

# NEW FACULTY MENTORING WORKSHOP

July 2023



ENGINEERING

# Objective of Workshop

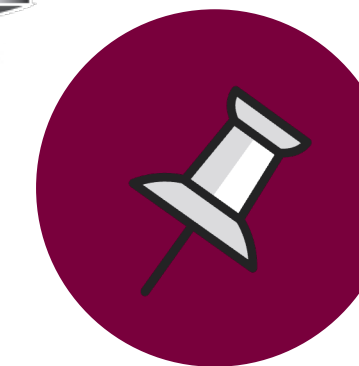


Communicate requirements for tenure/permanence

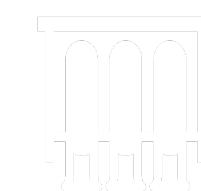


Practical advice on

- finding a mentor
- time management
- teaching
- service
- research
- work/life balance



This is an informal discussion!  
Panelists: please jump in with ideas.  
New Faculty: There are no dumb questions.



# Housekeeping – CODE OF CONDUCT

## DUTIES AND RESPONSIBILITIES OF FACULTY MEMBERS

McMaster Policy: [Code of Conduct for Faculty and Procedure for Taking Disciplinary Action](#)

Unless stated otherwise in the letter of appointment (and/or the annual contract, if applicable), faculty members have obligations to McMaster University in three areas: (a) teaching; (b) research, scholarly, or creative activities; and (c) university service.

a) Each Faculty member is responsible for teaching effectively and in a conscientious manner. Without limiting the generality of this requirement, faculty members

- Will follow Senate and Graduate Council policies regarding course outlines, and will inform students of assignments and methods of evaluation;
- Will make themselves accessible to students for consultation, for instance, by posting and maintaining reasonable office hours;
- Will adhere to the published time-table in all but exceptional circumstances, and will take reasonable and appropriate steps to inform both students and the University of any necessary cancellation and rescheduling of instruction; and
- Will be conscientious in grading student assignments and commenting on these in a timely fashion and will adhere to the schedules for submission of grades and evaluations by Department, Faculties and the School of Graduate Studies.

- (b) Each faculty member will devote a reasonable portion of time to research, scholarship, or creative work. All faculty members will make the results of such work accessible to their peers in the scholarly community, and, where appropriate, to the general public, through publications, lectures, and other means.
- (c) Each faculty member is responsible for participating in the life of the university, in governance and administration. They will normally do so through participation in committees of the University, and/or by accepting a fair and reasonable share of the administrative responsibilities in their Department, their Faculty, and the University.
- (d) Each faculty member is responsible for conducting himself/herself in a professional and ethical manner towards colleagues, students, staff, and other members of the University community. Without limiting the generality of the foregoing, faculty members at McMaster University.
- Will not infringe the academic freedom of their colleagues;
  - Will not discriminate against any member of the University community on grounds prohibited by the Ontario Human Rights Code;
  - Will observe appropriate principles of confidentiality, particularly regarding students;
  - Will, in their published work, whenever it is appropriate, indicate publicly the assistance of academic colleagues or students;
  - Will disclose conflicts of interest or other circumstances which may reasonably introduce or appear to introduce bias into any academic or administrative decision to which they may be a party; and
  - Will observe all the published rules and policies of the University and its legislative bodies.

# Interactions with Staff

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- Staff are the key to our success as a university
- Treat all staff members with respect.
- Our staff are extremely busy and have numerous demands on them. They will not be able to drop everything they are doing to deal with your issues.
- Give the staff lots of time for completion of tasks (example - arrival of a new graduate student, arrangement of grad pay, ...)
- Be kind to the staff – keep them on your side.
- Say thank-you!

# Professional Conduct - Expectations

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- Attendance at department meetings
- Attendance at student events (e.g. Meet the Profs)
- Timely response to emails.
- Inform office staff and chair when you will be away
- Setup autoreplies for your email
- Always treat students, staff, and faculty with respect. We are role models for the students
- Come to committee meetings on time, well prepared, and with actions completed

# CRITICAL FOR OUR SUCCESS WITH CEAB!!!

## Become a P. Eng./Requirements for Licensure



To be granted a licence to practise professional engineering in Ontario, an applicant must:

- be at least 18 years old;
- be of good character;
- meet PEO's stipulated academic requirements for licensure (hold an undergraduate engineering degree from a Canadian Engineering Accreditation board (CEAB)-accredited program, or possess equivalent qualifications), and, if required, successfully complete any technical exams.
- fulfill the engineering work experience requirements (demonstrate at least 48 months of verifiable, acceptable engineering experience, at least 12 months of which must be acquired in a Canadian jurisdiction under a licensed professional engineer); and
- successfully complete PEO's Professional Practice Examination (PPE).

Applicants are not required to be a Canadian citizen or landed immigrant, making it easier for those from outside of Canada to apply for and obtain a licence.

More information is available here, [http://www.peo.on.ca/index.php/ci\\_id/2057/la\\_id/1.htm](http://www.peo.on.ca/index.php/ci_id/2057/la_id/1.htm)

\*\*Please note that the Dean's office will cover the cost of the application fee.

# CEAB Graduate Attributes (GA) Outcomes Based Assessment

Critical to maintaining our accreditation



All faculty members are expected to participate in GA assessments



Talk to your chair to see where your course fits in in the GA measurement plan.



The New Faculty Orientation series offers an annual workshop on Graduate Attributes



New faculty members are expected to attend



# T & P/Permanence Requirements

## Yellow document has details:

[Link](#) (or just google: "McMaster policy tenure and promotion")

## Requirements for tenure:

- Effective teacher
- Scholarly achievement: promising program of scholarly work, record of peer review publications, strong promise of more to come.
- Diligent service

## Requirements for permanence:

- Excellent teacher – higher standard of performance
- Diligent service

# Assessments

[ASSESSED ANNUALLY BY CHAIR AND DEAN THROUGH RECORD OF ACTIVITIES]

## Teaching:

- Student evaluations of teaching now refer to the students' learning experience in the course rather than the effectiveness of instructor as the key question
- Peer observations of teaching – Formative vs Summative

## Research:

- Publication records
- Funding
- External referee reports (6-8 names required)

## Citizenship:

- Less important than research/teaching for assessment of tenure (but there are other reasons to do a diligent job on committee work)

# Find a Mentor(s)!

SOMEONE THAT YOU CAN ASK FOR ADVICE

Characteristics to look for in a mentor:

- A desire to help
- Has had positive experiences being mentored
- Good reputation for developing others
- Time and energy
- Demonstrated effective mentoring skills; trained in “the coach approach”
- Talk to your chair about who should be your mentor. You can have different mentors for teaching, research, etc.



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# TIME MANAGEMENT AND ORGANIZATIONAL TIPS



Say thank-you.

# Time Management/Organization

- Keep a list of long-term goals
- Break down long-term goals into doable short-term goals
- Set goals for each day. Consider long-term goals in daily tasks.
- Consider working at home 1 day a week
- Watch for diminishing returns in how you spend your time (example – overly elaborate website for your course).

# Organizational Tips

- Record of Activities:
  - FILL IT IN AS THE YEAR PROGRESSES!
- EMAIL: Always use correct SUBJECT and put key info into SUBJECT line.
- Example:

SUBJECT: *J. Smith (#1312333) – ENG 2PX3 Course Permission*
- Use “second signature in Outlook” as a way to send out answers to frequent questions

# “Reference” Binder

- Create a ‘reference binder’ (or electronic document): If there is stuff you are constantly looking up, print it out and put it in a binder that you keep near your desk or save well-labelled bookmarks on your computer. Example:
  - Dept regulations for grad students
  - 12-point system conversion to %
  - Status of Ph.D. students – who is on their committee, when they last had their committee meeting
  - Software manuals
  - Technical stuff: fluid properties, ...
  - Phone numbers...

# Try to Avoid:

- Perfectionism!
- Internet: Facebook, Twitter, ...
- Procrastination: difficulty with starting a new task. Technique is to say:
  - "I will work on this task for 5-10 minutes."  
Once you get started it is not as bad as you thought it would be.
- Multi-tasking:
  - More effective to work through your to-do list one at a time.



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# TEACHING



Say thank-you.

# Suggestions – Teaching

- Lectures:
  - Stay organized.
  - Information should be presented in logical and methodical order.
  - Use consistent notation. Define all symbols.
  - Always do an example after introducing new theory
  - Don't use examples from the textbook – try to find other textbooks to help with lecture prep
  - If you haven't already completed the Instructional Skills Workshop (ISW), register to attend it within the first two years of your appointment

# Suggestions – Teaching (cont.)

- Start lecture by reminding students of what was done at last lecture (if appropriate)
- Be enthusiastic and energetic: almost any topic can be made interesting
- Smile!
- Don't talk to the chalkboard / whiteboard
- Watch for diminishing returns in your work (e.g. no need for elaborate website)

# Suggestions – Teaching (cont.)

- ENGAGE the students!
  - Ask them questions
  - Try to get them to think and be interactive during the lectures.
  - Check out “Eric Mazur – Confessions of a Converted Lecturer” on YouTube
- Rethink whether PowerPoint is the best way to present material (especially if you have a lot of math/physics in your course)
- Students generally learn better if we develop equations during the lecture – so use a chalkboard or writable tablet to develop equations
- Benefit of writable tablet is that you are always facing the class
- Consider using “OneNote” for your lectures

# Suggestions – Teaching (cont.)

- To gain control of a large noisy class:
  - STAY CALM. Don't get angry.
  - Pause the lecture (the students will eventually notice)
  - Some professors will distract them with a “shiny object” like a YouTube video
- Informal teaching evaluation:
  - Request an informal assessment of teaching by the MacPherson Institute (Chris Lombardo, Engineering Liaison [lombardcl@mcmaster.ca](mailto:lombardcl@mcmaster.ca))

# Tests and Exams

- ALWAYS do the test yourself to ensure:
  - Correct level of difficulty
  - Appropriate timing (they need 2-3 times longer)
  - Catch any mistakes in the questions
  - Ask a T.A. to also write the test.
- Order of exam questions: start with the easier questions then have tougher ones at the end
  - This is also useful for trying to establish competence for graduate attributes
- Err on making the test a bit hard and then adjust the marking to get a reasonable average
- Visit the room assigned for the test and make sure it is appropriate
  - You can also view rooms here: <https://library.mcmaster.ca/spaces/cct/classroom-directory>
- Be clear about how much time there is to write the test: i.e., does it finish at 12:20 or 12:30?

# Interactions with Students

- Be reasonable with students.
- Follow 3Fs: fair, firm, friendly
- Organizational tip – re: grade changes
  - Keep an Excel sheet or piece of paper to record any issues (MSAF, accommodations, grade redistribution).
  - This way it is in one place and you don't need to search through emails to correct the grades before submitting them.

# Interactions with Teaching Assistants

- Arrange meeting with TAs at start of term to:
  - Fill in “TA Hours of Work Form”
  - Set expectations:

Mechanical Engineering has adopted a “TA Performance Expectations Sheet” (handout)

For example - discuss:

    - Professional conduct with students, staff, and faculty
    - Expected timeframe to complete marking
    - May need to work outside comfort zone – for example running tutorials
    - Arriving at meetings, tutorials, labs, etc. on time



# Teaching Timeline- Housekeeping

- 3 months before term starts:
  - inform the bookstore of the required textbook(s)
- 1-2 months before:
  - inform library of reserve items
  - book computer labs (if required) and make sure software is working

# Teaching Timeline – (cont.)

- A few weeks before:
  - go to the classroom that the Registrar has booked. Make sure that it has sufficient seats for the expected number of students. Familiarize yourself with the lights, screens, etc. so that you aren't fumbling on the first day!
  - If you plan to use Echo360, make sure that the room is enabled and test it.
  - Meet with the teaching assistants once they have been assigned. Fill out the 'Hours of Work' Form (this is a requirement from the T.A. union). Determine the tasks (and associated hours) that each T.A. will perform. Discuss your expectations.
- Early in the term:
  - Decide on a date(s) for the midterm(s) and book a testing room ([bookings@mcmaster.ca](mailto:bookings@mcmaster.ca)). Go to the room and ensure that it is suitable.

# Resources at MacPherson Institute

## Guidebooks on:

- Preparing teaching portfolio
- New Faculty Guide to teaching and learning at McMaster
- TA guide
- Supervision of graduate students

# Resources at MacPherson Institute

Web site: <https://mi.mcmaster.ca/>

## Key Contact

Chris Lombardo – [lombarcl@mcmaster.ca](mailto:lombarcl@mcmaster.ca)

## Workshops:

- Instructional Skills Workshop (3 day)

Contact Christina Brooks – [brooksct@mcmaster.ca](mailto:brooksct@mcmaster.ca)

- Course Design (2 day)

Contact Kris Knorr – [knorrk@mcmaster.ca](mailto:knorrk@mcmaster.ca)

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# SERVICE



Say thank-you.

# Service

- “Yellow document”: “*expected that...perform such assignments diligently and effectively.*”
- Want to develop a good reputation
- Opportunity to raise your profile outside of your Department or possibly Faculty
- Opportunity to meet potential collaborators and mentors
- BUT – be prepared to say NO if you are asked to be on too many committees. Get advice on this from your mentor and/or chair.

# Service – Suggestions for Success

## Organizational tip:

- Use a separate file for each committee.
  - E.g., staple together loose-leaf paper and put all meeting notes in that.
  - print out important emails and tape them into the stapled paper.
  - This means that you don't lose notes and all your notes are with you in one place.
- If you don't like paper – use OneNote to keep track
  - Make it functional for you!

# Service – Suggestions for Success

- Come to meetings on time and prepared
- Complete your actions
- Don't promise something you can't complete
- Respond to emails in a timely manner
- Use the correct SUBJECT in your emails (so important yet rarely done!!!)



# More suggestions - Service

- Be engaged! Don't be afraid to talk if you have something to contribute.
- Treat people with respect.
- Always say thank you.
- Be a positive and enthusiastic colleague.  
It is exhausting to be around people who complain about the work that needs to be done (i.e., graduate attributes assessment).
- Watch for diminishing returns.

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# RESEARCH AND GRADUATE STUDENT SUPERVISION



Say thank-you.

# Graduate Student Supervision

- Tenure timing:
  - normally assessed during 5<sup>th</sup> year
  - your dossier is put together after you have been at the university for 4 years!
- Timing of tenure and the lag between when a student starts and when they publish add more challenges to getting tenure
- Try to get grad students as soon as you can
- Consider collaboration with other profs  
(but you also need to develop independent research program)

# How to find good students?

- 4<sup>th</sup> year capstone design students
- If you teach 4<sup>th</sup> year, try to encourage strong students to stay for grad school
- Hire summer UG students
- If you can arrange, speak with 4<sup>th</sup> year class at other schools
- Visa students:
  - Easy to find visa students, but riskier?
  - At a minimum arrange a teams meeting prior to accepting to assess English.
  - Some profs get visa students to write up a short review of a paper or topic as a way of assessment of suitability for grad school.
  - Talk to their references

# Graduate Student Supervision

- Set expectations at first meeting
- Have a document that lists your expectations:
  - Strong work ethic
  - Come to meetings on time
  - Come prepared for our meetings (results, problems, solutions, next steps)
  - Bring paper and pen
  - Respond to emails
  - Technical expectations: grid independence.....
- Discuss plagiarism and expectations on using generative AI.  
Give them information on proper referencing

# Interactions with Grad Students

- Various methods:
  - Weekly scheduled meetings vs. as-needed meetings
  - Individual meetings vs. meetings with a group of students working in similar areas
- Students should leave the meeting with a clear understanding of what to do next. Keep long-term goals in mind
- Tailor your interactions to the needs of the students. Some students need a lot of supervision and others are able to work independently.
- Treat graduate students well. It is inappropriate to raise your voice with a student.

# Graduate Student Supervision

Responsibility of faculty to graduate student supervision:

- Graduate students sign on to achieve a degree
- They are not staff
- A graduate student cannot simply be dismissed if things are not working out
- They must be guaranteed a research stipend for the duration of their on-time degree (2 years for Masters or 4 years for PhD)
- They require mentoring and guidance

# Graduate Student Supervision

Responsibility of faculty to graduate student supervision:

*Good Practice in the Supervision and Mentoring of Postgraduate Students,*  
Chiappetta-Swanson and Watt

*The role of the supervisor is to provide a high-quality research and learning environment for the graduate student. The supervisor through mentoring and advising develops a professional interpersonal relationship with a graduate student that is conducive to scholarly activities, intellectual enhancement and promotes the student's professional career.*

James & Baldwin, 1999

Choose your graduate students carefully and thoughtfully and be prepared to commit mentoring time to them.



# McMaster Ph.D. Rules

- Need a Supervisory Committee
  - Composition may vary with dept?
  - A standard form for Supervisory committee meeting is completed.
- MUST meet every year
- financial penalty if supervisory committee meeting is missed!
- Ph.D. Comprehensive exam:
  - Often at around 18 months into Ph.D. program
  - Rules vary with department

# Master's (since July 2017)

- Thesis-based masters:
  - “Using the supervisory committee meeting report form that is used for doctoral students, a faculty member must give each of their Masters students (MASc) a mid-program progress review and submit that form to their department (and ultimately to SGS).”
  - Review should be completed within 12 months of starting masters degree
  - A committee meeting is \*not\* required – but is encouraged.

# Publishing

- Obvious stuff:
  - Papers should have an original contribution
  - Must be well written
- Start with best appropriate journal to submit to.
- Develop a thick skin. Some reviewers can be mean.
- Learn from what the reviewers say and incorporate comments if appropriate.
- If you disagree with reviewers, then make a case and let the editor know. Sometimes they will reconsider acceptance.

# Conferences

- Tenure: Need visibility and develop research reputation.
- Use conferences as a way to develop a list of external referees. (But be careful about how you interact with them – they must be at arms length to be referees for tenure case).
- Can also develop potential collaborations through networking at conferences.

# Collaborations

- Good to have a balance of independent and collaborative research
- Best collaboration is when each person brings something different to the partnership – complementary skills.
- Need to be careful about collaborating with senior faculty (at tenure time they might attribute the work to the senior person)

# GRANTS

- Easy-ish:
  - MITACS
  - NSERC: Alliance (need industry partner with matching funding)
- Getting more challenging:
  - NSERC-DG
- Key point: get someone to review your proposals well before submitting!

# FORM 101 - NSERC-DG TIPS

(LESSONS LEARNED FROM BEING ON GSC-1054 [Mech Eng])

- Important point: Make your research sound compelling. Explain why the work is hard. What is the 'discovery' component.
- Make it easy for the reviewers:
  - Consider 'readability' of text: font, spacing,...
  - Upshot: don't want to annoy the reviewers
- avoid acronyms
- don't list too many projects
- be clear about methodology
- emphasize novelty of work and potential impact
- don't be vague
- communicate that you understand limitations of technique

# Form 101 – cont.

- literature: make sure lit review is current and don't just refer to your own work!
- include a clear plan for how the HQP will be involved in the work
- use all 5 pages
- avoid using the words "I" and "my". Better to use "We".
- At the end of the day, there is a 'subjectivity' to the NSERC review. Sometimes one member can really sway the committee.



# Common CV

- be honest and don't pad your CV by listing student theses etc.
- under 'Peer Reviewed Conferences': don't list conferences where only the abstract is reviewed. You can list those under a separate conference section where you are very clear that only the abstract is reviewed
- Masters students: let the committee know if the students are course masters students
- talk about how you interact with the students (i.e., weekly meetings). Also, importance of 'soft skills'.
- clarify your role in co-supervisions and also indicate your contribution to papers.
- the GSC liked to see that the applicant was doing 'community' work like organizing conferences, reviewing journal papers, etc. (i.e., that the applicant is actively involved in the community that they work in)

# Common CV (con't)

- under 'reasons for delays in research': don't list something that won't be resolved in the next grant period. For example, if you list being department chair as a reason for a delay in research, but you have just started your chair term and will be chair for a few more years, this won't help your case!
- large numbers of publications or large numbers of graduate students will raise eyebrows. It begs the question: how much involvement does the applicant really have with their grad students and /or how much input to the paper is the applicant giving. Explain your contribution to the papers.
- if you say "*I'm an international leader...*" make sure that you can justify that!
- think carefully about the time that you allocate for each project (in the 'Current Funding' section of form100)
- in the list of papers, make sure you indicate which authors are your students. The committee likes to see the HQP publishing their work.

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# WORK/LIFE BALANCE



Say thank-you.

# Misc. Suggestions – Work Life Balance

- Life is short!
  - Don't obsess with work
  - Make time for yourself
  - Exercise
  - Make time for a hobby that you are passionate about
  - Have a room in your house that is clutter free that you feel happy in. Buy yourself flowers. 😊
  - Make time to see your friends and do stuff with your partner.
- From Dave Weaver (Mech Eng Emeritus Prof and former chair [x2]):
  - “Make the most of where you are along the path.”