

ENG PHYS 706
Toward a New Era of Nuclear Energy: Message from Fukushima
Spring 2023
Course Outline

CALENDAR/COURSE DESCRIPTION

This course will be conducted in May or June 2023. Details will be announced later through A2L and/or email.

This course consists of two parts; (i) Trip to Fukushima Daiichi Nuclear Power Station and other nuclear facilities etc. in Japan, and (ii) UT²-Mac Joint Workshop.

The full attendance of both (i) and (ii) and the presentation at UT²-Mac Joint Workshop are mandatory.

At the present, UT²-Mac Joint Workshop is scheduled in the week of May 16, 2023 and Trip to Fukushima is in the week of May 21. But this schedule may change.

Note that whether this course is conducted as scheduled is dependent on the safety decision by university and department as well as on the situation of COVID-19 situation in Ontario and Japan.

Due to the arrangement of hotel and bus and due to the arrangement of nuclear facilities, an instructor cannot accept any new registration after February 1, 2023.

Students need to check whether the visa to Japan is required by themselves. Invitation letter will be issued from the University of Tokyo. Check how long it takes to get a visa.

PRE-REQUISITES AND ANTI-REQUISITES

Prerequisite(s): Registration in the final level of an Engineering Physics program

Antirequisite(s): NA

INSTRUCTOR OFFICE HOURS AND CONTACT INFORMATION

Dr. Shinya Nagasaki
NRB 105
nagasas@mcmaster.ca
ext. 27090

Office Hours:
By appointment

TEACHING ASSISTANT OFFICE HOURS AND CONTACT INFORMATION

NA

COURSE WEBSITE/ALTERNATE METHODS OF COMMUNICATION

<http://avenue.mcmaster.ca/>
www.coursewebsite.mcmaster.ca

COURSE INTENDED LEARNING OUTCOMES

By the end of this course, students should be able to:

- Make the research presentation at Joint Workshop of UofT, McMaster and the University of Tokyo (UT²-Mac Joint Workshop)
- Establish the human network among the similar generation of three institutes during and after the WS

- Understand the responsibility of nuclear engineer
- Consider the future of nuclear energy in Canada and around the world based on the lessons learnt from Fukushima
- Understand the design, operation and role of various nuclear facilities

MATERIALS AND FEES

No materials

Recommend reading “Reflections on the Fukushima Daiichi Nuclear Accident” (Springer Open) and other reliable information on Fukushima accident in advance.

Travel and accommodation fee: There are no financial supports from the department and university. Talk with your supervisor.

You can apply to Travel Grants; <https://gsa.mcmaster.ca/gsa-funding/travel-grants/>.

Cost image: As of the end of October, 2022. Exchange rate changes drastically. Check by yourself.

1000 JPY = app.\$9.5

Airfare: \$2,000 (Air Canada. Students must book the flights by themselves. Can look for a cheaper flights).

Hotel: average = 10,000 - 12,000 JPY per night (The Univ Tokyo and the instructor will book the rooms. Students do not need to book.)

Transportation: app. 10,000JPY to trains & 10,000 JPY to bus for Fukushima; Instructor will collect the latter (cash, no receipt) in Tokyo. Furthermore, I strongly recommend students to purchase the JR East Pass (Tohoku Area) in advance (20,000 JPY). https://www.jreast.co.jp/multi/en/pass/eastpass_t.html.

In addition, the students need the meal fees, the excursion fee and the fees on free days.

In order to access to the nuclear facilities, instructor will collect some personal information, and the information will be presented to our contact persons in the facilities.

Because we will trip to area where Government of Canada issues travel advisory (around Fukushima Daiichi nuclear power station), students will be required to do some paperworks which are submitted to university.

COURSE FORMAT AND EXPECTATIONS

The course is organized as follows:

- UT²-Mac Joint WS (participation and presentation: mandatory)
- Full participation in visit to Fukushima Daiichi nuclear power station and other nuclear facilities etc.
- Submit the final report

COURSE SCHEDULE

Schedule will be finally fixed in March 2023.

The following is the plan in 2020 (Just for your reference).

May 14: Departure from Toronto

May 15: Arrival at Tokyo (if students can arrive on May 15, any flight options are OK)

May 16 – 19: Joint UT²-Mac Workshop at the University of Tokyo

May 20: Free Day

May 21: Move to Iwaki-city, Fukushima in the afternoon

May 22: Visit TEPCO Fukushima Daiichi; Talk/discussion with a resident of Fukushima
May 23: Visit JNFL (Reprocessing, Enrichment, Waste Disposal facilities)
May 24: Visit nuclear facility (TBD)
May 25: Visit nuclear facility (TBD)
May 26: Return to Toronto

Details will be explained in the explanation session (March or April 2020). Schedule will be announced later

ASSESSMENT

Full attendance in two weeks and the presentation at the WS are mandatory.
Assessment will be dependent on how you contribute to the discussion at the WS and at the facilities we visit.
Final report (detail will be explained at the explanation session) is required.

EQUITY, DIVERSITY, AND INCLUSION

Every registered student belongs in this course. Diversity of backgrounds and experiences is expected and welcome. You can expect your Instructor to be respectful of this diversity in all aspects of the course, and the same is expected of you.

The Department of Engineering Physics is committed to creating an environment in which students of all genders, cultures, ethnicities, races, religions, sexual orientations, abilities, and socioeconomic backgrounds have equal access to education and are welcomed and treated fairly. If you have any concerns regarding inclusion in our Department, in particular if you or one of your peers is experiencing harassment or discrimination, you are encouraged to contact the Chair, Associate Graduate Chair, Academic Advisor, or to contact the [Equity and Inclusion Office](#).

These principles and expectations extend to online activities including electronic chat groups, video calls and other learning platforms.

PHYSICAL AND MENTAL HEALTH

For a list of McMaster University's resources, please refer to the [Student Wellness Centre](#).

ACADEMIC INTEGRITY

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. **It is your responsibility to understand what constitutes academic dishonesty.**

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. For information on the various types of academic dishonesty please refer to the [Academic Integrity Policy](#), located at <https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/>

The following illustrates only three forms of common academic dishonesty:

1. plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
2. improper collaboration in group work.
3. copying or using unauthorized aids in tests and examinations.

Note that **allowing** another student to copy one's work also falls under academic dishonesty and will be treated in the same way as copying another student's work.

COURSES WITH AN ON-LINE ELEMENT

NA

CONDUCT EXPECTATIONS

As a McMaster student, you have the right to experience, and the responsibility to demonstrate, respectful and dignified interactions within all of our living, learning and working communities. These expectations are described in the [Code of Student Rights & Responsibilities](#) (the "Code"). All students share the responsibility of maintaining a positive environment for the academic and personal growth of all McMaster community members, **whether in person or online**.

It is essential that students be mindful of their interactions online, as the Code remains in effect in virtual learning environments. The Code applies to any interactions that adversely affect, disrupt, or interfere with reasonable participation in University activities. Student disruptions or behaviours that interfere with university functions on online platforms (e.g. use of Avenue 2 Learn, WebEx or Zoom for delivery), will be taken very seriously and will be investigated. Outcomes may include restriction or removal of the involved students' access to these platforms.

ACADEMIC ACCOMMODATION OF STUDENTS WITH DISABILITIES

Students with disabilities who require academic accommodation must contact [Student Accessibility Services](#) (SAS) at 905-525-9140 ext. 28652 or sas@mcmaster.ca to make arrangements with a Program Coordinator. For further information, consult McMaster University's [Academic Accommodation of Students with Disabilities](#) policy.

Note that accommodations granted while in the undergraduate program do not transfer automatically to the graduate program.

ACADEMIC ACCOMMODATION FOR RELIGIOUS, INDIGENOUS OR SPIRITUAL OBSERVANCES (RISO)

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the [RISO](#) policy. Students should submit their request to their Faculty Office **normally within 10 working days** of the beginning of term in which they anticipate a need for accommodation or to the Registrar's Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

COPYRIGHT AND RECORDING

Students are advised that lectures, demonstrations, performances, and any other course material provided by an instructor include copyright protected works. The Copyright Act and copyright law protect every original literary, dramatic, musical and artistic work, **including lectures** by University instructors

The recording of lectures, tutorials, or other methods of instruction may occur during a course. Recording may be done by either the instructor for the purpose of authorized distribution, or by a student for the purpose of personal

study. Students should be aware that their voice and/or image may be recorded by others during the class. Please speak with the instructor if this is a concern for you.

EXTREME CIRCUMSTANCES

The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labour disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, A2L and/or McMaster email.