Project Management for Graduate Students

January 22nd, 2018 (9:00 am – 3:30 pm – includes lunch)
Welcome, Overview and Introductions

Presenter: George Watson
Time: 9:00am-9:30am
This course has been especially designed for UW-Madison graduate students who want to enhance their capability to successfully lead a project (or multiple projects) to completion (e.g. a capstone project, a dissertation, field work, etc.)
Assuming you are a UW-Madison graduate student who wants to enhance your capability to complete your projects, this course will help you…

1. Set clear, actionable and attainable goals that you can measure and monitor
2. Identify and engage those who may influence and affect the attainment of your goals
3. Learn and apply proven and practical project management techniques used by professional project managers
4. Tailor your communication and planning skills to maximize the potential to be successful
5. Enhance your project leadership, management, collaboration, and teamwork skills
Course Topics

*Major topics covered in this course…*

1. Understanding the project management lifecycle—from beginning to the end of a project (and why the lifecycle is important)
2. How to identify and engage your stakeholders in defining and endorsing the project requirements
3. Managing risk, communication, and change
4. Executing and controlling the tasks, timeline, and resources
5. Preparing for a successful project closure and transition
Introductions

Opening Activity

1. Introduce yourself (~1 minute)
Project and Portfolio Lifecycle

Presenter: George Watson
Time: 9:30am-9:45am
**Portfolio**: A combination of projects and programs that helps achieve an overarching strategy.

**Program**: A group of projects that focuses on an area of a portfolio.

**Project**: A specific set of tasks that need to be complete to achieve the goals of the program / portfolio.

As an example…
- Your *Educational Goals* might be one of your “Portfolios”
- Attending *Graduate School* might be one of your “Programs”
- Completing your dissertation or your capstone might be one of your “Projects.”

Adapted from Technical Project Management in Living and Geometric Order: A Practical Perspective by Russell, Pferdehirt, and Nelson (2017) and by Morgan, Levitt and Malek (2007)
Aligning Projects with Strategies

Portfolio Management Translates Strategy into Action

So Many Possible Projects – Such Limited Time and Resources...

How to decide what to take and what to leave behind???

Weight Limit: 20 KG

Adapted from Technical Project Management in Living and Geometric Order: A Practical Perspective by Russell, Pferdehirt, and Nelson (2017)
Southwest Airlines Company...offers short-haul, low-cost, point-to-point service between midsize cities and secondary airports in large cities.

Adapted from Technical Project Management in Living and Geometric Order A Practical Perspective by Russell, Pferdehirt, and Nelson (2017)
Your Goals

Think, Pair, and Share

1. **Write 2-3 goals that you have for your current project**

2. **Pair up and describe your goals to your partner**
   - Your partner should listen and ask 1-2 clarifying questions
   - Switch roles and repeat

3. **Share something you learned or noticed about your goals or the pairing exercise**
Identifying and Engaging your Stakeholders

Presenters: George Watson
Time: 9:45am-10:45am
Stakeholder and Relationship Map Template

<Your Dissertation>

Internal Resources

External Resources
Stakeholder and Relationship Map Example
Leverage Your Support Systems

My Dissertation

Internal Resources

- Advisors
- Me
- Faculty
- Fellow Students

External Resources

- Alumni
- Research Library
- Other Researchers
- Lab and IT Resources
- Subject Matter Experts
Identifying Your Stakeholders

Refer to Exercise 1 in the Case Study

Refer to Exercise 2 in the Case Study
Typical Project Lifecycle

# Project Charter Template

<table>
<thead>
<tr>
<th>Project Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Sponsor</td>
<td></td>
</tr>
<tr>
<td>Project Manager</td>
<td></td>
</tr>
<tr>
<td>Primary Stakeholder(s)</td>
<td></td>
</tr>
<tr>
<td>Project Description / Statement of Work</td>
<td></td>
</tr>
</tbody>
</table>

### Business Case / Statement of Need
*Why is this project important and why is it important now?*

### Customers
*Direct users/Those impacted by the project*

<table>
<thead>
<tr>
<th></th>
<th>Customer Needs / Requirements</th>
</tr>
</thead>
</table>

### Project Definition

#### Project Goals

#### Project Scope

<table>
<thead>
<tr>
<th>Project Deliverables</th>
<th></th>
</tr>
</thead>
</table>

#### Project Risks
*Actions, events, and situations outside the project plan that may positively or negatively impact the project*

### Implementation Plan / Milestones
*Due dates and durations*

### Marketing Plan
*Market Analysis, Tactical Plan, Budget, and Timeline*

### Project Budget / Resources
*Money, people, services, materials, etc.*

### Communication Plan
*What needs to be communicated? When is communication needed? To who? How?*

### Change Management / Issue Management
*How decisions will be made? How changes will be made?*

### Project Team Roles and Responsibilities

<table>
<thead>
<tr>
<th>Team members</th>
<th>Roles</th>
<th>Responsibilities</th>
</tr>
</thead>
</table>

Source: [https://quality.wisc.edu/project-management-tools-and-templates.htm](https://quality.wisc.edu/project-management-tools-and-templates.htm)
Break!

Time: 10:45am-11:00am
Identifying and Validating your Project’s Requirements and Tasks

Speaker: George Watson
Time: 11:00am-11:45am
Topic Selection
Sources to Explore

Possible Topics

Sifting and Winnowing

My Approved Topic

Brainstorming

Personal Interests

?????

Grand Challenges

Career / Professional Aspirations

Building on a Body of Knowledge
Topic Selection – Another Perspective

Possible Topics

Your Approved Topic

Tip: Begin with the “End in Mind”

Remember the $25,000 Shower Curtain
Requirements Gathering (Step-by-Step)

Plan

Elicit and Analyze

Document and Specify

Quantify and Verify

Manage Change
Identifying Project Tasks

Step One
- Identify the high-level tasks
- Identify additional details as needed
- Sequence the tasks
- Identify the resources/people needed to perform/complete the tasks

Step Two
- Use the tasks, available resources and project timeline to create a schedule
Identifying / Validating Your Requirements
Updating the Project Charter and Identifying Project Tasks

Refer to Exercise 3 in the Case Study

Refer to Exercise 4 in the Case Study
Lunch and Panel Discussion

Time: 11:45am-1:15pm
Managing Risk and Communication Planning

Presenter: George Watson
Time: 1:15pm-1:45pm
Identifying Risks and Risk Management

**Risk**—An uncertain event or condition that, if it occurs, has a positive or negative effect on one or more project objectives (*Project Management Institute*).

**Risk Management**—The process of identifying, quantifying, and managing the risks that an organization faces (*Financial Times*).
Fishbone Diagram – Identifying Risks

Possible Causes…..

- Equipment
- Process
- People

- Materials
- Environment
- Management

Possible Risks
Risk Identification
What Could Possibly Go Wrong... Go Wrong... Go Wrong...?

What is the best-case scenario?

What is the worst-case scenario?

Generate a list of questions – such as:

- Are you performing a new technique?
- Do you have to wait on a lengthy submission / approval process with your Internal Research Board?
- Could your equipment delivery be delayed?
- Could your advisor retire or go on a sabbatical?
- What variability is possible due to unforeseen events?

What are the critical steps?

What are the deadlines / timelines?

How can I prepare for delays and changes?
## Typical Risk Response Strategies

<table>
<thead>
<tr>
<th>Negative Risks</th>
<th>Positive Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mitigation Strategies</strong></td>
<td><strong>Accept the Risk</strong></td>
</tr>
<tr>
<td>1. <strong>Accept</strong> the Risk</td>
<td>2. <strong>Ensure</strong> the Risk Occurs to <strong>Exploit</strong> the Risk</td>
</tr>
<tr>
<td>2. <strong>Avoid</strong> the Risk</td>
<td>3. <strong>Enhance</strong> the Chance of the Risk Occurring</td>
</tr>
<tr>
<td>3. Prepare <strong>Mitigation Plan</strong> in Case the Risk Happens</td>
<td>4. <strong>Transfer</strong> the Risk</td>
</tr>
<tr>
<td>4. <strong>Transfer</strong> the Risk</td>
<td>4. <strong>Share</strong> the Risk</td>
</tr>
<tr>
<td>Risk Description</td>
<td>Impact / Consequence(s)</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------</td>
</tr>
</tbody>
</table>
| I won't pass my Final Oral Defense. | Failure to pass your Oral Defense results in not receiving your Ph.D. | At the end of the Dissertation Process | Medium | 1) Accept the Risk  
2) Avoid the Risk  
3) Monitor the Risk and Prepare Contingency Plan  
4) Transfer the Risk |

Refer to Exercise 5 in the Case Study
## Communication Planning Template
### Chronological Sequence

<table>
<thead>
<tr>
<th>Timing</th>
<th>Message(s)</th>
<th>Audience(s)</th>
<th>Method(s)</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Launch</td>
<td>Launch your project</td>
<td>Sponsors / stakeholders</td>
<td>Initial meeting</td>
<td>You</td>
</tr>
<tr>
<td>6 Months Prior to Completion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Month Prior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Week Prior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day of Completion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Week After</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Month After</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

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## Communication Planning Template

### Milestone/Task Sequence

<table>
<thead>
<tr>
<th>Project Tasks</th>
<th>Message(s)</th>
<th>Audience(s)</th>
<th>Method(s)</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify Stakeholders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Rqmts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Design</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Implementation</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Post-Project Review / Debrief</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

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## DCS Communication Planning Template
### Unexpected / Surprise Events

<table>
<thead>
<tr>
<th>Project Tasks</th>
<th>Message(s)</th>
<th>Audience(s)</th>
<th>Method(s)</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Project Priority</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in Scope</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in Schedule</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in Deliverable</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cancellation</td>
<td></td>
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Monitoring Progress and Status Reporting

Presenter: George Watson
Time: 1:45pm-2:15pm
Status Reporting

- Schedule / Milestones
- Budget vs Actuals
- Changes / Decisions
- Issues / Roadblocks
- Successes

Analyze & Synthesize

Status Report for Target Audience
Status Reporting – Who, What, When, How and Why?

I wish I could get a “Reader’s Digest” version…

I wish we would have known earlier…

I wish my advisor and my stakeholders would let me know the issues I need to act on…

I wish I knew what was most important to do right now…

I wish we knew what is happening and when…

Discussion Questions

1. What have you tried?
2. What worked best?
3. Any new ideas?
How can I best keep my project on-track?

- Review Stakeholder Map and identify stakeholder needs

Refer to Exercise 6 in the Case Study
Break!

Time: 2:15pm-2:30pm
Managing Change

Presenter: George Watson
Time: 2:30pm-3:00pm
Change Happens! Plan for it…. (P.S. Conflict Often Travels With it Too)

Change may occur as a result of.. Leadership Change, Technology Change, Regulatory Change, New Competition, Weather Events, Global Events, New Knowledge, ....
Managing Change

Refer to Exercise 7 in the Case Study
Project Close Out and Celebration

Presenter: George Watson
Time: 3:00pm-3:15pm
Project Closeout / Lessons Learned

<table>
<thead>
<tr>
<th>Assess your Current Project</th>
<th>Think Ahead to Future Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals - - Results</td>
<td>New Goals</td>
</tr>
<tr>
<td>(Did I attain the desired results?)</td>
<td>(What should change?)</td>
</tr>
<tr>
<td>What Worked Well?</td>
<td>What Should Be Repeated?</td>
</tr>
<tr>
<td>What Could Have Been Better?</td>
<td>What Should Be Done Differently?</td>
</tr>
</tbody>
</table>

Fishbone Diagram

Refer to Exercise 8 in the Case Study

Refer to Exercise 9 in the Case Study
Recap / Questions

Major Topics

1. Project / Portfolio Framework
2. Identifying and engaging your stakeholders / resources
3. Identifying / validating your requirements and project tasks
4. Managing Risks and Communication Planning
5. Monitoring progress and managing change
6. Closing Out your Project
7. Next Steps?
Complete Course Evaluation

1. Complete Course Evaluation

2. Meet post-docs