Graduate Student Professional Development Seminar

Keeping on track, or, having a good online presence without wasting two hours a day on Snapchat

Plans are only good intentions unless they immediately degenerate into hard work

Peter Drucker

Those who plan do better than those who do not plan, even though they rarely stick to their plan.

Winston Churchill

M.G. Lipsett
Department of Mechanical Engineering
University of Alberta
January 30, 2019
http://www.mlipsett.com/teaching/

Today We Will…

Discuss how to develop and pitch an effective proposal for worthwhile and feasible research (for grant proposals, scholarships and awards),

Identify some of the thesis project pitfalls to avoid

Introduce ways to use modern media in academia

2

Developing a Proposal

A proposal is a document that outlines a rationale for pursuing a scope of work, with evidence that the plan is feasible and likely to be successful

Scholarships and Awards

Grants

Other Types

3

Follow the Rules!!!

Proposals generally go into competitions

Reviewers have a lot of candidates to review

Non-compliant proposals may be rejected without being considered, or at the very least be penalized for not fulfilling some criteria properly

4

Give a Compelling Story about Yourself and the Proposed Work

Proposals have several parts

Some are numeric criteria. You can't fix these, but, if there is something unusual about your transcript, explain it elsewhere in the package

Pay attention to statements of purpose. Along with what you say, there is how you say it.

Sloppy writing, unclear logic, incomplete knowledge and plans, logical leaps, and spelling and grammar errors will make your proposal look very weak.

Have a friend read it to fix it up as much as possible.

Then ask a person who has knowledge of the area to give a critical assessment.

Check that you are complying with the criteria.

Submit in time (internal deadlines matter!).

5

The Rest of the Story

Letters of Reference are every important

Generic letters are worse than useless

Find someone who can write about you, as specifically as possible, as worthy of the award

6

Recall the Project Processes

- Initiating (Setting Objectives)
- Planning the Work
- Executing (Working the Plan)
- Monitoring and Controlling
- Closing

7

Project Management Tips

<u>Keep a log book! Professionals must do this!</u>

A log book is generally a bound notebook, in which notes are written in ink, dated, and signed on each page. (If using an electronic method, keep signed docs in pdf.)
Create a baseline schedule to track subsequent time expenditures (sticky notes ➔ software package)
Keep reasonably detailed timesheets of hours (design, engineering, & project management).
Update the schedule as you see how it's going.

8

Project Plan Deliverables . . .

Design project plans change all the time!

Everyone on the team is responsible for updating the plan.

For projects of medium duration (like two years or so)
- Weekly updates are best
- Monthly updates may be acceptable, but do not allow for input if things are not going well or if there is missing information ("Did you know that there was a paper published on that eight years ago?")

Plan & update your project using a software package
- Remember project meetings
- Include time estimates for completing each task
- Allocate team members to specific tasks
- Use top level project line item to summarize all activities, costs, etc.
- Provide engineering cost estimates
  - Engineer in Training: $90 per hour
  - Intermediate Engineer: $150 per hour

On-line, collaborative scheduling tools are becoming more prevalent

9

Project Management as the Project Progresses

Update task descriptions and time estimates regularly as your understanding of the project develops.

Contingency (time & money buffers to allow for scope uncertainty) shrink as the project progresses. By the end of the project the schedule reflects what actually happened!

Track engineering/design time and costs throughout the project.

Keep your supervisor regularly apprised of progress. No-one likes surprises.

10

Pitfalls to Avoid

Being overconfident in estimating

Procrastinating

Allowing distractions to highjack your schedule

Perfectionism

Lack of discipline in tracking time & costs

Not keeping your supervisor informed.

Avoiding criticism, and taking criticism personally.

Not being willing to fail.

11

Media

Traditional publications (journals, conference proceedings)

Websites (institutional)

Professional presence as part of a research group

Contributions available online (papers, datasets)

Personal online presence to show the rest of who you are

(This can be good - or not good at all.)

12

Word Processing: What to Use?

It depends.

Word & similar packages allow you to see the formatting as you compose. It is simple to learn, but it can be difficult to customize the formatting.

GoogleDocs offers the same versatility – and limitations – but with the benefit of allowing multiple authors to edit at the same time, which is excellent when collaborating.

For custom formatting describing a lot of mathematics, then consider using LaTeX, which highly versatile & can give great results. It is also free; however, it does have a learning curve; and spell checking and grammar checking is tricky.

LyX is a new (free) word processing package that attempts to combine the best of both. Overleaf is a nice collaborative environment for LateX users.

Journals often have Word templates and sometimes LaTeX style files, but not so commonly for the newer packages.

13

Websites

Informative, up-to-date, content-rich websites are a great way to have an online presence to talk about your work, your output (not only publications but also datasets – which are increasingly important for scientific verifiability of results), and your interests *that are relevant to being a professional in your intended field*.

Use professional networking groups such as LinkedIn. Twitter can be good for professional outreach – or a distraction.

Keep your work (mostly) separate from the rest of your life. Remember that anything online might be found by a potential employer.

14

Communication with Your Supervisor & Committee

Use email. It is a legally admissible record.

Texting may be appropriate. Or not. Be careful.

Snapchat is not a good way to communicate professional matters.

Be courteous in your communications. Include enough context so that the email is not misunderstood.

Email lacks emotional context. Emojis are generally not that effective and should not be used in professional communications.

15

Meetings with Your Supervisor (& Committee)

Meet regularly – the interval between meetings will vary through your program

Have an agenda (in advance preferably)

Be on time

Bring supporting information. Some supervisors like to see stuff ahead of the meeting. Make sure computer-based information is ready to display

Keep notes of key actions and decisions – and after the meeting send out a follow up email document

Be courteous in your discussions. Disagreements are part of solving challenging problems. It must stay respectful and not be personal.

Discussions about expectations should be held in person, so that the discussion can be candid and have an emotional context.

16

Summary

- Proposals allow us the opportunity to do what we like.
- A good plan is critical to good delivery, but it is only part of the story that gives reviewers confidence.
- The plan will change. That's okay. But keep track of changes and learn from them. Keep your supervisor apprised. Feedback is a gift. If you are wasting time, it is not a *personal* criticism if your supervisor points that out and expects positive change.
- An online presence can help your professional reputation. Manage this carefully, as most online presence is really just entertainment and time wasting. Sometimes we need some fun. But procrastination is the thief of time.
- And Time is really all we have.
- This presentation is available online at
  http://www.mlipsett.com/teaching/

17