Project Management for Graduate Students

COURSE WORKBOOK

DAY ONE - April 8th, 2017 from 9:00AM-12:00PM
DAY TWO - April 15th, 2017 from 9:00AM-12:00PM

(LUNCH & NETWORKING - 12:00-1:00PM)

Location: Memorial Library Room 126
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Welcome, Overview and Introductions

Speakers: Eileen Callahan and George Watson
Intended Course Audience

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.)

Course Goals:

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 to maximize the value and impact
5. Enhance your project leadership, management, collaboration and teamwork skills
Major Topic Areas for this Course

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

Tips for Getting the Most from this Course

- Be open to learning
- Ask questions
- Listen actively
- Share your experiences
- Respect others
Overview of DiscoverPD

What is DiscoverPD?

A framework for graduate student professional development, which outlines nine areas - or “facets” - relevant to all graduate students at UW-Madison:

- Inquiry, discovery, and creation;
- Leadership;
- Interdisciplinary expertise and interdisciplinary connections;
- Career development;
- Managing projects and people;
- Communication; inclusion and diversity;
- Interpersonal effectiveness; and
- Personal effectiveness.

https://grad.wisc.edu/pd/aboutdiscoverpd/
Introductions

Opening Activity

1. Introduce yourself (~1 minute)
   
   a. Name

   b. Briefly describe your “project” and why the project is important to you
Goal Setting/IDP and Project Lifecycle

Speakers: Matthew Zinsil and George Watson
Basic Definitions

**Portfolio:** A combination of projects and programs that help 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 Education 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 Projects – Such Limited Time and Resources…

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

One technique for scenario planning is based on the knapsack problem, which conceives of a portfolio as a knapsack of a fixed size into which a backpacker can fit only a certain number of items.

Adapted from Technical Project Management in Living and Geometric Order
An Example from Southwest Airlines

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)
**Why use the Individual Development Plan?**

An Individual Development Plan (IDP) helps graduate students and postdoctoral researchers:

- assess current skills, interests, and strengths;
- make a plan for developing skills to meet academic and professional goals; and
- communicate with supervisors, advisors, and mentors about evolving goals and related skills.

The UW-Madison IDP website (grad.wisc.edu/pd/idp) offers a collection of resources to support you in writing your IDP:

- the university’s IDP policy and steps to getting started on your IDP;
- advice on writing specific, measurable, attainable, relevant, and time-bound (S.M.A.R.T.) goals;
- tips for discussing your IDP with your mentor;
- links to workshops on creating an IDP;
- and a reporting system to let your mentor, program, and/or grants administrator know that you have an IDP.
Your Goals

Think, Pair and Share

1. Write 2-3 goals that you have for your current project
   a. 
   b. 
   c. 

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

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

Speakers: George Watson
Stakeholder and Relationship Map Template

<Your Dissertation>

Internal Resources

External Resources

Customers????
Stakeholder and Relationship Map Example - Leverage Your Support Systems

My Dissertation

Internal Resources

- Advisors
- Me
- Faculty
- Fellow Students

External Resources

- Alumni
- External Researchers
- Other Researchers
- Lab and IT
- Subject Matter Experts

Customers (Future employers, Grant agencies, Foundations, etc.)
Identifying Your Stakeholders

Think, Pair and Share

1. Identify 2-3 internal and external resources for your project and write them on the template
   1. 
   2. 
   3.

2. Pair up and describe how you might best engage / leverage the resources you identified
   • Your partner should listen and ask 1-2 clarifying questions

   • Switch roles and repeat

3. Share something you learned or noticed about your stakeholders
Typical Project Lifecycle

## Project Charter Template

<table>
<thead>
<tr>
<th>Project Name</th>
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<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><strong>Project Description / Statement of Work</strong></td>
<td></td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Customers <em>(Direct users/Those impacted by the project)</em></th>
<th>Customer Needs / Requirements</th>
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<tbody>
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**Project Definition**

<table>
<thead>
<tr>
<th>Project Goals</th>
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<tbody>
<tr>
<td>Project Scope</td>
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<tr>
<td><strong>Project Deliverables</strong></td>
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</table>

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

<p>| | |</p>
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**Implementation Plan / Milestones** *(Due dates and durations)*

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**Marketing Plan** *(Market Analysis, Tactical Plan, Budget, and Timeline)*

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

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

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

<p>| | |</p>
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</table>

**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)
Creating Your Project Charter

1. Draft your project description using Project Charter template

2. Identify stakeholders using your stakeholder / relationship map

3. Practice your “elevator” conversation
Identifying and Validating your Project’s Requirements and Tasks

Speaker: George Watson
Topic Selection—Sifting and Winnowing
Topic Selection – Funnel Perspective

Tip: Begin with the “End in Mind”

(Remember the $25,000 Shower Curtain)
Activity - Describing Your (Actual/Planned) Process for Identifying Your Topic

To yourself (1)

To a partner (2)

With a group of 4 (4)

Group recap (all)
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

Brainstorm ideas - - - - - - - - - - - - - - - - - - - - - Organize, Arrange, Cluster…
Wrap-up and Prep for Day Two

Speaker: George Watson
Assignment Possibilities (Pick at least 2)

- Review / Refine your goals
- Review / Refine your project charter
- Review / Refine your stakeholder / relationship map
- Review / Refine your requirements

Commitment Card

- Name:
- Assignment 1:
- Assignment 2:
- Questions
Welcome and Assignment Review

Speaker: George Watson
Course Topics (A look back and a look forward)

Major topics covered in this course...

Day One…
1. Understanding the project management lifecycle—from beginning to the end of a project (and why the lifecycle is important)
2. Goal setting and leveraging the Individual Development Plan (IDP)
3. How to identify and engage your stakeholders in defining and endorsing the project requirements

Day Two…
4. Managing risk, communication and change
5. Executing and controlling the tasks, timeline and resources
6. Preparing for a successful project closure and transition
Review/Discuss Assignments

Commitment Card

• Name:
• Assignment 1:
• Assignment 2:
• Questions

• Review / Refine your goals

• Review / Refine your project charter

• Review / Refine your stakeholder / relationship map

• Review / Refine your requirements
Pause and Reflect...

• What have you learned about your project since last week?

• What have you learned about yourself?
Managing Risk and Communication Planning

Speaker: George Watson
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*).

_Your definition???
Fishbone Diagram—Identifying Risks

Possible Causes.....
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>Mitigation Strategies</th>
<th>Negative Risks</th>
<th>Positive Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. <strong>Accept</strong> the Risk</td>
<td>1. <strong>Accept</strong> the Risk</td>
</tr>
<tr>
<td></td>
<td>2. <strong>Avoid</strong> the Risk</td>
<td>2. Ensure the Risk Occurs to <strong>Exploit</strong> the Risk</td>
</tr>
<tr>
<td></td>
<td>3. Prepare <strong>Mitigation Plan</strong> in Case the Risk Happens</td>
<td>3. <strong>Enhance</strong> the Chance of the Risk Occurring</td>
</tr>
<tr>
<td></td>
<td>4. <strong>Transfer</strong> the Risk</td>
<td>4. <strong>Share</strong> the Risk</td>
</tr>
</tbody>
</table>

1. Accept the Risk
2. Avoid the Risk
3. Prepare Mitigation Plan in Case the Risk Happens
4. Transfer the Risk
## RISK ASSESSMENT TEMPLATE

<table>
<thead>
<tr>
<th>Risk Description</th>
<th>Impact / Consequence(s)</th>
<th>Timing</th>
<th>Probability</th>
<th>Mitigation Strategy</th>
</tr>
</thead>
</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 |

### Example

**Risk Description**: I won’t pass my Final Oral Defense.

**Impact / Consequence(s)**: Failure to pass your Oral Defense results in not receiving your Ph.D.

**Timing**: At the end of the Dissertation Process

**Probability**: Medium

**Mitigation Strategy**: 1) Accept the Risk  
2) Avoid the Risk  
3) Monitor the Risk and Prepare Contingency Plan  
4) Transfer the Risk

### Your Risk

<table>
<thead>
<tr>
<th>Risk Description</th>
<th>Impact / Consequence(s)</th>
<th>Timing</th>
<th>Probability</th>
<th>Mitigation Strategy</th>
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### Communication Planning Template using 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>
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<tr>
<td>1 Week Prior</td>
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<tr>
<td>Day of Completion</td>
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<tr>
<td>1 Week After</td>
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<tr>
<td>1 Month After</td>
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</tbody>
</table>
## Communication Planning Template for Milestones and Tasks

<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>
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<tr>
<td>Project Rqmts</td>
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<tr>
<td>Project Design</td>
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<tr>
<td>Project Implementation</td>
<td></td>
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<tr>
<td>Post-Project Review / Debrief</td>
<td></td>
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</tbody>
</table>
### DCS Communication Planning Template for 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>
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<tr>
<td>Change in Scope</td>
<td></td>
<td></td>
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<tr>
<td>Change in Schedule</td>
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<td></td>
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<tr>
<td>Change in Deliverable</td>
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<tr>
<td>Cancellation</td>
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</tbody>
</table>
Monitoring Progress and Status Reporting

Speaker: George Watson
Status Reporting

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

Analyze & Synthesize

Tailor Status for Target Audience
Status Reporting—Who, What, When, How and Why?

Discussion Questions

1. What have you tried?

2. What worked best?

3. Any new ideas?
Managing Change

Speaker: George Watson
Change Happens!

Plan for it…. (P.S. Conflict often travels with it as well)

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

- How might a “Project Charter” help you manage change?

- How might “stakeholders/relationships” help you manage change?

- How might “risk management” help you to manage change?

- How might the “communication plan” help you manage change?

- How might “status reporting” help manage change?
Project Close Out and Evaluation

Speaker: George Watson
## Project Closeout / Lessons Learned

### Assess your Current Project
- **Goals - Results**
  - (Did I attain the desired results?)

### Think Ahead to Future Projects
- **New Goals**
  - (What should change?)

### What Worked Well?
- **What Could Have Been Better?**

### What Should Be Repeated?
- **What Should Be Done Differently?**

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### Fishbone Diagram

<table>
<thead>
<tr>
<th>Cause</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>People</td>
<td>Positive - Negative</td>
</tr>
<tr>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>Technology</td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td></td>
</tr>
<tr>
<td>Measures</td>
<td></td>
</tr>
<tr>
<td>Materials</td>
<td></td>
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</table>
Recap/Questions

Major Topics in This Course

1. Goal Setting and the IPD
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?
Course Evaluation / Follow-up

1. Complete 1-Page Course Evaluation

2. Compose Letter to Yourself (will be mailed to you in 2 months)
   - Your current plan
   - Your anticipated accomplishments
   - Any words of encouragement you think you may want to hear…
Discussion Questions

1. What part of this course was most helpful?

2. Do you have any new insights related to what you learned in the class?
Networking Lunch and Small Group Discussion

Moderator: Eileen Callahan