ETAPA LAB MANUAL

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Table of Contents

General

Introduction

Welcome to the Energy Technology and Policy Assessment (ETAPA) research group! This manual is intended to provide general information on administrative policies/procedures, degree completion and various services/guidance offered by McGill and the lab. ETAPA is a welcoming space, and we are all here to help one another; therefore, please feel free to ask other lab members for questions. We all contribute to this manual to help each other, so if you have information worth adding, please let Dr. Jordaan know!

Also, thank you to the Barrett Lab for the inspiration of this lab manual template.

About This Lab

Decisions about energy technology and the advancement of innovation can either adversely or positively impact our economy and the environment. Both life cycle assessment (LCA) and techno-economic analysis (TEA) are pillars to the quantitative sustainability research we undertake. We develop novel LCA methods to understand the changing regional and temporal patterns of energy infrastructure and the subsequent environmental outcomes. Our analyses examine project-level economics of both new innovations but also existing technology alternatives that can mitigate impacts. Technology innovation plays a pivotal role in our policy research. We investigate the policies that encourage the development and deployment of more sustainable energy technology innovations. The ETAPA group produces research in line with the research themes of the Trottier Institute of Sustainability in Engineering and Design (TISED).

Equity, Diversity, and Inclusion

The ETAPA group is dedicated to creating a welcoming, inclusive environment and ensuring a positive learning experience. There are a variety of resources at McGill that aim to provide services for promoting equity, diversity, and inclusion, listed below.

The following information is provided by Dr. Luc Chouinard (graduate program director), Sun Chee Wong (graduate program coordinator), and from Dr. Jordaan.

Engineering Inclusivity, Diversity and Equity Advancement (E-IDEA)
As described by the E-IDEA is an umbrella of initiatives engaging students, staff, and faculty in advancing social equity, diversity, and inclusion across the Faculty of Engineering. The initiative

includes youth action and outreach, teamwork initiatives, EDI awards, projections art exhibits, and the EDI Advocacy Program.

Graduate Engineering Equity Committee (GEEC)
Email: equity.geec@gmail.clom
Website: https://equityeng.wixsite.com/geec

EUS Equity
EUS Equity is an initiative run by McGill University, which commits to promoting EDI in engineering. For more information, please visit here.

Student Clubs
The undergraduate and graduate student bodies offer various clubs that are focused on EDI values, listed below.
- Promoting Opportunities for Women in Engineering (POWE)
- National Society for Black Engineers (NSBE)
- Queer Engineer
- American Indian Science and Engineering Society (AISES)

For more information on the clubs listed, please visit here.

Email Etiquette

Professor Jordaan aims to respond to emails within 1-2 days. If there is no response in 2-3 days, simply follow up. Also, please be sure to pay close attention to group emails, as they include important information.

Individual Meetings

Individual meetings are scheduled monthly, by inserting your name in a Google Doc sent by Professor Jordaan; when available by email, please choose the time slot for your meeting in a timely manner.

If an additional meeting is required, please send Professor Jordaan an email with your availability (a when2meet or Doodle poll is helpful for scheduling).

Lab Group Meetings

Full group meetings will generally be held monthly during the semester. These meetings are meant to be a lively exchange of ideas, often centered on student progress through presentations and discussion. All lab members are expected to attend in person, with a Zoom link available for certain exceptions such as illness, which first needs to be confirmed by emailing Dr. Jordaan of your in-person absence so the group will ensure the Zoom has been started.

Undergraduate Students

SURE Students
For more information, please visit this [link.](link)

Casual Research Assistants
Filling out the assigned job application
After the job has been confirmed with Professor Jordaan, an administrative officer from the Department of Civil Engineering will send an email with a unique link for the job, posted on MyWorkDay.

Setting up MyWorkDay
Once the application has been filled out and accepted, you will receive an email from "IT Automated Notice", which will send you instructions on how to create a McGill staff email, which will be used for your profile on MyWorkDay.

Inputting Hours
Hours need to be submitted by the date of the given time period indicated in the "Time" section of MyWorkDay. The time periods are based on a 2-week period. The section indicates when a period "locks", therefore ensure your hours are submitted before the specified "lock" date. Once the hours are submitted, please email Dr. Jordaan indicating the period of hours submitted.

There is also a MyWorkDay app, available on the Appstore on your mobile device, which can be used for inputting hours, etc.

More information can be found here. If you have issues with onboarding, please consult this link first, prior to contacting support.

International Students

The following information is provided by Dr. Luc Chouinard (graduate program director) and Sun Chee Wong (graduate program coordinator).

As McGill University is Canada's largest host to international students, the campus offers a variety of services and events for incoming students. For general information, please visit [here](#).

International Student Services (ISS)
The International Student Services centre offers support and information regarding immigration, health services, and programs/events offered. Further information can be found [here](#).

McGill Orientation Week

Further information can be found [here](#).

The Buddy Program

Further information can be found [here](#).

First Friend
The First Friend program matches incoming students in the same region (ideally at the same level and faculty), which aims to offer support through the application and immigration process, and to establish a "first friend" prior to arriving! Further information and signing up can be found [here](#).

Post-Doctoral Scholars

The following websites detail the process of obtaining a work permit or a postgraduate work permit (PGWP) based on the individual's status in Canada, at McGill University, or if they are joining McGill from abroad. Also, note that there are distinct postdoc categories, and their rights vary accordingly. Nevertheless, regardless of the postdoc category, all postdocs should submit essential documents to qualify for registration. These crucial documents include (1) **a Letter of Agreement**, (2) **a Letter of Invitation**, and **the work permit**. A specific form for the Letter of Invitation can be obtained by requesting it from the Department of Civil Engineering.

[Postdocs_Instructions_Registration](#): This online resource furnishes information for Postdoctoral Fellows, International Postdocs, and Postdoctoral Research Trainees.

[Postdoctoral fellows/scholars/researchers](#): This website offers a comparative analysis of diverse postdoctoral categories, serving as a valuable resource for incoming postdocs.

[How to apply for a work permit](#): This website clearly explains the fundamental procedures for applying for a work permit.

Ph.D. Students

The following information is provided by Dr. Luc Chouinard (graduate program director) and Sun Chee Wong (graduate program coordinator), Department of Civil Engineering.

Degree Requirements

A thesis of original scholarship and distinct contribution to knowledge is required along with the following courses:

- CIVE 701 Ph.D. Comprehensive Examination
- CIVE 702 Ph.D. Research Proposal

Additionally, 6-8 credits of complementary courses at the 500 or 600 level taken from the Department of Civil Engineering are required. Please note that the complementary courses must be completed prior to registering for CIVE 701. The general timeline for thesis submission is ideally 3-4 years, with a maximum of 6 years. Tracking progress for the thesis is attached as a milestone to your myProgress, found here. The dates to submit your Progress tracking forms can be found here.

Master's Students (Thesis)

The following information is provided by Dr. Luc Chouinard (graduate program director) and Sun Chee Wong (graduate program coordinator).

Degree Requirements

The program has a minimum residency of 3 terms full-time, and the usual completion time is 20-24 months, with a maximum of 3 years. Transfer to the non-thesis option is possible with approval from the department. Tracking progress for the thesis is attached as a milestone to your myProgress, found here. The dates to submit your Progress tracking forms can be found here.

27 credits of thesis courses are required, including:

- CIVE 630 Thesis Research 1 (3 credits)
- CIVE 631 Thesis Research 2 (3 credits)
- CIVE 632 Thesis Research 3 (3 credits)
- CIVE 633 Thesis Research 4 (6 credits)

- CIVE 634 Thesis Research 5 (6 credits)
- CIVE 635 Thesis Research 6 (6 credits)

Additionally, there is a 1 credit-required course, CIVE 662 Master's (Thesis) Research Seminar.

17 credits of complementary courses are required; please note the following:
- A minimum of 9 credits must be CIVE courses
- A minimum of five courses at the 500 or 600 level, with at least 8 credits at the 600 level
- A maximum of 1/3 of coursework credits may be taken outside McGill (approval required from the department)

Master's Students (Non-Thesis)

The following information is provided by Dr. Luc Chouinard (graduate program director) and Sun Chee Wong (graduate program coordinator).

Degree Requirements

The program has a minimum residency of 3 terms full-time, and the usual completion time is 20-24 months if full-time. Transfer to thesis option possible with approval from the department. Tracking progress for the thesis is attached as a milestone to your myProgress, found here. The dates to submit your Progress tracking forms can be found here.

Also, please note that the project report is examined in the department only.

A minimum of 12 credits is required from a list of research-oriented courses from one of the research streams: Infrastructure, Environmental/Hydraulics – Water Resources, and Transportation (List A)

A maximum of 30 courses with an emphasis on expertise (specialty area) for professional practice are required. Graduate courses from other McGill engineering departments are allowed as complementary courses as well.

Additionally, a research seminar is required:
- CIVE 664 MEng (Non-thesis) Research Seminar (3 credits)

The Department of Civil Engineering also offers a Master of Engineering (M. Eng) non-thesis in Environmental Engineering program.

Research-course Credits

1. Email program coordinator (Sun Chee Wong for Civil Engineering) about intention to take research credits for non-thesis project.

2. Fill out the form with your PI, outline how many hours spent on the project per week and in total, and how many credits is that equivalent to. Also, write out your project outcomes and deliverables and a weekly schedule. The project credits will be graded.

3. Send the program coordinator the completed form with PI's signature for approval.

4. Once the project is approved by the department, request permission to register for non-thesis research credits on Minerva

5. The registration gets approved by the coordinators and then registration will be available

Expense Reports

Submitting an order through McGill Marketplace

McGill marketplace is the host to many products, ranging from office supplies to catering services. Follow the instructions below to submit an order:
1. Log into Minerva
2. Type "McGill marketplace" in the search bar
3. Search for products in the "Shop" page
4. Add items to cart
5. Once they have been assigned to "draft cart", assign the cart to a "requestor", i.e. search for Professor Jordaan's name (type Jordaan in search bar)
6. Send an email to Professor Jordaan to confirm the order

For more information, please visit here.

Online Booking

For travel bookings, please use this link.

FOAPAL is the structure that needs to be followed for classifying, recording, and reporting financial transactions. For more information, please visit here.

Concur

Please refer to the user guide provided by McGill for detailed instructions on accessing Concur, including information how to set up a profile, making a transportation reservation, etc. The link can be found here.

Lab-associated/Travel Reimbursements

Prior to any purchases, approval is required from Professor Jordaan, along with the 6 digit "Default Fund Code" for submission.

Before filing, please ensure that the direct deposit information is entered on the Student Menu in Minerva.

For individual expense reports, please follow the instructions below, provided by Ms. Stephanie Trempe (the faculty research financial administrator):
1. Log into Minerva
2. Student Menu
3. Expense Report Menu
4. Submit an Expense Report
5. Submit an Expense Report for Yourself

Please use the instructions found here. And ensure that the report is at detailed as possible (i.e. no acronyms as well)

If there are issues pertaining report submission, please email fst-civil.engineering@mcgill.ca (the faculty financial services).

Mylissa Falkner is the administrative coordinator; please email mylissa.falkner@mcgill.ca for additional support if needed.

Personnel Resources

General

The following information is provided by Dr. Luc Chouinard (graduate program director) and Sun Chee Wong (graduate program coordinator).

Service Point
The ground floor of the McLennan Library Building
https://www.mcgill.ca/servicepoint/

Local Computing Services
For opening a LAN computer account and other local computing services, contact
bill.cook@mcgill.ca or jorge.sayat@mcgill.ca

Campus Security Services
Downtown: 514-398-3000
Macdonald: 514-398-7777

Mental Health Services

Peer Support
Hub Peer Supporters, Peer Support Centre, Nightline, SACOMSS (Sexual Assault), and Safely Connected McGill.

The Student Wellness Hub
Students can access health promotion and meet with professionals, including:
- Access Advisors: providing single-session counselling, exploring, and accessing other resources (on-campus and off-campus)
- Counsellors and Local Wellness Advisors: mental health professionals
- Health Promotion Resources: programming including animal therapy, art hive, workshops and therapy groups

Keep.meSAFE
A free, unlimited, 24.7 access to mental health support for all McGill students; providing phone and mobile chat appointments in 60+ languages, with diverse counsellors who understand your experience and the unique needs of your community (including 2S&LGBTQ+, BI&POC,

immigrant communities, international students, individuals with disabilities, veterans and more. The service is available through the MySSP app or by calling 1-844-451-9700.

Graduate Students

The following information is provided by Dr. Luc Chouinard (graduate program director) and Sun Chee Wong (graduate program coordinator).

Please check the general information first found here, where the following information can be found, along with Gradinfo email messages:
- Requesting a leave of absence
- Changing research supervisor
- Preparing your M.Eng. project report
- Fast-tracking from your master's thesis degree to the Ph.D. degree

The timeline of programs and important steps can be found here.

Graduate Program Coordinator
Ms. Sun Chee Wong – gradinfo.civil@mcgill.ca for the daily administration of graduate studies and advice. Please make sure to use this email address rather than her personal address.

Graduate Program Director
Professor Luc Chouinard – luc.chouinard@mcgill.ca

Dean's Office
Professor Russell Steele – russell.steele@mcgill.ca, although the dean mostly deals with the graduate program director and coordinator, rather than directly with students.

Administrative Officer
Ms. Mylissa Falkner –mylissa.falkner@mcgill.ca, the main liaison for desk assignments, expense reports, TA forms and funding.

ETAPA Shared Drive

The ETAPA drive is where important documents will be placed (e.g. general literature, course list, the lab manual, etc.). If you do not already have access, contact Dr. Jordaan to help connect you.

Learning Resources

Course Recommendations

McGill has a variety of courses to offer; for a list of recommended courses, please visit the ETAPA shared drive for more information. Please note that these courses can provide ideas, but there will be more specific courses required for each student's line of inquiry, as mentioned above, so it should be used as a guide but confirmed and discussed with Dr. Jordaan.

General Literature on ETAPA Topics

The following links are relevant literature for general knowledge on ETAPA topics and a good starting point for research:

Life Cycle Assessment: Theory and Practice ([link](#))
Life Cycle Assessment: Part 1: Framework, goal and scope definition, inventory analysis, and applications ([link](#))
Life Cycle Assessment Part 2: Current Impact Assessment Practice ([link](#))

CDSI

The Computational and Data Systems Initiative (CDSI) led by the Faculty of Science for McGill students offers a large variety of free data science workshops and bootcamps that will support ETAPA research. For more information, please visit [here](#).

GIC

The Geographic Information Centre (GIC) is offered to all McGill students by logging into ESTI with your McGill SSO. The centre offers various workshops, lessons, and resources on the website. For more information, please visit [here](#).

Esri Courses

Esri training is a learning tool for ArcGIS, the program offers classes led by instructors and self-paced courses. Fore more information, please visit [here](#).

GitHub

Please feel free to share relevant GitHub links to Dr. Jordaan to add to the manual. The following can be useful for research:
GitHub-Python Web Scraper

Additional Tools

The following information is provided by Dr. Luc Chouinard (graduate program director) and Sun Chee Wong (graduate program coordinator).

The McGill Writing Centre
Mclennan-Redpath Library, Room #02
https://www.mcgill.ca/mwc/
514-398-7109
Inquiries: mwc@mcgill.ca
Tutorial services and online courses are also available.

The McGill Engine Centre
The centre focuses on stimulating and supporting technological innovators and entrepreneurs at McGill University in collaboration with the McGill Dobson Centre for Entrepreneurship and the Office of Innovation and Partnership. The centre's pillars include collaborative co-working space and bookable rooms for seminars, conferences, and meetings; co-curricular programming for workshops, seminars, lectures, and events; coaching, mentoring and connecting; project funding and industrial research and development collaborations.

Enhancing Learning and Teaching in Engineering (ELATE)
ELATE hosts events, creates resources, and facilitates learning communities to enhance the teaching and learning experience in the Faculty of Engineering. For more information, contact elate.engineering@mcgill.ca

Empower
Empower offers support to develop leadership, personal and professional skills in service of your future career. For more information about resources, contact empower.engineering@mcgill.ca

TISED
The Trottier Institute for Sustainability in Engineering and Design (TISED) is a centre of innovation in advancing education and supporting research within sustainability projects. TISED offers scholarships for undergraduate students, and funding for Ph.D. students (more information here). Additionally, the centre regularly hosts speakers that present their research related to

sustainability within a wide range of engineering. Sign up for the TISED newsletter here for information on upcoming events, courses, and seminars.

McISCE

The McGill Centre for Innovation in Storage and Conversion of Energy (McISCE) undertakes cutting-edge research in transformative energy conversion & storage technologies by engaging with collaborations and partnerships across McGill and externally. All ETAPA students are encouraged to get involved, as there is an active student engagement with interesting events and opportunities that you can all enjoy. Do reach out to the appropriate contact on the McISCE website.

Social Media and Website

Slack: https://etapa-jordaan.slack.com
Instagram: @etapa_group
Website: https://sites.google.com/view/jordaan-etapa/home?pli=1

If you would like to be featured on the website, please send a biography and profile picture; the current "People" section on the website offers general guidelines and examples to follow.

Moving to Montreal

Finding an Apartment
There are various resources for house-hunting in Montreal. The following are a few examples:
- Zumper (link)
- Facebook Marketplace
- McGill Facebook groups (although important to be cautious of scams)
  - Link
  - Link

Healthcare Options

Insurance for International Students
Health insurance is required for all international students through McGill's International Health Insurance Plan. Further information can be found here.

McGill Clinic

McGill has a clinic at both Macdonald and Downtown campus. The clinic is appointment-only, and it is suggested that it is best to call at opening hours. For more information, please visit this [link.](#)

There are also clinics offered by Quebec healthcare throughout the city, as well as private clinics with a fixed fee. For more information on clinics throughout the city, please visit this [link](#).

Hospitals

Montreal has numerous hospitals; for more information on locations and hours, please visit this [link](#).

Applying for Quebec healthcare

You may be eligible to register for Quebec healthcare; to check your eligibility and for more information, please visit this [link](#).

Transit Options

STM

Montreal has a reliable public transit system, with a variety of passes and routes available. For more information, please visit [here](#).

Macdonald Campus Shuttle Bus

McGill has another campus located in Sainte-Anne-de-Bellevue, approximately 40 minutes away from Montreal. It is the host for the Faculty of Agricultural and Environmental Sciences. There is a shuttle bus for travel between campuses, and the schedule can be found [here](#), along with other relevant information.

Student Contribution to this Manual

Maya Dwivedi-Leng
Vibhor Saoji
Dr. Zainab Obaid Almheiri