Climate and Space 747
Proposal Development
Fall 2024

Instructor: Enrico Landi (elandi@umich.edu)

Credits: 1 *(usually feels like 4)*

Lecture: In person:
Time: *Friday 9:30am-10:30am*
Location: *2424 CSRB*

Office Hours: Zoom:
Time: *Anytime, upon request*
Address: *https://umich.zoom.us/j/96727598875*
Passcode: *112043*

Course description:

The goal of this course is to help students to develop the necessary skills to write a successful proposal to a US funding agency, write such proposal, and to deliver a successful talk on their research topic.

Students will select, together with their Ph.D. advisor, a research topic they would like to propose to NASA's Future Investigators in NASA Earth and Space Science and Technology (FINESST) program. Each section of the proposal text will be built during this course, with comments from the instructor as well as from the other students during the Peer Reviews.

The final product of this course will be *a full, submittable proposal,* which will be evaluated by the instructor. This proposal will be presented by each student to the class during a talk at the end of the course, whose duration will depend on schedule and class size, and will be announced during the course.

Prerequisites: None

Requirements: None

Writing: You will be expected to write each and every section of the proposal following the guidelines of the FINESST program, in the order specified in the syllabus. Each writing assignment needs to be sent to the instructor by the deadline noted in the syllabus **(**early submissions are welcome). Late submission will count as a missed assignment and *will not be reviewed by the instructor.*

Use of AI technology such as ChatGPT is forbidden for your own safety: such technology is harmful to your future as a scientist as it prevents you from learning how to write (and think). Those who want to use it anyway, will do it (*without* Instructor's permission) because it is impossible to check, *but they will do so at their own risk*. By experience, such technology results in generic and shallow text, which is not going to attract favorable reviews from funding panels (and the instructor).

Talk: The pdf file of the final talk needs to be sent to the instructor **by 5:00pm of the day before the talk is scheduled** (earlier submissions are welcome). This gives time to the instructor to test them into his ancient laptop.

Lectures: The lectures are an indispensable part of the course. They will begin promptly at 9:30am. Please **arrive on time and do not leave before the end,** because both behaviors will disrupt other students. In order to maintain focus and attention during lectures, **all electronic devices (phones, tablets, personal computers) must be turned off during class.**

The Peer Review (see below) is a fundamental part of this course and will be part of the final evaluation, and requires your active participation.

All presentations files, description of the assignments, and any other relevant material will be posted on Canvas right after the lecture in which they have been introduced (Canvas > Files).

Peer Reviews: Peer Review requires active participation from each student, and has four main goals:

1. Each student will receive feedback not only from the instructor, but also from fellow students;
2. Students will be exposed to different writing styles, which can help them develop their own;
3. Students will be exposed to research outside their field; and
4. Students will get used to the tasks of reviewing someone else's work: such a task is a normal activity for a scientist

For the Peer Review, students will be given one or more proposals from other students (depending on proposal length and class size), will read them, and will provide feedback to the proposal author. Everything must be done within the hour, so that reviewers will have limited time to read the text. This way, the authors are forced to be as clear and easy to read as possible, because the reviewer will only have time to read the text once.

Honor code: We will follow all policies of the Honor Code, which can be found at

http://www.engin.umich.edu/students/honorcode.

Plagiarism will not be tolerated. Plagiarized work will receive a failing grade and will also result in further disciplinary action.

REQUIRED BOOKS No books are required.

ASSESSMENT

This course is Pass/Fail. To pass this course, students must have:

1. Completed their final proposal;
2. Successfully given their final talk;
3. Participated actively to each Peer Review; and
4. *Asked a lot of questions during lecture!*

SCHEDULE OF LECTURES AND ASSIGNMENTS

(BLACK: IN PERSON CLASS; MAGENTA: REMOTE CLASS; RED: CANCELED CLASS; BLUE: ASSIGNMENT)

WEEK 1

Aug 30 FRI 9:30AM: LECTURE - COURSE PRESENTATION

WEEK 2

SEP 5 THU 6:00PM: ASSIGNMENT - PROPOSAL TOPIC AND ABSTRACT
SEP 6 FRI *NO CLASS — GRADUATE STUDENT RETREAT*

WEEK 3

SEP 13 FRI 9:30AM: LECTURE - THE PROPOSAL JOURNEY

WEEK 4

SEP 16 MON 6:00PM: ASSIGNMENT - THE INTRODUCTION AND THE SCIENCE GOALS (1ST DRAFT)
SEP 20 FRI 9:30AM: LECTURE - WRITING A SUCCESSFUL PROPOSAL

WEEK 5

SEP 25 WED 6:00PM: ASSIGNMENT - THE INTRODUCTION AND THE SCIENCE GOALS (2ND DRAFT)
SEP 27 FRI 9:30AM: PEER REVIEW - INTRODUCTION AND THE SCIENCE GOALS

WEEK 6

OCT 2 WED 6:00PM: ASSIGNMENT - REVIEW OF ASSIGNED PROPOSALS
OCT 4 FRI 9:30AM: LECTURE - THE PROPOSAL IN THE SCIENTIST'S LIFE

WEEK 7

OCT 7 MON 9:00AM: ASSIGNMENT - METHODOLOGY AND TIMELINE
OCT 11 FRI *NO CLASS — INSTRUCTOR'S TRAVEL*

WEEK 8

OCT 16 WED 6:00PM: ASSIGNMENT - FULL PROPOSAL (1ST DRAFT)
OCT 18 FRI 9:30AM: PEER REVIEW - FIRST PROPOSAL DRAFT

WEEK 9

OCT 25 FRI 9:30AM: LECTURE - THE TALK IN THE SCIENTIST'S LIFE
OCT 28 MON 9:00AM: ASSIGNMENT - RESEARCH READINESS STATEMENT

WEEK 10

OCT 31 THU 5:00PM: ASSIGNMENT - FINAL TALK FIRST GROUP (PDF FORMAT)
NOV 1 FRI 9:30AM: FINAL TALKS - FIRST GROUP

WEEK 11

NOV 4 MON	9:00AM: ASSIGNMENT - DATA MANAGEMENT PLAN, ACKNOWLEDGEMENTS, MENTORING PLAN
NOV 7 THU	5:00PM: ASSIGNMENT - FINAL TALK SECOND GROUP (PDF FORMAT)
NOV 8 FRI	9:30AM: FINAL TALKS - SECOND GROUP

WEEK 12

NOV 14 THU	5:00PM: ASSIGNMENT - FINAL TALK THIRD GROUP (PDF FORMAT)
NOV 15 FRI	9:30AM: FINAL TALKS - THIRD GROUP
NOV 15 FRI	6:00PM: ASSIGNMENT - FULL PROPOSAL (2ND DRAFT)

WEEK 13

NOV 21 THU	5:00PM: ASSIGNMENT - FINAL TALK FOURTH GROUP (PDF FORMAT)
NOV 22 FRI	9:30AM: FINAL TALKS - FOURTH GROUP

WEEK 14

NOV 29 FRI	*NO CLASS — THANKSGIVING*

WEEK 15

DEC 2 MON	6:00PM: ASSIGNMENT - FULL PROPOSAL (FINAL VERSION)
DEC 6 FRI	*NO CLASS — INSTRUCTOR TRAVEL*

NOTES:

1 - ALL ASSIGNMENTS (TALKS, PROPOSAL SECTIONS, FULL PROPOSAL) IN PDF FORMAT
2 - INSTRUCTOR WILL *ALWAYS* BE AVAILABLE FOR QUESTIONS UNTIL THE OFFICIAL END OF CLASS AND THE FINAL ASSIGNMENT DEADLINE.