Tri-Agency Graduate Scholarships: Writing a research proposal

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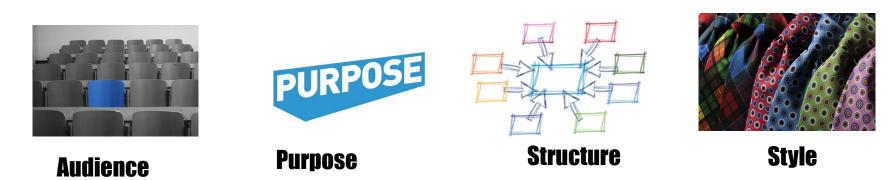
Fall 2018





This workshop is divided into three sections

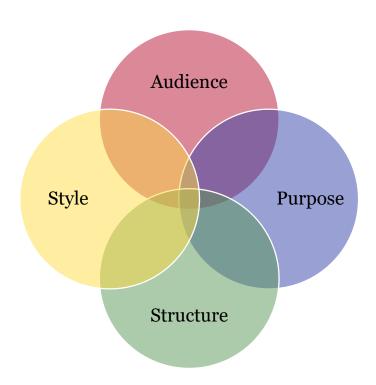
1. The research proposal as a genre



- 2. Tips and reminders
- 3. Q&A

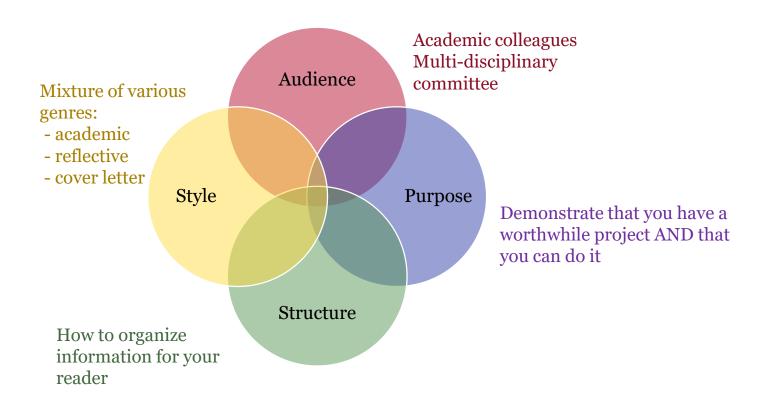


The research proposal as a genre





The research proposal as a genre





Audience: Consider who will read your proposal



Multi-disciplinary: experts and non-experts

Discourse community: shared goals, values and conventions (Beaufort) How do you convince them?

Demonstrate:

- 1. Credibility
- 2. Your investment in the project

Balance:

Demonstrate your capability without overstating.



Audience

JUDGING CRITERIA CGS – Master's

Academic Excellence	Academic record: Marks; program; awards; course load	50%
Research Potential	critical thinking; initiative & independence; work experience & academic training for field; contribution, merit, originality, significance & feasibility of project; research experience & achievements	30%
Personal Characteristics and Interpersonal Skills	work & volunteer experience; project management; communication; involvement in academic life & the community	20%



Audience

JUDGING CRITERIA NSERC - Doctoral

	Academic Excellence	 Academic record Scholarships and awards held Duration of previous studies 	30%
	Research Potential	 Quality of research contributions to research Relevance of work & training Significance, feasibility, and merit of proposed research, & justification for location of tenure Ability to think critically, apply skills and knowledge, judgment, originality, initiative and autonomy Enthusiasm for research Determination and ability to complete projects on timely schedule 	50%
a	Personal Characteristics and Interpersonal Skills	 The ability or potential to communicate scientific concepts clearly and logically in written and oral formats. Professional and relevant extracurricular interactions and collaborations 	20%





JUDGING CRITERIA SSHRC - Doctoral

<u>Multidisciplinary selection committees</u> evaluate applicants solely on academic merit, measured by:

- past academic results, as demonstrated by transcripts, awards and distinctions;
- the program of study and its potential contribution to the advancement of knowledge;
- relevant professional and academic experience, including research training, as demonstrated by conference presentations and scholarly publications;
- two written evaluations from referees; and
- the departmental appraisal (for those registered at Canadian universities).



Audience

JUDGING CRITERIA CIHR- Doctoral

Achievements and Activities of the Candidate	Publication activityOther research activityAcademic record	35%
Characteristics and Abilities of the Candidate	• Indopondonos	40%
Research Training Environment	 Training program Scientific activity Research resources Training record 	25%



Purpose: What does your proposal need to accomplish?



Demonstrate that you have a worthwhile project <u>and</u> that you can do it.

- 1. Rationale why? The significance or value
- **2. Review where?** Situate it in existing research
- **3. Outline how?** Methodology, approach, materials, timeline

(Proctor)



The CARS model



Demonstrate knowledge of your field and knowledge of your problem

Based on Swales' analysis of introductions to academic research articles

Move 1: Establish a territory

Move 2: Establish a niche

Move 3: Occupy the niche

(Swales 140-141)



Make a central claim

- Generalize about topic
- Review previous research

CARS Model

Move 1: Establish a territory

"Research into alcohol use during pregnancy establishes that..."

"Military historians generally question the relationship between..."

"Maxwell's work on Bourdieu's theory of social capital establishes..."

"While scholars accept that... recent work by Boston and Jones has complicated this issue by suggesting..."

"Extensive research into ocular decay in aging populations has established that..."

- Make a central claim
- Generalize about topic
- Review previous research

CARS Model

Move 1: Establish a territory – **General Guidelines**

- Do your research. Read widely to get a sense of the field. Talk to your advisor or potential committee members about your project.
- Consider the currency of the project. How much has been published? When? Ask yourself, is this research worth pursuing right now? Why?
- When writing, this section should be short, succinct, and specific. It both establishes your credibility as a researcher and justifies your project.

SIDEBAR: DEVELOPING YOUR RESEARCH QUESTION

Ensure you have a research question, not a topic

Question – Significance – Motivation

- 1. I am researching...
- 2. Because I want to find out...
- 3. 3. In order to help my reader understand...

Booth et al.

This is a conceptual framework – not a template!

- Draw a new connection
- Extend existing work
- Fill a gap
- Make a counterclaim
- Apply existing methodology to an existing or new problem

CARS Model

Move 2: Establish a Niche

"This research is complicated by Henry's work on drug use during pregnancy, which suggests that..."

"However, the Canadian indigenous community, while a potentially significant source of data, has been largely ignored in these studies..."

"The existing research has failed to account for the presence of..."

"Recent work by Sanders et al. has demonstrated that... There is the potential to extend their work into... in order to..."

- Draw a new connection
- Extend existing work
- Fill a gap
- Make a counterclaim
- Apply
 existing
 methodology
 to an
 existing or
 new problem

CARS Model

Move 2: Establish a Niche – **General Guidelines**

- This is the move that establishes your research as distinct and relevant.
- Be as detailed and specific as possible, but stay concise.
- In terms of quantity, this portion should be longer than the first move.
- Be persuasive. Why is this relevant? What will it add to the field? What potential does it have? What might other researchers be able to do with it to further the field?
- State your exceptions to current research positively. Don't trash the field and its scholars.

- State your purpose or plan
- Describe
 your
 methodolog
 y, claim, or
 contribution
- Describe the project's structure

CARS Model

Move 3: Occupy the Niche

"In my study, I will demonstrate that..."

"My research will examine the links between..."

"I argue that..."

"My methodology adapts Sternum's theories to... by..."

"I will begin by collecting..."

"During the initial phase, I expect to find..."

- State your purpose or plan
- Describe your claim, contribution, or methodology
- Describe the project's structure

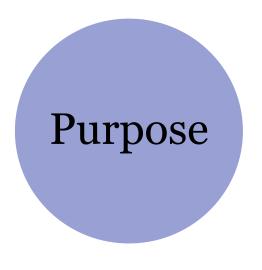
CARS Model

Move 3: Occupy the Niche – **General Guidelines**

- State your claim, argument, or hypothesis clearly.
- Include the anticipated outcome and its potential contribution.
- Be detailed but not too detailed. Provide the relevant information to demonstrate validity, but don't overwhelm with minutiae.
- Describe and define what you will be studying and how you will access the data, subject matter, participants, etc.
- Be clear about your theoretical framework and/or methodology.
- Give a brief overview of the type and structure of the project, e.g. what kind of thesis it is and what will you include.

Your credentials and potential as a researcher

Show your credibility and your investment in the project and your work



- What have you done before?
- What are your goals?
- What do you hope to contribute?
- What motivates you?



Move 1: Establish a territory

Obesity is a growing public health problem. Globally, 500 million adults are obese and an additional 1 billion are overweight. Obesity rates have approximately doubled since 1980 and continue to increase in virtually all high, middle and low-income countries1. Recent estimates indicate that one-quarter (25%) of adult Canadians are obese and an additional 37% are overweight, while more than one quarter of Canadian children and youth are either obese or overweight. ^{2,3} The direct healthcare costs of obesity are estimated at more than \$6 billion, or 4% of total health expenditures. Overweight and obesity are important contributors to chronic disease morbidity and mortality. In adulthood, excess body weight increases the risk of a range of chronic diseases, including cardiovascular disease and osteoarthritis, type 2 diabetes and certain types of cancers⁵. The etiology of obesity is complex, with many factors being involved in its development.

Move 2: Establish a niche

Food consumed at restaurants and fast-food outlets accounts for a growing proportion of dietary intake among Canadians, and is believed to be an important contributing factor in the obesity problem. Several prospective studies have demonstrated that frequently eating at restaurants—particularly fast food restaurants—is associated with excess weight gain over time. ^{6,7,8,9} Currently, Canadians receive little or no information regarding nutritional content of restaurant food. Menu labelling is a potentially effective population-level intervention to help reduce the prevalence of obesity and obesity-related chronic disease. In addition to changing consumer behavior, menu labelling also has the potential to promote the availability of healthier food options from the food service industry. ¹⁰ To date, several studies have examined the impact of nutritional labelling interventions on caloric consumption in a naturalistic setting. ^{11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28} However, results from these studies have been mixed and study designs have been limited. None of these studies were conducted in Canada. Two recent reviews highlighted the scarcity of studies and methodological limitations of those that have been conducted, including a lack of "natural experiments". ^{29,30}

Move 3: Occupy the niche

The primary research that I will undertake during my PhD career will examine the impact of displaying nutritional information at the point-of-sale on consumer behaviour. The proposed research project will be a naturalistic study conducted in partnership with The Ottawa Hospital. The Ottawa Hospital Civic Campus has implemented a new nutrition promotion program in the cafeteria, which includes displaying nutritional information (including calories, saturated and total fat, and sodium) on digital menu boards. The hospital has also created a new health logo for products that meet a set of nutritional standards modeled after the Heart and Stroke Foundation's Health Check TM Program 1, as well as the new nutritional standards to be implemented in Ontario schools. The same labelling program will be implemented in the Ottawa Hospital General Campus in the spring of 2012. The implementation of these policies provides an opportunity to conduct a quasi-experimental study of nutrition labelling in a naturalistic setting.

Move 1: Establish a territory

The obesity epidemic continues to be a leading issue in the health of Canadian children and youth, which is likely to continue in the future. Numerous health-related consequences of obesity have been documented in the literature, including cardiovascular problems, hypertension, type 2 diabetes, psychosocial problems and various forms of cancer. The increasing prevalence of obesity has been linked to physical inactivity and further supported by a positive association between sedentary behaviour and body mass index (BMI). Moreover, the influences of student

Move 2: Establish a niche

The obesity epidemic continues to be a leading issue in the health of Canadian children and youth, which is likely to continue in the future. Numerous health-related consequences of obesity have been documented in the literature, including cardiovascular problems, hypertension, type 2 diabetes, psychosocial problems² and various forms of cancer.³ The increasing prevalence of obesity has been linked to physical inactivity⁴ and further supported by a positive association between sedentary behaviour and body mass index (BMI). Moreover, the influences of student and school-level variables have shown to have an effect on obesity. Recent literature has also noted the importance of the built environment and its influence on obesity. The built environment can be defined as the physical aspects of our lives, such as the neighbourhoods, roads, facilities, recreational areas and food sources, which influence our daily lives⁸ and may prove to be a fundamental contribution to the occurrence of obesity. However, limited research has been conducted in youth populations, with cross-sectional studies constituting most of the research.9 Furthermore, there have been no studies which have evaluated how changes in school programs and policies over time have influenced the built environment and subsequent changes in health status (i.e., obesity) in a representative sample of Canadian youth.

Move 3: Occupy the niche

The proposed research project will examine the link between the built environment and obesity using data from the COMPASS study; a prospective cohort study collecting hierarchical longitudinal data (2012-2016) from a convenience sample of 80 secondary schools and the ~50,000 grade 9 to 12 students attending those schools in Ontario and Alberta (CIHR MOP-

Move 1: Establish a territory

A classical problem in number theory is to calculate the density of of a certain infinite set of prime numbers among all primes. For example, let $S = \{p : p \text{ is prime}, p \equiv 3 \pmod{4}\}$. Due to a famous result by Dirichlet, we now know that the density of this set among the set of all primes is $1/\varphi(4) = 1/2$.

We then generalize this notion of density to fields, where we naturally consider prime ideals in the ring of algebraic integers in place of prime numbers. Let O_L and O_K denote the ring of algebraic integers contained in L and K, respectively. Let L/K be a Galois extension with Galois group $G = \operatorname{Gal}(L/K)$ and discriminant $\Delta_{L/K}$. Finally, let p be a prime ideal of O_K such that $p \nmid \Delta_{L/K}$. We define the conjugacy class $\sigma_p \subseteq G$ so that $\sigma \in \sigma_p$ if and only if there is a prime ideal q of O_L lying above p such that $\sigma(q) = q$ and for all $\alpha \in O_L$ we have $\sigma(\alpha) \equiv \alpha^{|O_K/p|} \pmod{q}$. Now that this notation has been described, we may give one of the most celebrated results in algebraic number theory. Namely, the Chebotarev density theorem [3], of which the prime number theorem and Dirichlet's prime density result are a consequence. This result is summarized nicely in [2] and is as follows:

Let L/K be Galois and let C be a conjugacy class contained in G = Gal(L/K) as described above. Then the set $S = \{p : p \text{ a prime ideal of } O_K, p \nmid \Delta_{L/K}, \sigma_p \subseteq C\}$ has density d(S) = |C|/|G|.

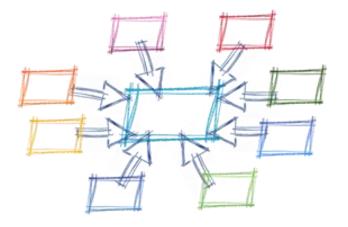
Move 2: Establish a niche

Several versions of this theorem can be found. In particular, Lagarias and Odlyzko [1] give an effective version of the Chebotarev density theorem for application to algebraic number fields. Let K be an algebraic number field and L be a normal extension of K with Galois group G. Define $\pi_C(x, L/K) = |\{p : p \text{ is unramified in } L, \sigma_p \subseteq C, |O_K/p| \le x\}|$ and let $R = |\pi_C(x, L/K) - (|C|/|G|)\text{Li}(x)|$. It is shown in [1], using the Chebotarev density theorem, that $R = o(x/\log x)$ as $x \to \infty$.

Move 3: Occupy a niche

We intend to apply the Chebotarev density theorem, in a similar fashion as in [1], to extensions of function fields. That is, we consider a field K which contains a field F such that there is at least one $x \in K$ transcendental over F so that K/F(x) is a finite algebraic extension. It is our goal to produce a precise and explicit density result for such extensions of fields. While Chebotarev's density theorem has been applied to function fields before, we intend to improve the currently given results by tightening bounds on a function field analogue of π_C by reducing the currently given error terms.

Structure: how will you organize this information?



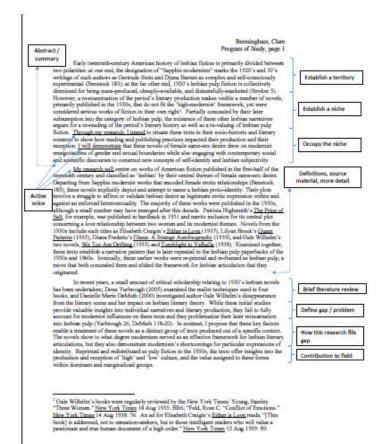
- Depends on the agency application
- Use paragraphs effectively
- Subheadings are an option
- Tell a story!
- 1. OPENING PARAGRAPH (hook your reader)
 - Project summary: question/significance/motivation
 - Just enough background information

2. BODY PARAGRAPHS

- More detail about the project and problem
- Brief literature review separate or integrated, but always justified through links to your project
- Methodology
- Credentials, goals, motivations
- Why this university, this program, these people?
- What will the funding help you do?



Discussion of annotated example



Bermingham, Clare Program of Study, page 2

To frame concepts of production, distribution and reception, my research will draw upon fascrists of cultural production, including Pierre Bourdinia and Reis Folksi. I will depend on fasorites of modernize that have energed in the last two decades through the work of Karlis Jay, Shari Benstook and Bornie Kime Soot, specifically their consideration of the interplay of grades, security, race, and class. In addition, Andreas Hyssonic so concept of the 'Great Divide' between high art and reast culture (with and Bornie Kime Soot) a recent case for studying modernity alongside modernism to account for both low's and 'High modernit forms (13) are particularly appropriate for a study of novels that confirented modern science and medicine and responded to benefits of grades in reversion, alternating and lossine pathology in their marratives. Mischel Foucault's work as countial for discussions of power and discourse analysis, as well as undenstanding how those texts operate against a contemporary insistence of disease through a type of "reverse discourse" (Foucault 101). In addition, the thorizon of Justith Butler and Fee Konstifely Sodgwick are accessory for demonstrating how these novels functioned performatively in their search for and articulation of gender and sexual identities.

Theoretical framework / methodology Secondary literature review

As a Master's student, I am currently engaged in a study of 1950's and 1960's lesbian pulp finition that has direct bearing on my proposed decircula work. Entitled, Zongerous Platins's Negotiating Disappears of Disasses, Vice and Consigno to Lesbian Pulp Fiction, 1950-1965, it is a study of how lesbian paperback originals engaged and resusted contemporary and provident psychosusly for an entitle disappears. My goal, as I move into descript work, is it contributes to a more comprehensive understanding of what constitutes query literature, and how it relates to concepts of individuals and shared subsociative. By analyzing texts that energed concurrently with articulations of lesbias self-identity and formulations of community, Jaim to chaid the low literary expressions from marginalized individuals respond to the dominant culture and help formulate a shared, insagined community. Because so text exists in solution, hepse to better understand how such texts engage with other genres and formal strategies to frame their nametives of genesis and recisioners.

Establishing credibility.

Goals & planned

contributions to larger field

My decision to pursue graduate work is driven by my decise to engage with literature through the various lenses of cuband consects and oriental flessory. As such, my sufficiented work with those lengthy ignored texts is a remembra opportunity to contribute to the body of work on leshian writing and identity in American literature of the early tenerated contribute. Fistorian Lillian Fuderman notes that social factors of the American 1930s made it extremely difficult for leshians to self-dentity (93-4), and yet the existence of these novels demonstrates that social factors were worsen were welling to name their difference and their desire through authority, and that they were compelled to speak back to the society that represend them. As a recognitive Lam equally corresplied to undermend and to where how their voices fit into and contribute to a larger social and literate content.

Broader contribution investment in work Note use of emotion as persuasive tactic

The University of Waterloo has offered me the opportunity to move into their doctoral program with advanced standing upon completion of my current year of study, and this option would enable me to declicate more time to this project and the parasit of my mosersh guals. Additionally, the PhD program at Waterloo will allow me to engage while hierators and language floory, both of which are contral to my work and its employment of critical discourse studying. By continuing my graduate work at Waterloo, I hope to work with Dr. Victoria Lamont, whose approach to recovering Americans womant's fellowin has great relevance for this study, as well as Dr. Maznay McArthur, whose work in modernist formalism offers a valuable method for goining single into these transitive structures. The University of Waterloo has occollent research resources, including a substantial collection of leishes friction from the early twentich containy. It is block, havever, that some travel will be required to research the publication history of my subject texts are day received disenting will entain text to work.

Why Waterloo. Why this program. Why these supervisors. What I will use the research funds for.



Style: How will you package and present the information?



- Formal and academic, but accessible to non-experts
- Avoid jargon
- Be specific and succinct
- Signal to your reader that you are coming from a place of knowledge without explaining too much



Example of accessible scholarly style

The primary objective of the research project described herein is to use the available hierarchical longitudinal data from waves 1 to 3 of the COMPASS data to examine how changes in the built environment characteristics within or surrounding a school over time (i.e. greater access to recreational facilities, healthy food options and neighbourhood walkability) are related to changes in youth overweight or obesity over time. The secondary objectives are to examine if (a) the impact of the built environment on overweight and obesity differs by gender or by ethnicity, and (b) how changes in school programs or policies over time interact with built environment characteristics to impact overweight and obesity.



Style

- Link past experiences to your research potential
- Be persuasive why are you the best person to do this work? Why now and why here, at this institution?
- Convey your excitement about the project!



Example 1:Positioning self as researcher

This project represents a collaboration with the Public Health Agency of Canada and The Ottawa Hospital. As a result, this project will also provide me with an opportunity to work with these stakeholders both in implementing the study and with disseminating the findings. Indeed, the Public Health Agency of Canada has indicated that they view the study as the first opportunity to collect evidence in an area of high priority for the Agency. We have been invited to present the findings to the Agency and they have indicated that the Chief Public Health Officer of Canada has expressed a particular interest. I have been directly involved in all aspects of this project to date, including the design of the study, the grant application, and working with our collaborators, and I look forward to the knowledge translation opportunities from disseminating the findings.

Example 2: Positioning self as researcher

The University of Waterloo, a leading Canadian institution in smart grid research, provides an excellent setting for my doctoral thesis to extend this research. Supervised by Dr. Parker, this proposed research, "Stimulating Residential Electricity Consumption Shifts Using Smart Grid Tools: An Analysis of Intervention Effectiveness on Consumer Engagement and Conservation Behaviour" aligns with SSHRC's future challenge area of building understanding to leverage emerging technologies to benefit Canadians.

Style

- Styles change across fields & disciplines
- Proposals must be both academically rigorous <u>and</u> personally persuasive

Remember that you want to demonstrate two things:

- 1. Your credibility based on (a) your description of your project and (b) your research record, your academic record, involvement, etc.
- 2. Your investment in and your fit for the project



How well you communicate is critical



- Proposal writing must demonstrate your command of language and the field.
- Position yourself as a scholarly colleague. Write to your equals, not to teachers / superiors.
- Write concisely. Each word counts and should drive your application further.
- Coherence, logic, and flow are created through a solid structure and good storytelling.
- Sentences should be varied to sustain interest.



Use the following appropriately and sparingly



- Showing objectivity through nominalization. "A broad examination shows that..."
- Using the passive voice to emphasize process and de-emphasize the actor.

"Sex workers are often characterized as victims by the public..."

- Definitions of words or terms. If used, incorporate the definition into the sentence. "Affect, defined here as embodied intensities beyond the articulation we call emotion, is a useful theory to..."
- Acronyms. If they are necessary, define them the first time.

"The BASE (Bridge to Academic Success in English) students..." (Shryer et. al.)



Final Reminders

- □ Start early! A solid grounding in research is key to your credibility
- □ Talk to your advisor and other people in the field about your proposal
- □ Look at other proposals in your department, if possible
- → Ask others to read it: experts and non-experts get feedback!
- ☐ Make sure your application is correct. Follow the instructions carefully
- ☐ If not this year, then next... revise and re-work it. Use the year as an opportunity to make it stronger



WCC services and programs

- Individual 50-minute consultations
- Workshops on communication topics
- Grad writing cafés
- English Conversation Circles
- English Conversation Café
- Dissertation Boot Camp
- Speak Like a Scholar
- Fundamentals for Writing your Thesis

Staff specializations: digital literacy, STEM, faculty/grad/postdoc, online learning, classroom-integrated support



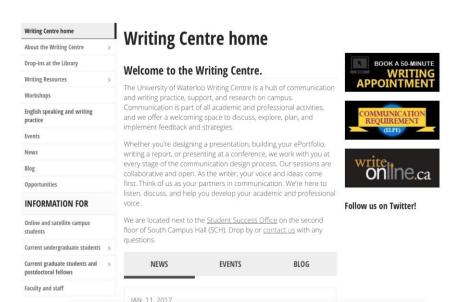






Use the Writing and Communication Centre

Book a one-on-one appointment:



Come to a drop-in:

Dana Porter Library				
Monday	10 am – 4 pm			
Tuesday - Thursday	10 am – 7 pm			
Friday	10 am – 2 pm			
Davis Centre Library				
Monday - Thursday	11 am – 3 pm			
AHS (BMH 1048)				
Tuesdays	11 am – 2 pm			



What questions do you still have?





References & Resources

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