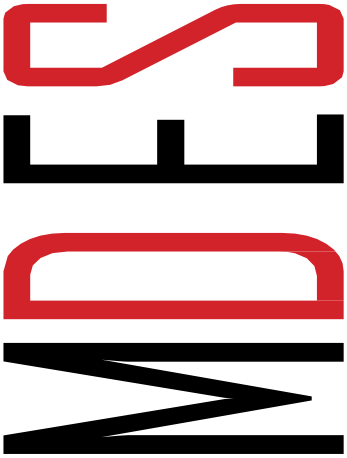
MDes Handbook

Master of Design
School of Industrial Design
Carleton University



Fall | Summer | Winter | 2025 - 2026

School of Industrial Design

3470 Mackenzie Building
1125 Colonel by Drive
Ottawa, ON, K1S 5B6


SUSTAINABILITY
DESIGN
SOCIAL
DESIGN
INNOVATION
DESIGN
TECHNOLOGY
INTERDISCIPLINARY
DESIGN
EXPERIENCE
DESIGN
USER-CENTERED
INDUSTRIAL

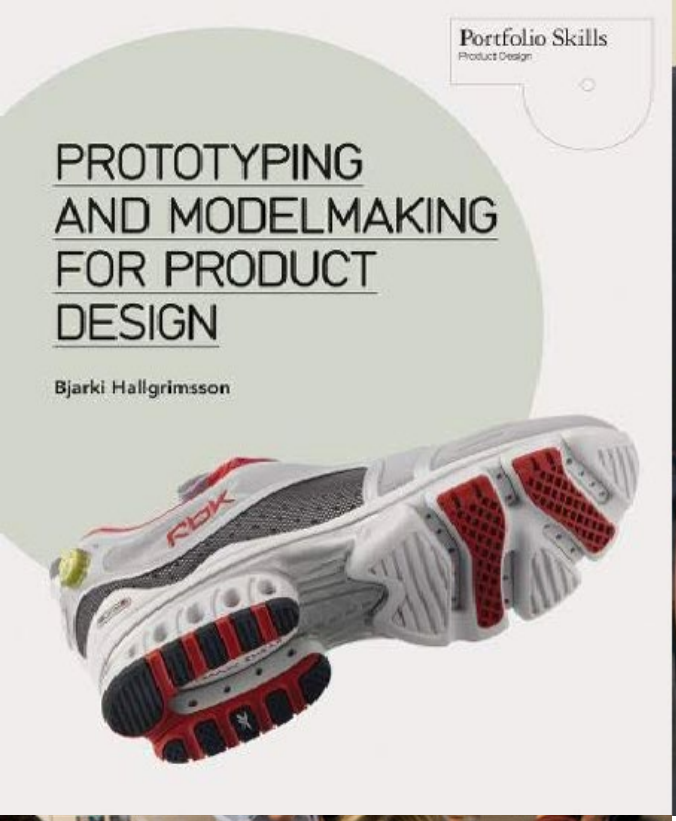
1. PROGRAM OVERVIEW

The School of Industrial Design (SID) offers a program of study and research leading to the Master of Design (MDes) degree. The Master of Design can also be taken with a Collaborative Specialization in Accessibility. Both programs require successful completion of 5.0 credits, including a 2.0 credits thesis. The program takes a strong research approach and is normally completed after two years of study.

The focus of the program is to advance knowledge in the field of Design through the study of advanced design principles and interdisciplinary design practices. This is achieved through a program of study that will enable graduates to positively integrate design principles, methodologies, and interdisciplinary design development processes into private and public sector business practice.

Students examine and incorporate multifaceted design principles and practices that contribute to the strategic value of design with particular research focus on the following key areas: Accessibility and Inclusion.

They also have the opportunity to engage in interdisciplinary interactions with faculty from the school as well as faculty and students from a diverse range of disciplines in the university, all linked to the design development process.


Portfolio Skills
Product Design
PROTOTYPING AND MODELMAKING FOR PRODUCT DESIGN
Bjarki Hallgrimsson
RBK

2. PRIMARY LEARNING OBJECTIVES

Design Research

The study of methods for investigation, exploration, and data collection such as undertaking and differentiating between qualitative and quantitative data collection for design problems; examining discursive methods of critical analysis and practice; and employing emerging theories and practices in supervised research projects.

Interdisciplinary Design Development

The study and practice of methods that are used to foster collaboration across disciplines which may include: working on and contributing to projects in interdisciplinary teams; working on design projects with external public and private sector partners with a solid record of interdisciplinary development experience; learning in “interdisciplinary-team-taught” courses, and thesis supervision.

Knowledge Creation and Dissemination

It involves expanding knowledge within critical design areas (e.g. advanced materials and manufacturing processes, advanced visualization, design and culture, design management, extreme environments, human-centered design, product interaction design, social innovation, sustainable design, and strategic design research); writing and presenting papers; delivering workshops at conferences and seminars, limited funding support; and creating archival reference documents for industry such as case studies and technical reports.

Strategic Design Planning

The study of methods for planning, implementation, and application may include incorporating strategic user observation analysis into design projects; identifying systems-related patterns for effectively planning design projects; merging relevant strategic design research and business practices; and integrating user-oriented innovations in prototyping new services and products.

3. ACHIEVEMENT OF PRIMARY LEARNING OBJECTIVES

The learning objectives are achieved through a sequence of core courses structured to provide the opportunity for balancing theory and practice and are integrated with courses from different disciplines. The core courses offer a variety of pedagogical approaches such as project-based interdisciplinary studio activities, lecture-based methodology and theory classes with individual and/or team papers, a seminar class, international conference, and workshop participation.

The sequence is structured so that students learn the theory and principles in one course, such as Design Research Methods (IDES 5102), and apply it in a subsequent course, such as the Interdisciplinary Design Development Studio (IDES 5103).

Students are also required to take one elective course to deepen their knowledge in areas relevant to their thesis topic. Finally, each student undertakes a supervised thesis investigation to apply and demonstrate the principles, research methods, and knowledge acquired.

All the core courses highlight interdisciplinary and/or collaborative work in theory or practice, where the term interdisciplinary refers to the cooperation between people from different disciplines to achieve common goals that integrate expertise from those different disciplines. For example, the Interdisciplinary Design Development Studio (IDES 5103) may focus on projects undertaken by teams of students who share their different expert knowledge and experiences such as business, psychology, architecture, and information technology among others.

In addition, the core courses highlight a balance between technological, environmental (sustainable), cultural, and social concerns. To this end, the core courses promote a primarily user-centered design research approach.


Improving SensAct's Usability and Potential to Support
Augmentative and Alternative Communication (AAC)
Using Human-Centred Design Methods


Overview: Why momentum?
Enhance visitor experience:
Successful case studies
Motivation
Sense of connection
Dearth of research in Momentum


Carleton


human-oriented
collaboration


disciplinary
sustainabil
innovat
research


interdisciplinary
sustainability
management
prototyping
interaction design
manufacturing processes
extreme environments
education
research
technology
innovatio

Peer Learning

Graduate students are expected to have a regular presence in the studio to benefit from peer learning as well as interactions with professors. The peer-learning model is the underlying principle behind the MDes classes in which students working on their projects have the advantage of engaging in and learning from critical discussion, interaction, and problem-solving with peers and professors. In addition, graduate students may be invited to present research-in-progress talks to the student body at regular informal gatherings, and to participate in the annual undergraduate seminar (IDES 4001). Students are also encouraged to present papers and workshops at conferences and seminars, with funding support made available to them, on a limited basis.

Interdisciplinary Aspects

The objectives of learning interdisciplinary design development processes involve integrating different disciplines and different people to achieve common goals. In the MDes program, the student body is made up of students with different design backgrounds whose discipline-specific perspectives broaden everyone's viewpoints. Opportunities for working with non-designers may be found in core and elective courses to prepare graduates to work on teams with non-designers in their future workplaces.

The Interdisciplinary Design Development Seminar (IDES 5101) introduces relevant issues in design discourse. Design Research Methods course (IDES 5102) and Interdisciplinary Design Development Studio (IDES 5103) may include students enrolled in other degree programs such as the Sprott School of Business MBA program, the Master in Human-Computer Interaction, or the Master of Engineering in Technology Innovation Management. Working on a design problem that crosses disciplines provides experiential learning in interdisciplinary design development processes. Furthermore, the extended core faculty of the program includes individuals who are members of different faculties and/or departments at Carleton University in addition to the School of Industrial Design. These faculty members can be involved as co-supervisors in student thesis committees.

Finally, studio projects may be undertaken collaboratively with private sector partners with a solid record of interdisciplinary development experience who participate in studio activities and/or consult with the students on a regular basis.

The school has a long history of collaborating with public and private sector partners such as the National Capital Commission (NCC), Motorola, Bombardier, World Design Organization (WDO), Black and Decker, DW Product Development, Smart Technologies, and others.

4. PROGRAM REQUIREMENTS

The MDes program requires successful completion of 5.0 credits with at least 4.5 credits taken at the 5000 level or higher.

The Graduate Program Coordinator approves elective course selections that might be chosen with the assistance of the supervisor. Only one 0.5 credit elective may be taken as a Directed Study. Only one 0.5 credit elective may be taken as a 4000-level course. The schedule of coursework and thesis progress follows:

Year 1
Fall Term

IDES 5101
IDES 5102

ACCS 5001
(Accessibility)

IDES 5101 Interdisciplinary Design Development Seminar (0.5 credit)
Investigation of disciplines involved in design development, with experts in Business, Engineering, Sociology, Anthropology, Architecture, Psychology, Human Factors, Industrial Design, and others. Includes a critical examination of methods used to integrate different approaches, and roles that personality, leadership, negotiation, conflict management, and team building play in collaboration. Introduction to graduate academic writing.

Milestone 1
***Thesis Supervisor Assignment Form**

IDES 5102 Design Research Methods (0.5 credit)
Critical analysis of research methods in design and disciplines contributing to design including anthropology, psychology, sociology, and business. Application areas include advanced materials and manufacturing processes, advanced visualization, product interaction design, extreme environments, sustainable design, design and culture, design management, and human-oriented design.

ACSS 5001 Critical Disability Studies (0.5 credit)
Course engages disability theory, culture, and activism to consider bodily difference and its relation to the workings of power and social control, accessibility, normalization, ableism, and medicalization. Students will gain an understanding of contemporary debates, theories, and methodologies of critical disability studies.

Thesis Supervisor & Co-supervisor
MDes students are assigned a thesis supervisor who is faculty member at the School of Industrial Design, Carleton University. Co-supervisors, if any, can be Carleton Faculty member external to SID or an Adjunct Professors who is member of SID. An Adjunct Professor may only supervise an MDes thesis as co-supervisor.

** Please refer to Appendix*

Students must submit the ***Thesis Supervisor Assignment Form** no later than **the 30th of September** in the First term of registration. If there is a co-supervisor, then the form must be resubmitted by the **23rd of December**.

Milestone 1 - Statement of Study Interest
This statement is a short document of the area of student's research interest that has been identified and narrowed down during the 1st semester. It should include a brief description of the student's primary research curiosity along with the preliminary research questions and the implication of its potential results. The research topic should tie to the research areas of the supervisor. This document should follow the provided template. It must be submitted to the MDes Brightspace submission link and eventually emailed to the co-supervisor, if any, for evaluation **by the 23rd of December** in the 1st Fall term (if the student does not meet this deadline, it will be difficult to meet the May deadline for Milestone 2). Milestone 1 needs to be developed with the supervisor's support, who will provide constructive feedback before and after submission. Final feedback and assessment will be provided on Brightspace by the supervisor.

Year 1
Winter Term

IDES 5103
Elective 1

Elective 2
(non-Accessibility)

ACCS 5002
(Accessibility)

Milestone 2

IDES 5103 Interdisciplinary Design Development Studio (0.5 credit)
Team-based studio projects draw on interdisciplinary design development methods in achieving a common design objective. Projects will be supervised by academic and industry advisors from a wide range of disciplines and conducted in collaboration with professionals from external organizations.

ACSS 5002 Accessibility and Inclusive Design Seminar (0.5 credit)
Provides foundational knowledge, exploring interdisciplinary approaches for incorporating accessible, inclusive, and human-centered design principles into the research, design, and development of products, information, and environments that can be used by all people, regardless of ability.

Milestone 2 - Literature Review
A literature review is an overview and evaluation of the scholarship that exists on a specific topic or research question student's research topic. It allows students to gain a good perspective and comprehensive overview of their research topic in the literature; and to identify critical points in current theoretical and methodological contributions to a particular topic where their research focus would fit. Students must

review up to 10-15 relevant sources. This document must be submitted to the MDes Brightspace submission link and emailed to your external co-supervisor by the **31st of May**. Milestone 2 needs to be developed with the supervisor's support, who will provide constructive feedback before and after submission. Final feedback and assessment will be provided on Brightspace by the supervisor.

Year 1
Summer Term

For the most current listing of summer course offerings, visit the public class schedule. Students may also use the "Build Your Timetable" feature in Carleton Central to plan their summer schedule to ensure successful registration.

In addition, summer is the perfect time to get ethics approvals, collect data, and read thesis related literature in preparation for Milestone 3. Please consult with the student's supervisors and, if any, co-supervisor to develop the thesis proposal.

Year 2
Fall Term

Elective 3
(non-Accessibility)

Milestone 3

Milestone 3 – Thesis Proposal*

The thesis proposal is a substantial document, resulting from considerable preliminary research into the thesis area. It must include clear research questions, hypothesis investigated, relevant sources from concrete literature review, and doable data collection and analysis methods and research plan. Milestone 3 needs to be developed with the supervisor's support, who will provide constructive feedback before and after submission. Final feedback and assessment will be provided on Brightspace by the supervisor.

It must be submitted according to the template provided to the MDes Milestones Brightspace submission link and, eventually, e-mailed to your co-supervisor **by the end of September** in year 2. After the submission, an **oral presentation** should be given to the invited audience including SID supervisor, co-supervisor (if any), other faculty members and students. This event is held **in the first weeks of October.**

Thesis Proposal should include the following information.

1. Introduction
   - Area of interest & Research question
2. Literature review
3. Methodology
   - Data gathering
   - Ethics
4. Planning & Timescales
5. References

**Students must successfully satisfy each Milestone requirement before proceeding. If a Milestone is unsatisfied, the re-submission date will be negotiated with the Graduate Program Coordinator and the student's Supervisor and, eventually, Co-supervisor.

Year 2
Winter & Summer Term

IDES 5909
Final Thesis

Oral Examination

IDES 5909 Thesis (2.0 credit)
A comprehensive study that demonstrates the student's ability to conduct critical research in the specialization area in which design can contribute to competitive advantage through design planning and interdisciplinary design development processes. It should exhibit competence in design research process by applying an existing body of knowledge in the critical analysis of a new question or of a specific problem or issue in a new setting.

Thesis
This document should minimally include the following headings, as discussed on the Graduate Studies website - https://gradstudents.carleton.ca/resources-page/thesis-requirements/

Title Page
Abstract
Acknowledgments
Table of Contents
- List of Figures
- List of Tables
- List of Appendices

1. Introduction
   - Background/Context
2. Literature Review
   - Theoretical/Conceptual Framework
3. Methodology / Approach
4. Results / Research Findings
5. Discussion / Limitations/ Further studies
6. Final Considerations

Bibliography (APA format, 6th edition for citations and references only)
Appendices

Once the SID thesis supervisor approves the examination copy (deemed ready for defence), the student should upload the copy to Carleton Central at least **three weeks** before the defence date. The Thesis Approval Form is signed off electronically by the thesis supervisor indicating that the thesis is ready for defence. Once the thesis defence has taken place and all corrections are made, the final copy must be

uploaded to Carleton Central. To do that, the student submits their final copy to the supervisor and the SID supervisor notifies the Graduate Administrator that the student is ready to upload. Then, the Graduate Administrator will authorize the upload for the student to do in Carleton Central. Along with the upload, the student must fill out licenses and agreements. Information for thesis submission is available on the Graduate Studies website in a document entitled “Thesis Examination Policy”. The copies must comply with any special school requirements governing the form of the thesis, including methods of bibliographical entry and the use of diagrams and tables.

Oral Examination

An oral examination is required for all students in the MDes program. The examination board will be formed by the SID thesis supervisor, co-supervisor, an examiner from a department other than that of the candidate, one additional member from the department concerned and a chair.

For more detailed information, see Graduate Studies website in the document entitled “Thesis Examinations Policy”.

5. MDES STUDY SEQUENCE

	Year 1			Year 2	
Research & Coursework	**Semester 1 Fall**	**Semester 2 Winter**	**Semester 3 Summer**	**Semester 4 Fall**	**Semester 5 Winter**
IDES 5101 (0.5 credit) Interdisciplinary Design Development Seminar	●				
IDES 5102 (0.5 credit) D e s i g n Research Methods	●				
IDES 5103 (0.5 credit) Interdisciplinary Design Development Studio		●			
Elective (0.5 credit)		●			
Elective (0.5 credit)		●			
Elective (0.5 credit)			●	or ●	
IDES 5909 (2 credit) Thesis					●
Semester Credit	1.0	1.5	0.5	0.5	2.0
Accumulated Credit	1.0	2.5		3.0	5.0
Deliverables	**Milestone 1** Statement of Study Interest Thesis supervisor Assigning form	**Milestone 2** Literature Review		**Milestone 3** Thesis Proposal	**Final Thesis & Oral Examination**
Research Activity	Establish area of interest Identify a potential research topic Prepare Milestone 1	Scope of topic Hypothesis & Questions Develop methodology Prepare Milestone 2	Ethics Application Data Collection (If applicable) Literature Review Prepare Milestone 3	Conduct data collection Analyze & Synthesize data Identify Insights Draft of thesis	Examination Copy Complete Thesis Oral Defense
Supervisor	Confirmation of SID Supervisor		Work continues with the supervisor	Work continues with the supervisor	Formation of Examination Board

6. MDES with Collaborative Specialization in Accessibility STUDY SEQUENCE

	Year 1			Year 2	
Research & Coursework	**Semester 1 Fall**	**Semester 2 Winter**	**Semester 3 Summer**	**Semester 4 Fall**	**Semester 5 Winter**
IDES 5101 (0.5 credit) Interdisciplinary Design Development Seminar	●				
IDES 5102 (0.5 credit) D e s i g n Research Methods	●				
IDES 5103 (0.5 credit) Interdisciplinary Design Development Studio		●			
ACSS 5001 (0.5 credit) Critical Disability Studies	●			or ●	
ACSS 5002 (0.5 credit Accessibility and Inclusive Design Seminar)		●			
Elective (0.5 credit)		●	or ●	or ●	
IDES 5909 (2 credit) Thesis					●
Semester Credit	1.0 or 1.5	1.0 or 1.5	0.5	0.5 or 1.0	2.0
Accumulated Credit	1.0 or 1.5	1.0 or 2.5 or 3.0		3.0	5.0
Deliverables	**Milestone 1** Statement of Study Interest Thesis supervisor Assigning form	**Milestone 2** Literature Review		**Milestone 3** Thesis Proposal	**Final Thesis & Oral Examination**
Research Activity	Establish area of interest Identify a potential research topic Prepare Milestone 1	Scope of topic Hypothesis & Questions Develop methodology Prepare Milestone 2	Ethics Application Data Collection (If applicable) Literature Review Prepare Milestone 3	Conduct data collection Analyze & Synthesize data Identify Insights Draft of thesis	Examination Copy Complete Thesis Oral Defense
Supervisor	Confirmation of SID Supervisor		Work continues with the supervisor	Work continues with the supervisor	Formation of Examination Board


SCHOOL OF
INDUSTRIAL
DESIGN

7. SCHOOL RESOURCES

Administrative and Technical Support

The School of Industrial Design has two full-time administrators. The Graduate Administrator is stationed in the General Office and is the first point of contact for master student inquiries. The School Administrator oversees the school budget and undergraduate students.

The Computer Technician is available for computing issues and other computing and electronic expertise.

The Lab technicians are available for manufacturing and model-making expertise and other advanced prototyping support if needed for graduate research.

Dedicated Space

MDes Studio in Mackenzie Building accommodates up to 24 graduate students. Students have access to this studio 24 hours a day. There are additional meeting rooms for faculty and students to meet to review their work on an ongoing basis, and they must be booked ahead of time. Some MDes classes will take place in the studio, and students not enrolled in those classes are welcome to work quietly in other parts of the room. Graduate students can also take advantage of the range of work and learning spaces currently utilized by the undergraduate program.

The school's Manufacturing Labs and Resources include sophisticated rapid prototyping capabilities, computer systems, equipment, and resources to support the design and development of three-dimensional and virtual prototypes. The Maker Room in the School of Industrial Design allows for significant research into and development of 3D printing technology, interactive electronic prototypes, and final proof of concept models.

It complements and supports the design and generation of interactive products and systems. While these labs are primarily for the students enrolled in the Bachelor of Industrial Design program, graduate students may find that they need to support the undergrads in the shops as TA's or need to produce prototypes for their own thesis research. In both cases, individual consultation with a Lab Technician is required.

8. FACULTY RESEARCH PROFILES

Upon acceptance to the program, each student will be assigned a SID Graduate Supervisor. Each student will be encouraged to develop their personal elective curriculum in consultation with the supervisor. The Graduate Program Coordinator will make every effort to balance graduate students' interests with supervisory assignments.

Bjarki Hallgrimsson,
Associate Professor,
School of Industrial Design

BIO

Professor Hallgrimsson is a product designer, author, and researcher. After graduating with a mechanical engineering degree and gaining professional experience, he discovered industrial design, which became the passion and focus of his future career. He holds an MSE in product design from Stanford University and has worked for several professional industrial-design consulting firms in the United States and Canada. His own company HPD developed award-winning and patented products for a variety of clients in a broad range of industries. “Prototyping and Modelmaking for Product Design”, by Laurence King Publishing is available in 5 languages and shows how “physical prototypes form a strategic part of a successful product designer’s toolkit”. Although a generalist at heart, his expertise in prototyping and working on community-based projects in Low to Middle-Income Countries continue to drive his interest in design for social prosperity through local and global north-south collaboration between universities and local organizations. Professor Hallgrimsson grew up in Sweden, Kenya, and Tanzania.

RESEARCH

Professor Hallgrimsson leads undergraduate and graduate students in research on practical prototyping methods, technologies, and applications. This has included diverse projects in collaboration with other disciplines. Currently, he is a co-principal investigator on the Gendered Design in STEAM project https://carleton.ca/id/more/gendered-design-in-steam/, where he has provided expertise on prototyping methods for use in creating dialogue and a more participatory process of community engagement in social innovation projects. Another current research interest is in collecting, cataloging, and narrating industrial design history. This has been made possible through collaboration with both the Department of History and the Department of Art and Architectural History at Carleton.

Chantal Trudel,
Director & Associate Professor,
School of Industrial Design

BIO

Chantal Trudel is a graduate of Carleton University's School of Industrial Design (B.I.D) and earned her Master's Degree in Applied Ergonomics (MSc) from the University of Nottingham. Chantal's experience reflects her appreciation for the role of industrial design within interdisciplinary teams and working with other professions to achieve a comprehensive understanding of people, processes, and their context. Early in her career, she conducted research for Teknion's 'Advanced Concepts' and worked as a product designer for Umbra. For over 10 years, she has worked within the field of architecture and interior design, exploring the use, planning, and design of spaces and products within complex building systems. Starting with commercial interiors at B+H Architects, she went on to specialize in healthcare environments with Parkin Architects. Since then, her field experience in designing healthcare environments has given her insight into product limitations and potential research opportunities.

Chantal has worked on large, multidisciplinary teams, as a planner and designer at Winnipeg's Health Sciences Centre's (HSC) Women and Newborn Hospital (Parkin Architects/Architecture 49) and as a designer during the pursuit stage of Infrastructure Québec's McGill University Health Network Glen Campus competition in Montreal with (Parkin Architects under OHL). Her work has been featured in Canadian Interiors for the design of McClelland and Stewart's office (B+H Architects). In 2010, Chantal and her colleagues received the Canadian Architect Award of Excellence for the Women and Newborn Hospital and a High Commendation for the same project from the International Academy for Design and Health in the International Future Health Project Category in 2012.

RESEARCH

Chantal is interested in design's role in health, safety, performance, and productivity, with a special interest in clinical processes and the design of products and environment; patient and family experience in health care design; design for women and newborn care; the role of design in understanding and practicing infection prevention and control (IPAC); and human-computer interaction in health care design. Her students have explored digital navigation in hospitals; noise cancellation/ personalized acoustic control for in-patients; IPAC and ergonomic considerations in commode chair and hand sanitizer design; sensor and internet-enabled technology for facilitating family assistance in care; to name just a few examples. Other students have explored health and safety within the context of forest fighting with the Ontario Ministry of Natural Resources and Forestry, investigating human factors considerations.

Chantal's research on clinical audiology as it relates to the ergonomics and design of products and the environment has been featured in Access Audiology & The Leader, a digital publication on the American Speech–Language–Hearing Association website. Her master's thesis examined the influence of product and environmental design as well as clinicians' perspectives and work motivations, on IPAC within a neonatal intensive care unit. The study leaded to the development of a framework for understanding IPAC breaches and recommendations for further research and development.

Chiara Del Gaudio,
Graduate Program Coordinator,
Associate Professor,
School of Industrial Design

BIO

Chiara Del Gaudio is a designer, researcher, and instructor in Design. She is an Associate Professor and Graduate Program Coordinator at Carleton University's School of Industrial Design. She holds a Ph.D. in Design from Pontifícia Universidade Católica do Rio de Janeiro, an MSc in Design & Engineering from Politecnico di Milano, and a Bachelor's degree in Industrial Design from the same institution. She has been teaching Design at both undergraduate and graduate levels in Brazil and Canada, and she has been Visiting Professor in Italy and the US. Her education and practice, teaching, and research experience bring elements from strategic and participatory design, together with a critical study in design perspective, and knowledge on the design of processes, systems, services, and products. After working as a product and service designer, her design practice has mainly focused on Design's social and political dimensions in projects at the intersection between the university and local communities.
She has been working on applied design research projects addressing more democratic, inclusive, and sustainable urban contexts, design processes, and outcomes. Since 2014, she has also worked as a strategic consultant for small service and innovation enterprises in Brazil and, more recently, in Canada.

RESEARCH

Chiara Del Gaudio's main research and practice interests are Design as a political process, Participatory and Collaborative design approaches, Strategic Design for Social Innovation, and power and conflict in Design processes. Within this framework, her research mainly focuses on designers' contribution toward more inclusive, resilient, and sustainable societies. Specifically, she seeks to explore how designers can promote the conditions for them to happen and design processes for self-determination. In this regard, she researches: how power plays out in the design process, the dynamics of oppression and resistance by design; how Design can prevent dynamics of discrimination, exclusion, and marginalization; the issues inherent to 'dominant design' knowledge; and how to evolve the existing Participatory and Strategic Design practice through the concepts of tactics, devices, and strategies, and the theories of complexity. Moreover, she has been researching the limits, challenges, and risks related to collaborative and participatory approaches when applied in society, mainly in conflict-affected and fragile urban areas; and the necessary conditions for this kind of Design practice. She founded and leads the Urban Imaginaries Lab (www.urbanimaginarieslab.com). She also is an active member of the design research community at the national and international levels. In Brazil, she organized and re-designed the National Symposium on Sustainable Design in 2015 and 2017. In 2020 she organized the 16th Participatory Design Conference on the theme "Participation Otherwise" and is part of its Advisory Board. She was invited to discuss and present her work at national and international events and seminars. She has published in peer-reviewed journals such as CoDesign, the International Journal of Design, Urban Design; and in edited collections such as Designing in Dark Times: An Arendtian Lexicon. She has worked with members of the Participatory Design network to foster the discussion of emerging topics in Design and Participatory Design, such as decoloniality, plurality and pluriverse, oppression and resistance, and gender issues within design processes. She edited two special issues for the Strategic Design Research Journal.

Juan Jiménez Garcia,
Assistant Professor,
School of Industrial Design

BIO

His background is in industrial design. He obtained my BA from Universidad de Los Andes in Colombia. Following this, he completed his advanced studies at the MSc. program 'Design for Interaction' of Delft University of Technology (TUDelft), the Netherlands with Cum Laude degree. He received my PhD in Human-Computer Interaction at the Faculty of Industrial Design Engineering, TUDelft. After graduating, he worked as a post-doctoral researcher.

Research and education have been for him a journey of discovery, of who he is, the world around him, and his contribution to society. This journey so far has opened the doors to share and implement his design perspectives and tools across cultures with an interdisciplinary focus. He works closely with TUDelft in The Netherlands, Beijing Normal University in China, and The Hong Kong Polytechnic University in Hong Kong.

RESEARCH

He is passionate about human-centered design for personal informatics systems. His work is conducted through ethnographically informed design, human-centered design, and participatory design. His interest is to create social impact by designing socio-technical systems that deliver meaningful experiences between people, technology, and data, understanding and representing real human needs through digital interactions that improve people's daily life.

He focuses on:

- Understanding as the initial stage in the development of technological systems;
- Designing for user empowerment;
- Designing for personal reflective and persuasive informatics;
- Integrating qualitative and quantitative data;
- Designing for healthcare and wellness scenarios.

Current research directions:

- Enhancing the accessibility of healthcare digital technology by closing the gap between design requirements and people's localized needs and values;
- Developing and applying HCD methods in a real context in order to understand people's daily life experiences and their impact on the design of solutions;
- Studying the notion of global north vs. global south for best practices in the design of context-oriented solutions;
- Studying behavioral change strategies in developing reflective, persuasive, or coercive personal informatics systems.

Stephen Field,
Undergraduate Program Coordinator,
School of Industrial Design

BIO

Stephen Field is an internationally experienced industrial designer with over 25 years of background in the design and development of products and systems. As an educator, Stephen mixes his professional experience with his enthusiasm and passion for design. From day one of first-year studio Stephen introduces students to the design process, a process that will be cultivated throughout their industrial design education. As the students advance through the program Stephen, through his teaching, illustrates the importance of a holistic approach to design. As a past entrepreneur, he describes how the importance of sound business thinking combined with design can create innovative products and systems for the world's diverse markets.

Only by understanding the tools and skills of design can students develop the visual language needed to create.
Stephen puts a great deal of emphasis on students developing the ability to sketch; he sees it as one of the most valuable skills to allow for the formulation of a good design. Only through the ability to sketch can a designer then pool the many other tools of design to create and develop products and systems.

RESEARCH

Coming from a global background in the design and development of energy-efficient housing components and manufacturing, my research focus has led me to demonstrate how collaborative holistic approaches can be utilized in developing sustainable products and systems for remote Canadian First Nations and Inuit communities. By working within an interdisciplinary framework that creates participatory research teams within the university; Sprott School of Business, School of Industrial Design, and Environmental Engineering. Through this collaboration, students embrace co-creation and co-design research methods. By conducting intensive multi-week field trips, students actively engage with communities, employing participatory approaches and implementing prototyping and testing methods. Due to the geographic isolation, students develop tools and methods that facilitate distant distributed studios, allowing for ongoing community engagement. Graduate students interested in a collaboration that applies design processes to assist in developing self-sufficiency and self-reliance through community entrepreneurship that is respectful to the indigenous communities.

Tim Haats,
Assistant Professor,
School of Industrial Design

BIO

Tim Haats is an experienced product designer, entrepreneur, researcher, and educator with expertise in product development and small business management. As an Assistant Professor in the School of Industrial Design at Carleton University, Tim utilizes his practical skills, knowledge, and passion for design and business to explore the relationship between design and entrepreneurship, and how emerging design practices support innovation.

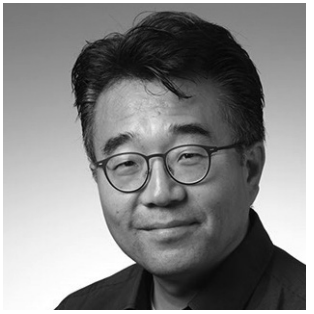
Tim defines himself as a pracademic with active roles in both academia and professional practice. He is a small corporate business owner in the service industry managing many organizational aspects from daily operations to strategic planning. He is also a mentor and consultant for product design and entrepreneurship, working with students, inventors, and start-ups on different projects in various capacities. With this, Tim approaches his research initiatives from a practitioner's perspective with a focus on bridging practical and theoretical knowledge. A large part of his work is dedicated towards fostering industry partnerships, building professional relationships, and continuing to strengthen the links between research, academics, and professional practice.

RESEARCH

Tim's research interests revolve around design, entrepreneurship, and business, and the emerging design practices that support innovation. This includes topics such as design entrepreneurship, design thinking, business design, emerging technologies, design tools and methods, and intellectual property. Currently, Tim's focus is mainly on design entrepreneurship and emerging technologies.

Within the topic of design entrepreneurship, Tim is working towards understanding the dynamics of venture start-ups and how design can play a critical role in the development of successful small businesses. He is also trying to understand what makes designers entrepreneurial and how to foster more designer-founders in support of innovation and economic development.

Within the topic of emerging technologies, Tim is exploring the use of Extended Reality (XR) – including Virtual Reality (VR), Augmented Reality (AR), and Mixed Realty (MR) – within industrial design practice, and how these technologies can support product development through forms of collaboration, communication, prototyping, and testing. This includes understanding how professional designers are currently using these technologies, but also investigating new opportunities that will enhance the design process. Furthermore, Tim is exploring the development of new technology applications. This work is being done in collaboration with businesses and organizations who are innovating within their respective industries.



WonJoon Chung,
Associate Professor,
School of Industrial Design

BIO

Dr. Chung is an industrial designer and design educator interested in research on individual and collective creativity of designers, strategic research on design thinking, and pedagogical research to improve students' design competency to meets the demand of the 21st century. He received his bachelor's degree from Konkuk University in South Korea and his master's degree from the Ohio State University's department of industrial design. After several years of design practices, he joined the Ph.D. program at the Institute of Design at Illinois Institute of Technology (IIT) in Chicago and received his doctoral degree focusing on developing theoretical frameworks for the use of early prototype to facilitate interdisciplinary collaboration in 2009. Dr.Chung started his design career as a kitchen furniture designer at ENEX in South Korea and worked as a design research intern at Battelle Memorial Institute in Columbus, Ohio, and LPK in Cincinnati, Ohio. While pursuing his doctoral degree at the Institute of Design, IIT, he taught a foundational course, called "Introduction to Product Design" for non-design background students. He joined Carleton's design program in 2007 and is currently an associate professor.

RESEARCH

Dr. Chung's research focuses on the individual and collective creativity of designers, strategic research on design thinking, and pedagogical research to improve students' design competency in response to the demand of the 21st century. Specifically, he is interested in working on a practical application of the characteristics of design thinking such as abductive reasoning process, reflective practices, outside the box thinking, and iterative process using tangible artifacts (i.e. sketches and prototypes) to tackle a wicked design problem.

His research endeavour led him to be invited to participate in several government-funded projects in Korea that allowed him to establish a partnership with a number of prestigious industry partners as well as a design department in universities in Korea.

Steven Pong,
Assistant Professor,
School of Industrial Design

BIO

Dr. Steven Pong completed his Bachelor of Design in industrial design at OCAD University, in 2005. Immediately after, he spent several years developing products, packaging, and fixtures for premier Canadian companies including Mimran Group/ Alfred Sung and Richelieu Hardware before returning to school to complete a Master of Design degree at NSCAD University, in 2009. While investigating the function of industrial design in applied academic medical research for his thesis, Steven accepted a position at the Kite Research Institute at UHN as an industrial designer. In this role, he collaborated with scientists and students to design and build devices required to complete healthcare-based research, the analysis and communication of results, and the commercialization of promising solutions. Research areas included: biomechanics, robotics, neural engineering, infection control, sleep, and mobility. While at Kite, Steven completed his PhD at the University of Toronto in the Department of Mechanical and Industrial Engineering, in 2019. His thesis required the development and testing of an electronic system designed to reduce the incidence of healthcare-acquired infections through increased hand hygiene performance among health care workers. After finishing his studies, Steven was promoted to Staff Scientist, in charge of Design and Fabrication Services. In 2022, Dr. Pong transferred to an Affiliate Scientist role at Kite and accepted an Assistant Professor position at the School of Industrial Design at Carleton University where he continues to teach undergraduate courses and conduct design-focused research.

9. GRADUATE SUPERVISION – RESPONSIBILITIES & EXPECTATIONS POLICY

Responsibilities of Supervisors

1. To provide constructive feedback to work submitted by the student in a timely manner as governed by departmental guidelines. This includes the student's thesis work as well as his or her research papers. Where this feedback cannot be provided within one month, this delay must be handled in full consultation with the student.
2. To maintain regular communication and consultation with the student.
3. To be available for regular and timely consultations with students and to provide notification of lengthy absences and the support mechanisms available under these circumstances.
4. To agree to continue supervision when on sabbatical or other type of leave, or to assist the student in making arrangements for supervision during the period of the leave.
5. To assist students in seeking financial support, especially in writing letters of good quality in support of scholarship and fellowship applications (e.g. well-written, informative, typed, on university letterhead).
6. To convene meetings of the advisory committee.
7. To agree with the student on a reasonable schedule for the completion of each portion of the research and thesis. Supervisors should advise their students to be aware of FGPA deadlines.
8. To be familiar with the regulations and standards of the faculty of graduate and postdoctoral affairs, and the academic unit, especially as they pertain to the conduct of research and the production of the thesis, and to ensure that the student is aware of these regulations and standards.
9. To be aware of and abide by the university's policies on conflict of interest, sexual harassment, and research ethics.
10. To assist the student in identifying a suitable research topic and (where appropriate) setting up a program of study.
11. To assist the student in the interpretation of research materials.
12. To indicate clearly when a draft thesis is in acceptable condition for examination or, if it is clear that the thesis is not examinable, to advise

the student in a timely fashion. In the case of disagreement between the supervisor and the student as to whether the thesis should move to defence, the student does have the right to proceed to the examination without the supervisor's support.

13. To complete all necessary departmental records and the supervisor's section of the annual audit form required by the faculty of graduate and postdoctoral affairs.
14. To discuss with the student as early as feasible, any potential joint authorships or joint ownership of data or patents which might arise, provide a written version of any understandings reached on these matters and also ensure that student contributions to publications are adequately acknowledged. (granting agencies and major journals have guidelines which cover some or all of these items.)
15. To discuss with the student any potential copyright issues related to external material reproduced in the thesis.

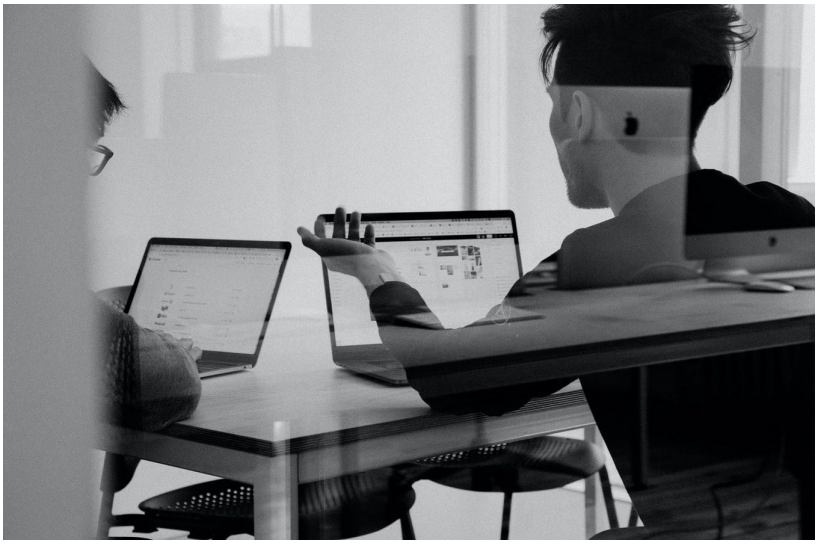
Responsibilities of Students

1. To choose, with the supervisor's help, a feasible research topic.
2. To work systematically and within agreed deadlines, as far as possible, in order to meet the program deadlines specified by both the department and the Faculty of Graduate and Postdoctoral Affairs.
3. To familiarize themselves with the unit and FGPA policies regarding the elements, course, and completion of their degree.
4. To make themselves available for meetings with their supervisor during regular business hours.
5. To be well prepared for meetings with the supervisor.
6. To participate in the professional development opportunities provided by their unit and FGPA.
7. To agree with the supervisor on a reasonable schedule for the completion of each portion of the research and thesis.
8. To submit to the supervisor all research materials, as requested, and, at the agreed times, drafts of parts of the thesis for comment.
9. To give serious attention to the advice and direction of the supervisor.
10. To realize that the supervisor has duties and commitments that may delay access at short notice or slow down the return of a draft.
11. To acknowledge direct assistance of material drawn from other scholars and researchers.
12. To produce a thesis that meets the specifications and standards of the Faculty of Graduate and Postdoctoral Affairs and the academic

unit.

13. To submit the thesis to the judgment of the academic unit via the examination procedures specified and to abide by the judgment of the examiners, subject to any appeal on grounds of procedural irregularities.
14. To respect copyright regulations when reproducing external material in the thesis.
15. To maintain regular communication with the supervisor.

This array of responsibilities imparts certain expectations on the part of both the supervisor and the student.



Expectations of the Supervisor

- To expect the student to pursue the agreed research topic, unless a change has been mutually agreed upon.
- To expect the student to give serious attention to advice concerning perceived deficiencies in the research and the thesis, and to receive a reasonable explanation when this advice is not followed.
- To terminate supervision if the student is not displaying a reasonable effort if they fail to heed advice on changes deemed essential, or if the student changes the agreed thesis topic without consent.
- To have their contribution to the thesis appropriately and clearly acknowledged.
- To have permission from the author of the thesis for the research set out in the thesis to be used as part of the larger project, when the student has produced the research as a research assistant employed on the larger project (with the understanding that the student will retain scholarly credit).

Expectations of the Student

- To be assisted by the supervisor in developing a clear and feasible research topic and in solving problems and assessing progress as the work develops.
- To be assisted in a clear understanding of the substantive and formal requirements of a thesis (e.g., length; methodology; validation of topic; degree of originality, especially in masters theses).
- To receive within a reasonable time frame a fair and thorough assessment of both the drafts and the completed thesis, and clear explanations of negative comments.
- To be permitted to seek a new supervisor (however, it is understood that an academic unit and the university cannot guarantee a suitable replacement).
- To be protected from arbitrary changes in research direction which are detrimental to the timely completion of the thesis.
- To have their contribution to the thesis fairly reflected in the attribution of authorship of publications and of patents.
- To be permitted to submit a thesis for examination even if the supervisor is not satisfied, providing the work conforms to the guidelines and regulations laid down by the Faculty of Graduate and Postdoctoral Affairs and the academic unit.

10. POTENTIAL PROBLEMS & PROCESS FOR RESOLUTION

When either the student or the supervisor feels that the supervisory relationship has failed to meet the responsibilities listed in this policy, they may request an informal resolution process. This will take place initially within the academic unit, and then, if not resolved, within Graduate Studies, with the involvement of the Ombudsman where this seems appropriate.

In those disciplines that do not assign a supervisor on admission, the student should understand that, while the academic unit will make every attempt to assign the supervisor of choice, the supervisorial relationship has to be consensual. Supervisors are assigned based on their availability and their competence in the field of the proposed thesis topic.

Students should understand that while the academic unit and the university will make every reasonable effort to find a supervisor for the student, there might be rare occasions where it proves impossible to do so. In cases where a suitable supervisor cannot be found, the student may be required to withdraw from the program in good standing.

Furthermore, students understand that their lines of research may encounter some change due to dependence upon the research direction of the supervisor.

Honorary Faculty Appointments with Approved Supervision Status
For students seeking information about graduate supervision status, please contact your academic unit directly.

For Carleton Faculty/Staff: You can access the up-to-date list of honorary ranks in Banner. If you do not have access to this list, please email faculty.affairs@carleton.ca.


2
EXIT

11. TRAVEL BURSARIES

The Faculty of Graduate and Postdoctoral Affairs provides funds to students in financial need who require assistance to conduct or present their research. The bursary account contains a limited amount of funds. Applications are considered on a case-by-case and first-come-first-served basis. Applications are submitted to your department for approval.

Guidelines

- Only allowed to submit 1 application per academic year.
- Retroactive applications will not be approved.
- Must be registered full-time in the term in which the bursary is approved, and the travel occurs.
- Electronic Application forms must be submitted to the department at least one month in advance of the expected travel activity.
- Funds can be for research or conference. Students conducting research will normally be registered in the thesis, research essay, or major research project course. Students attending a conference must have official confirmation from the conference organizer that the student's paper has been accepted for presentation.
- A letter of support from the student's thesis supervisor is required.
- A budget and rationale are also required.
- Students are required to submit a report after attending the conference or research, to include proof of attendance (e.g., boarding passes, registration fee receipt).
- If the travel is not completed for any reason, the amount of the bursary must be reimbursed in full.

How to Apply

Students apply by completing the Graduate Student Travel / Research Bursary online application form.

What you need:

- Rational on how this travel will assist your research
- Travel costs
- Financial resources
- Official confirmation from the conference organizer that your paper has been accepted for presentation.
- Letter of support from your thesis supervisor

Steps:

1. Login to Carleton Central
2. Select the Awards and Financial Assistance menu
3. Click on Graduate Online Application Forms
4. Completed Graduate Student Travel / Research Bursary online application form including the budget and rationale
5. Combine the official confirmation from the conference organizer that the student's paper has been accepted for presentation and letter of support from your thesis supervisor into one pdf file.
6. Attach the above file to your application.

APPENDIX A: THESIS SUPERVISOR ASSIGNMENT FORM

Thesis Supervisor Assignment

School of Industrial Design

- All parties should review the **Graduate Supervision-Responsibilities and Expectations Policy**
- Master of Design students will need to submit this form twice.
    1. At the end of September to confirm their supervisor and thesis topic area only.
    2. At the end of the fall term when the co-supervisor has been identified.
- Once the form has been submitted any changes to the supervisor or co-supervisor should be discussed with the Graduate Program Coordinator.

Student

Name _____ **Carleton ID:** _____

Signature _____ Date (mm/dd/yyyy) _____ **Email:** _____

Thesis Topic Area: _____

Thesis Supervisor

Name _____

Signature _____ Date (mm/dd/yyyy) _____

Co-Supervisor (only required by the end of the fall term)

Name _____

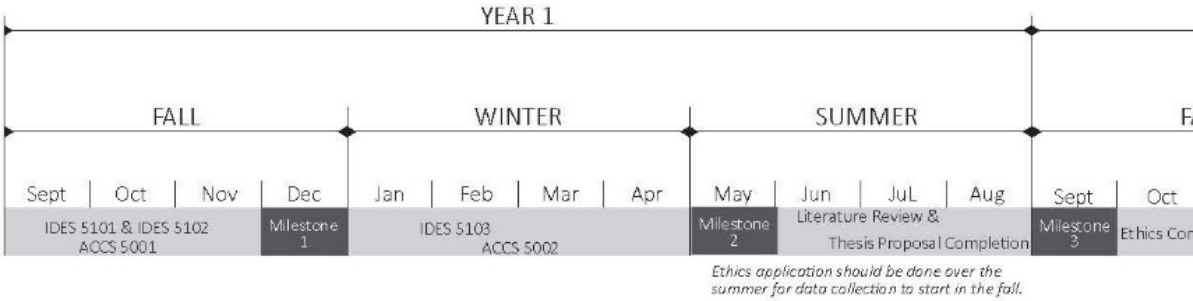
Signature _____ Date (mm/dd/yyyy) _____

Supervisors

MDes is an interdisciplinary program where there can have both supervisor and co-supervisor for the thesis. MDes students must choose a thesis supervisor who is faculty member at the School of Industrial Design, Carleton University. The co-supervisor is optional and can be any Carleton Faculty member (including SID) or an Adjunct Professors who is member of SID. An Adjunct Professor may only supervise an MDes thesis as a co-supervisor. If your proposed supervisor does not fit the above description, you must discuss this with the Graduate Program Coordinator, before you will be given approval.

*Please submit completed form to Brigthspace under the **MDes Milestones** course.*

APPENDIX B: MDES PATHS TO COMPLETION



Milestone 1
Statement of Study Interest

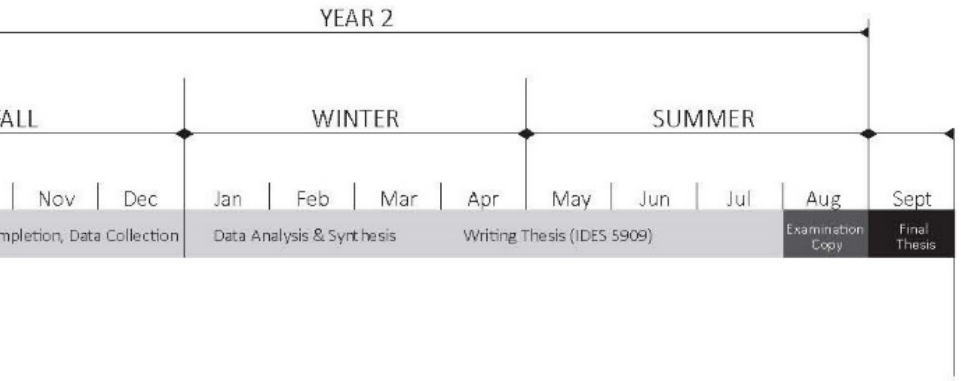
Statement of Study Interest is a summary of your research interest that has been narrowed down during the 1st semester. It includes a brief description of your preliminary research questions along with the implication of the potential results of the research. Make sure that your research topic must tie to the research areas of the SID faculties with whom you want to work.

This document must be submitted to the MDes Brightspace submission link and, eventually, emailed to the external co-supervisor for evaluation by **December 23 in year 1** (If you don't meet this deadline, it will be difficult to meet the deadline for Milestone 2.)

Students must submit the thesis supervisor form no later than September 30.

Milestone 2
Literature Review

Literature Review is an overview and evaluation the scholarship that exists on a specific topic or research question student's research topic. It allows students to gain a good perspective and comprehensive overview of their research topic in the literature; and to to identify critical points in current theoretical and methodological contributions to a particular topic where their research focus would fit. This substantial document of the preliminary research into a thesis topic areas must be submitted to the MDes Brightspace submission link and, eventually, emailed to your external co-supervisor by **May 31 in year 1.**



Milestone 3
Thesis Proposal

Thesis proposal describes what you will investigate, why it is important, and how you will do the research to get your thesis plan approved. It includes the clear research questions, hypothesis investigated, relevant sources from literature review, and doable data collection and analysis methods and research plan.

Milestone 3 must be submitted be submitted to the MDes Milestones Brightspace submission link an, eventually, e-mailed to your co-supervisor by **September 30 in year 2.**

Oral Presentation will occur in October.

Examination Copy

Examination copy of your thesis must be distributed to the thesis examination committee **3 weeks before the defence (by mid August, at latest) in year 2.**

Oral thesis defense will be scheduled 3 weeks after the submission of the examination copy.

The committee needs to be defined 2 weeks before the distribution on the thesis to the committee.

Final Thesis

The deadline of a final thesis submition is usually in **the middle of September** for November graduation (date changes yearly).

If the final thesis is not submitted until middle to end of September, graduation will take place in the winter semester, without having to pay ongoing tuition fees.

Students must successfully satisfy each milestone requirement before proceeding. If a milestone is unsatisfied, the re-submission date will be negotiated with the Graduate Program Coordinator and the student's thesis supervisor.