

University of Toronto
Department of Molecular Genetics
“Graduate Professional Development for Scientists”
Fall 2021 Syllabus

Coordinator:

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Office hours: 1 hour after each class

Time: 1-3pm (2 hours/class; 12 hours total)

Days: Fridays (Sept 10, Sept 17, Sept 24, Oct 1, Oct 15, Oct 29)

Location: TBD (unless otherwise posted)

Course Objectives:

This course is designed to empower trainees to be market-ready at a time when the job market continues to become more competitive, whether it's in academia or outside academia. Embarking on a career path requires strategic consideration of who you are, what skills you have and what kind of value you can deliver. Importantly, many graduate-level trainees have strong technical skills as well as well-developed soft skills, but may lack the ability to communicate these skills effectively during the job search process. The primary goals of this course are to broaden students' self-awareness around their skills, interests and overall value and to teach trainees how to explore and create career options and opportunities. Students will learn how to generate a professional development plan and how to confidently market themselves during and after graduate school.

Reading

Success After Graduate School by Nana Lee and Reinhart Reithmeier, 2016

Order from the University of Toronto Bookstore [BOOKPOD](#). **As this is printed on demand, please allow 7 business days for printing.** You may pick it from the bookstore (pickup desk) when it is ready. **Pick this book up as soon as possible as you'll need to have it read by the end of the course and provide a report on your lessons from the book.**

Individual Development Plan Consults

As part of GPD, we have a 30 minute one-on-one consult to discuss anything you like regarding your own GPD and to go over an IDP. On the first day of class, you'll be asked to sign up for a time to meet. If you're unable to make the meeting, please ensure you inform me 24 hours ahead of time.

Course Agenda at a Glance:

Date	Event	Topics/Assignments	Bring to Class (email if course is online)	Assignment Due
Sept 10	Session 1	Understanding your Value: Career launch, self-assessment, myIDP, storytelling, CAR framework introduction.		
Sept 10	Assignment 1 Due	A. Create a myIDP account and perform assessment: http://myidp.sciencecareers.org B. See video for background information on SWOTs. Do a personal SWOT: https://www.mindtools.com/worksheets/personal SWOT Analysis Worksheet.pdf		Email assessment outputs with a 1pg IDP output reflection about your output (double spaced). Submit as a WORD Document (not a PDF) so I can comment/edit more easily. Don't forget your name, student number and date all assignments. Also provide file names in the format: 2020-04-01 – Assignment 1 – LAST NAME, First name
Sept 17	Session 2	Communicating your Value (1): Job search strategy Refine CAR during class. Refine personal statement. LinkedIn Profile: Introduction Cover letters, Networking	1-3 draft CAR bullet from your resume. Bring your resume. (not bring graded)	
Sept 17	Assignment 2 Due	Research project summary.		Email 1 page word summary of your research project (double-spaced)
Sept 24	Session 3	Communicating your Value (2): Interview skills Giving feedback Peer Review of Job Applications Introduction of 3MT	Sample job description you would consider applying for. Draft Resume Draft Cover Letter	

Sept 24	Assignment 3 Due	Job application <ul style="list-style-type: none"> - Job description - Final resume - Final cover letter - 1 CAR story 		Email job application as a word document.
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Oct 1	Session 4	Cultivating your value Generating Value Professionalism <ul style="list-style-type: none"> - Email - Slides - Meeting effectiveness Mock interview	2 copies of your job application	
Oct 1	Assignment 4 Due	Networking Reflection		Email 1 page reflection on your networking experience as a Word document (doublespaced)
Oct 15	Session 5	Value generation: Innovation process Three Minute Thesis Practice Peer Feedback	Draft 3MT slide (Static) Email name, title, email address of your invited networking guest	
Oct 22	Assignment 5 Due	Final 3MT slide		Any resubmissions
Oct 29	Session 6	Capstone Class: Three Minute Thesis Final Networking Event	One 3MT slide presentation to the class.	Informational Interview Summary, if applicable.
Nov 5	Assignment 6 Due	Final book reflection of <i>“Success After Graduate School”</i>		Email 1 page reflection of <i>“Success After Graduate School”</i>

Deliverables/Evaluation

i) Written Assignments (60%)

All reports are to be submitted via email before midnight of the due date. Late reports are not accepted, unless for medical reasons.

Assignment 1 - IDP reflection: Write a summary of your findings from your IDP (500-700 words). What are your next steps in the following year? Cite at least three specific SMART goals for each project and professional/career development. **Due Sept 10, 2021.**

Assignment 2 - Research project summary: Write a 500-700 words summary of your research intended for the public audience with illustrations. **Due Sept 17, 2021.**

Assignment 3 - Job Application: Write a one-page cover letter and a resume for a job description. Include the job description as well. **Due Sept 24, 2021.**

Assignment 4 – Networking Reflection: Attend a networking event or reach out to a professional in your field of interest you'd like to meet for an informational interview. If attending a networking event, meet 2-3 new contacts and practice your networking skills. If conducting an informational interview, schedule a phone or in-person meeting to discuss career opportunities in your field of interest. Write a 500-700 word reflection of your networking experience, what went well and what you might do differently next time. Note, if you conduct an informational interview, please exercise caution when meeting with people you don't know. Meet during the daytime, in a public space preferably and be safe or online or by phone. If attending a networking event, go with a classmate. See below for more information. **Due Oct 1, 2020. s**

Assignment 5 – Final 3MT slide: Please submit your final static slide as a ppt file via email. **Due Oct 22, 2021.**

Assignment 6 – Book reflection: Write a 500-700 word reflection (not a summary or review) on "Success After Graduate School" and outline at least 3 areas where you found value to help you design your own career path. **Due Nov 5, 2021**

ii) Presentations (20%)

1. Present your research in three minutes with one static slide to the general public describing why it is significant to today's society. (10%) **(Oct 29, 2021)**
2. In-class Panel and Networking event: Bring a guest to the last class. (10%) **(Oct 29, 2021)**

iii) Attendance and Participation (20%)

Rubrics and Suggestions

1. IDP Reflection (10)

- Thoroughness of your assessment (3)
- Clarity (2)
- Reasonable next steps – which resources will you use? (3)
- Feedback on the IDP – your thoughts and feedback on this tool (2)

2. Research Project Summary (10)

Good examples of an article for a lay audience are those written in the Economist magazine. Assume you can use the terms “DNA,” “cell,” and “protein.” The illustration for your research summary could be a series of panels or many pictures throughout your article. In essence, you can have as many as you like if you think it will help clarify your story. One example would be one for the intro, one for the background or hypothesis, one for the methods, one for results. Some of you could even put it all on one illustration or have sub-pictures. Whatever works for your project.

Start by drawing your research on paper, as if you are explaining the big picture to an intelligent seven year old or your non-scientifically minded grandmother or grandfather. It is usually a picture of a person or animal, then magnify the organ/cell affected, then magnify to the protein or gene you are working on. No raw data. Do not include jargon and avoid acronyms, unless you explain these terms. The best research summaries have been those which have been written earlier and given to grade 10 or lower high school students for feedback. You’ll be marked according to the following:

- Appropriate title for the general public (0.5)
- Clarity (2.5)
- Introduction (2)
- Methods (1)
- Why – Scientific (1)
- Why – Big picture (0.5)
- Illustration (2)
- Figure Legend (0.5)

For additional readings on scientific lay summaries, here are a few articles:

<https://www.elsevier.com/connect/authors-update/in-a-nutshell-how-to-write-a-lay-summary>

<https://mssociety.ca/uploads/files/guide-to-writing-lay-summary-eng-final20130726.pdf>

<https://www.cfn-nce.ca/wp-content/uploads/2017/09/cfn-guidelines-for-lay-summaries.pdf>

3. Cover Letter/Resume (20)

Cover Letter

- Company Header (1) Address to a real name and date (1)
- Opening sentence (1) Opening paragraph (1)
- Middle section (3) WHY that company, what are you offering?
- Last paragraph closing (1)
- Signature (1) Your contact info (1)

Resume

- Resume one to two pages (3)
- Overall appearance (1)
- Use of action Verbs (1)
- Experience – CAR statements (4) Education (0.5)
- Skills if applicable, Selected Awards/Publications (0.5)

Remember to start taking an inventory of your experiences, prioritize them according to the value they convey relative to the job you're applying for, and then write your CAR statement for key experience. We'll focus a lot on CAR statements to help communicate the context of our work, the meaningful actions we've taken and the results and "so-what" of our experiences. These CAR statements will form the basis of the value stories we'll tell during future interviews.

4. **Networking experience:** If you haven't attended a networking event before, there are many opportunities in Toronto to attending events where professionals congregate. Life Sciences Ontario (<https://lifesciencesontario.ca/events/>) has networking breakfasts, and other organizations such HipHaus (<https://thehiphaus.com>) or the Science to Business Network (www.s2bn.org) have on-going events. Please look into these early and book off your time for your own professional development. Before attending, be sure to practice your elevator pitch, read up on some current events and issues in your field and think of some insightful questions you can ask your fellow networkers. Take note of how the conversations go, your own reactions and the reactions of those you're talking to.

Alternate informational interview (to networking events): If there's a lock-down during this time, then we'll ask that you reach out to someone of interest on LinkedIn to introduce yourself and try to arrange a 20-30 minute virtual discussion, webcall or phone call. To connect on a professional level with someone you don't know, we recommend finding a relatable topic to frame the request around, which means you may need to know something about the individual, their career path, professional interests and activities. Inform the individual of your interest in learning more about some specific topic, their career trajectory, or their current role and that you're seeking advice/insights they have on these areas. Ensure that you have a genuine interest in learning about the area you're asking about and be prepared with 3-5 questions to guide the conversation.

5. Three Minute Thesis Slide and Presentation

Send your slides to the professor by Bring the slide on a USB key on presentation day.

- Clarity (10)
- Time under 3 minutes, no less than 2:30 (10)
- Helpful illustration (5)
- Significance to the public (5)
- Confidence and enthusiasm (5)
- Content professional and appropriate (5)

6. Book Reflection (10)

- Insightful new ideas regarding your own career development (5)
- Clarity, grammar, professionalism (5)

Presentation

Three Minute Thesis

Some Pointers for the 3MT

1. Start with a story or a question. Here is a good example. "Do you know that your own immune cells fight cancer? Some of you may be walking around with cancer cells (pause) but are perfectly healthy because your own immune cells can overcome them. (Pause) My name is John Doe and I will tell you a David and Goliath story happening in our own bodies."
2. Do not use filler words such as "like, so, uhm, ok, right, uh." If you feel compelled to use them, just leave a slightly longer pause.
3. End with a pause and then "Thank-you."
4. Slide has a title on top, your name on the top right hand corner. No PIs, no institutions, no degrees.
5. Every word and picture should be pointed out and talked about. You should refer to your slide within the first 20 seconds, if not earlier, and continue on with the illustrations as visual aids. Minimize text.
6. Be confident, own the room with your story and your presence. You are the expert.
7. Best way to practice is to draw the slide as you tell the story like a chalk talk.
8. Abandon the notes and use cue words on the slide. A good series of illustrations will bring forth the story.

Have fun practicing your story to friends and family!

In-Class (Virtual) Networking Event – Oct 29, 2021

Pair up with another student and develop a plan to identify and for one of you to cold contact a professional (cc the other student) who has the career you would perhaps explore after graduate school.

If your guest is unable to make it for this date but would be open to an informational interview, please submit a 500 - 600 word summary (can be in point form) your discussion with that person. Topics to include are how you contacted them, how they made their career transition, and what you thought of the whole experience (cold call, approaching someone new, their career). Each student must submit their own summary electronically by end of day **Oct 29, 2021**.

Imagine where you want to be in 5 years time. A prof? A research scientist at a hospital? A management consultant? In Pharma? Biotech? Guests should be somebody who has been through the job application, interview process, landed their job and are now working professionals who are being remunerated for their work.

Search through LinkedIn with keywords of your alumni department, or even ask other PIs, PDFs, colleagues to find a professional who is at a career that you are aspiring towards or interested in learning more about. Join 10,000 Cups of Coffee. Find a person through your network and contact them using the email template I gave you. Contact the individual directly and NOT the company in general, their info desk or HR. Do not contact the company. Contact the individual. You build rapport with people, not companies.

If they do not respond in 2 weeks, ask with a gently reminder and if they do not write back, do not contact them again. Try to find someone else.

If they want to help but cannot make it to the networking event, request an informational interview over coffee, the phone or email, whatever works for them. Ask open-ended questions regarding their career pathway and how they got there, their transition and about their current day-to-day. An informational interview is a time when you can ask them questions about their career and the company. It is possibly a pre-interview for you, so maintain professionalism.

Email me your confirmed guest's name, degrees, job title and affiliation for the Networking Event by **Oct 15, 2021**. If your invited panelist did not respond, please email me the note you sent to them.

Enjoy the process!

Resources

Simon Sinek's "Start with WHY"

<https://www.youtube.com/watch?v=sioZd3AxmnE>

Adam Leipzeg's "How to Know Your Life Purpose in 5 Minutes"

<https://www.youtube.com/watch?v=vVsXO9brK7M>

France A. Cordova's "Embrace Uncertainty"

<http://science.sciencemag.org/content/351/6276/994>

Peter Weddle's "Avoiding Career Obsolescence"

<https://www.youtube.com/watch?v=NSNIIsmBKIk>

Resume CARs

<http://careerrocketeer.com/2012/06/what-does-a-car-have-to-do-with-your-resume.html>

Resume Action Verbs

<https://gecd.mit.edu/sites/default/files/jobs/files/resume-action-verbs.pdf>

Core Competencies

<http://www.workforce.com/2002/09/03/31-core-competencies-explained/>

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