REx Workshops

1. Research Methodologies (STEM/HASS) (Mandatory for all REx Fellows)

Instructor(s): Dr Natalie Pang Lee San, Dr Magdeline Ng Tao Tao, Mr Richard Ho Cheng Yong

In this two-hour workshop, REx Fellows will learn about the various types of methodologies available such as qualitative, quantitative and mixed methods in research, how to select a suitable method to conduct research and how to evaluate the credibility of a research work. REx Fellows will also be enhancing their research skills when learning about the different types of databases available, how to retrieve key literature articles from these databases, what are the latest research tools and how to use them for their research.

- Ideate – To define or scope ideas to show novelty or identify gaps in research (by using effective search techniques)
- Search – To adapt various search strategies using different sources
- Measure and Enhance – To understand the basics of Scholarly Communication: publishing matters, research impact and research data management
- Overview of Research Methods in HASS or STEM

There are two options of this workshop - Option 1 is customized for STEM students while Option 2 is customized for HASS students. REx Fellows have the option to attend either one depending on their research needs.

2. Ethics in Research (Mandatory for all REx Fellows)

Instructor(s): Dr Rafi Rashid

This will be a two-part workshop, with each part lasting for two hours. The first part of the workshop will introduce REx Fellows to important ethical considerations when conducting research. Core topics of research ethics and integrity applicable to all disciplines will be covered and discussed in class.

The second part of the workshop will cover case studies where students will apply concepts learnt in the first part of the workshop, identify the ethical problem for each case and discuss with their peers and instructors of appropriate ways to approach the problem.

By the end of this 2-part workshop, students should be able to:

- Describe the ethical principles of research and identify codes and policies for research ethics
- Apply various research principles so as to articulate an ethically acceptable solution in various situations
- Recognize that reasoned judgment is valuable when making difficult decisions

- Affirm the importance of adhering to ethical norms in research
- Demonstrate an awareness of unethical research practices (e.g. through historical case studies)

3. Research Communications

Instructor(s): Dr Lee Ming Cherk, Ms Brenda Yuen Pui Lam

In this two-hour interactive workshop, REx Fellows will be introduced to the practice of communicating research findings in semi-formal written texts, such as news articles and blogposts, to non-specialist readers in an effective and engaging manner.

 By the end of the workshop, participants will be able to:

1. identify the purpose, audience, and content suited for formal and semi-formal types of written communication; and

2. use language and style that are appropriate to the semi-formal type of written communication.

The workshop is conducted through mini-lectures, critical evaluation of exemplars, and participants' writing practice in explaining their own research findings for non-specialist readers. Before the workshops, participants are expected to write and submit a short academic text (of no more than 150 words) about their own research. During the workshop, they will learn how to turn their submission into a piece of semi-formal written communication.

4. Careers in Research

Instructor(s): Dr Benjamin Tan, Dr Lakshmi Ramachandran

This two-hour workshop will be conducted by career advisors from Centre of Future-Ready Graduates (CFG). REx Fellows will get insights as to what constitutes research and how to kickstart a career in research. Instructors will share their own journey from graduate school to early careers post-PhD, and insights will be shed on differences between academia, industry and entrepreneurship, important core skills and attributes needed as well as employment opportunities for each. Tips will be shared on how to gain relevant research exposure via internships or undergraduate research experience such as UROP or FYP. REx Fellows will get to do some hands-on experiences to identify their interests and to explore potential career paths.

In this workshop, students will:

- Explore the options and career pathways in research and innovation, including academia, industry and entrepreneurship.
- Learn how to prepare for a career in the area of research and innovation Gain insights into Singapore's research and innovation landscape.

- Reflect on their potential career paths in research and innovation.

5. Research-Oriented Writing Workshop

Instructor(s): Dr Tait Caleb Bergstorm

This two-hour workshop will give REx Fellows a deeper insight into the process of writing and publishing their research findings. The workshop will cover the following:

1. Structure:

- Article Structure: what are the components of research writing: Title page, Abstract, Intro, Lit Review, Materials & Methods, Results/Data, Discussion, Conclusion, References, Appendices
- Paragraph structure: Intro paragraph(s), Body paragraphs

2. Style:

- Text: voice, tense, person, abbreviations and acronyms, contractions
- Use of figures and tables: design, introduction into text, discussion of significance in text

3. Citation and Writing from Sources:

- Quotation, paraphrase, and summary: when to use which and how to produce a good paraphrase
- In-text citation and references

4. Process: Strategies for writing up research

- Lit Review and Intro
- Conducting research
- Data analysis and interpretation
- Results and discussion
- Abstract and title
- Revision, editing, review, and proofreading

A peer review session at the end of the workshop will provide REx Fellows opportunities to talk to tutors and workshop instructors to get feedback and suggestions to improve their report and/or thesis writing.

6. Data Storytelling Workshop

Instructor(s): Kontinentalist Pte Ltd

This workshop is designed for students who want to develop their skills in using data visualisations and narrative structures to tell their stories. It will cover techniques for

effective data visualisation (e.g. chart hygiene and effective use of colours), storytelling tips and tricks, and how to understand your audience.

a) Storytelling and persuasion:

- The power and importance of storytelling
- The role of the data storyteller
- Understanding your audience

b) What are the essentials for a good storytelling:

- How to handle and curate your data
- Understanding the types of data stories
- Storyboarding and story structures

7. Poster Presentation Workshop

Instructor: Dr Siti Nur Fairuz Binte Sheikh Ismail

In this two-hour workshop, REx Fellows will go through essentials of preparing for a poster presentation session – this includes the visual, content and oral aspects of presenting an academic poster. The workshop will provide REx Fellows an understanding of the objectives of presenting an academic poster, guidelines and considerations of preparing and presenting a research poster to a specialised and non-specialised audience. For this workshop, REx Fellows will also get a chance to present a 3-minute elevator pitch to the audience and receive feedback on areas of improvement.

8. Panel Discussion Workshop

Instructor(s): Dr Priyam Sinha

This two-hour workshop provides REx Fellows an understanding of the principles, agenda, and how to plan and prepare for a panel discussion. Students will have an opportunity to do a role-play in being part of a mock panel discussion and receive feedback on the articulation of their ideas.

9. Artificial Intelligence in Research

Instructor(s): A/P Tan Wee Kek, Dr Lek Hsiang Hui

Artificial Intelligence (AI), in particular generative AI tools, will transform the way students learn and conduct research. This two-hour workshop exposes students to various opportunities to apply AI tools in research and also cautions against potential pitfalls. Students will be imparted with knowledge and skills to leverage on AI tools at each stage of the research process, namely:

• Use of AI tools in formulating and designing research problem;

• Use of AI tools in summarising research papers and conducting literature reviews;

• Use of AI tools in data collection and analysis; and

• Use of AI tools as an aid in writing research report.

Micro-lectures will be supplemented with various hands-on activities.

10. Storytelling for Impactful Communication

Instructor(s): Ms Susan Lee

If you agree that complex concepts can be communicated with simplicity, this workshop is for you. In the hands-on session, you will learn to create suitable story arcs and use rhetorical strategies to unpack complex ideas into relatable and useful information.

To craft compelling stories, we will first identify the target audience and develop authentic audience personas for the stories. We will analyse the functions of figurative language (e.g. imagery, analogy, metaphor, similes) for explaining concepts and scenarios in the context of your story. You may bring an example from your research to apply rhetorical strategies and develop your story.

At the end of the workshop, participants will be able to

- Analyse the target audience of your research pitch.
- Apply selected rhetorical strategies to simplify explanations of a concept or scenario for the target audience.
- Craft a story that integrates the use of rhetorical strategies to communicate effectively with the target audience.

11. Sharing Your Research: Making the Pitch work for you.

Instructor(s): Dr Jason Banta

Sharing your ideas should be a logical part of your own research plan! This workshop will help you develop a modular approach to sharing your ideas. By focusing on essential elements of good research, such as a rational for your work, an objective statement of your research goals, and an understanding of the implications of your ideas, we will develop a set of moves that you can use to describe your work in 3,5, or 8 minutes.

In this workshop, you will:

1) Identify the essential elements of your research as scaffold for sharing ideas.
2) Work on isolating the most impactful parts of your research to leave an impression on your audience.
3) Practice sharing technical expertise with non-specialist audiences.
4) Leveraging storytelling to create a memorable impression on your audience.