for module 1.

Aug 30, Course content “module 1 Introduction” will be made available on the portal.

Sep 9, Nominal start of course

Sep 13, 2 Integration Management

Sep 20, 3 Stakeholder Management

Sep 27, 4 Scope Management

Oct 1, Submit your comments on previous papers, via Quercus, due 11:59 pm Eastern Time.

Oct 4, 5 Time Management

Oct 11, 6 Organizing for Projects

Oct 18, 7 Cost Management

Oct 18-20, Anytime during these three days, **Mid-Term Exam** to end of module 5 .

Oct 20, mid-term answers released

Oct 25, 8 Procurement Management

Oct 23, Final date for team formation. After this date, I will assign any ungrouped students into teams.

Nov 1, 9 Risk Management

Nov 8, 10 Communications Management

Nov 4, Microsoft Project MPP file due 11:59 pm Eastern Time, one per team, by email to instructor.

Nov 15, 11 (Human) Resources Management

Nov 22, 12 Wrap-up

Dec 5, at noon, **Final Exam**, 110 minutes long.

Dec 15, Team paper due 11:59 pm, in PDF, by email to instructor and via Quercus, both.

QUERCUS: If you are having trouble with Quercus, contact the Quercus help team, q.help@utoronto.ca.

YOUR EMAIL: It is required that you be able to receive email at your utoronto.ca address. Without it, I cannot send you an email.

DISCUSSION BOARD: We will be using *Quercus* for asking questions (and proposing answers) on course content and on course administration, and for class discussions. For your questions, you will be able “Start a New Discussion” and get good discussion and answers from classmates first, and then myself.

You will be required to engage in some of the course content discussions. At the time of the mid-term, I will evaluate discussion board participation up to that time. And then at end of the term, I will re-evaluate participation for the whole term. Don't try to leave it all until the end!

SUBMISSION: COMMENTS ON PREVIOUS PAPERS: I will provide a link to a folder with several previous team papers of differing quality. Please select and read two of them and submit an individual short write-up with your observations. About 800 words in an email attachment. Surprises, or similarities among the papers, or other observations, etc. You can also comment if you think the paper does or does not meet my specification for team papers. No special format, except of course use quotation marks if quoting from the papers.

This allows us all to learn from other teams' papers, and gives you a chance to see good and not-so-good examples of what I am looking for.

MICROSOFT PROJECT: The popular software Microsoft Project is available to all engineering students through your Microsoft Azure account. If you are not an engineering student, I can arrange a copy for you.

Q: Can we download Microsoft Project for Mac?

A: No, there is no version for Mac since the late 1990s. You can use an emulator to run Windows software, such as Parallels for Mac. Or, as someone says, "you can just remote control a computer in the engineering computer labs. They all have Microsoft Project in there." Or you can find Microsoft Project in computer labs in the Mississauga campus. Or you can use the free version of ProjectLibre (www.projectlibre.com), an open source PM software system intended as a standalone replacement for Microsoft Project. It has a Mac version. Project Libre may not have the full features of MSP, and it may not open well in MSP, but I will allow you to use it.

MPP FILE SUBMISSION:

Each team is to submit an MPP (Microsoft Project) file by email to the instructor, displaying a WBS and schedule for the work your team will do on your own project to research, write a report, and submit. (It is NOT retroactively for the Boeing 787 or other project you have decided to study.) So you can actually prepare your WBS and schedule without even having chosen your subject. I will look for the following:

- Include your team letter designation in the filename.
- The WBS hierarchical structure, and the WBS column inserted into the display.
- The schedule should be based on a critical path network. In Microsoft Project terms, with "links" between the tasks.
- No links between summary tasks please. It is better practice to put them between the bottom-level tasks.
- Most tasks should be "auto-scheduled", not "manual scheduled".
- Most tasks should be "as soon as possible". You may have report submission tasks or milestones which have "must finish on" or "finish no later than" constraints. (Double-click on the task name, select Advanced tab.)
- Resource names assigned to most or all of the bottom-level tasks.
- Start with a milestone, finish with a milestone.

Tips: When first opening a new Microsoft Project file, go to File, Options, Schedule, Scheduling options, and ensure it is set to Auto Scheduled. I suggest never select "effort-driven" unless you are quite familiar with MSP and intend to use this method. A useful tutorial is available for free at www.tech.uh.edu/projectnmotion, lessons 1-4.

TEAM PROJECT: A team research report on an engineering or other "technical" project of your choice which has been completed within the last 15 years, emphasizing "lessons learned" that we can gain from the project. It must be a project **which you have not studied in any other course**. Please discuss your project choice with your instructor for approval.

See separate document “Requirements for Team Project”.

CODE OF BEHAVIOR ON ACADEMIC MATTERS: For information on possible sanctions in the case of academic misconduct, please consult the Code of Behaviour on Academic Matters:

<http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/ppjun011995.pdf>