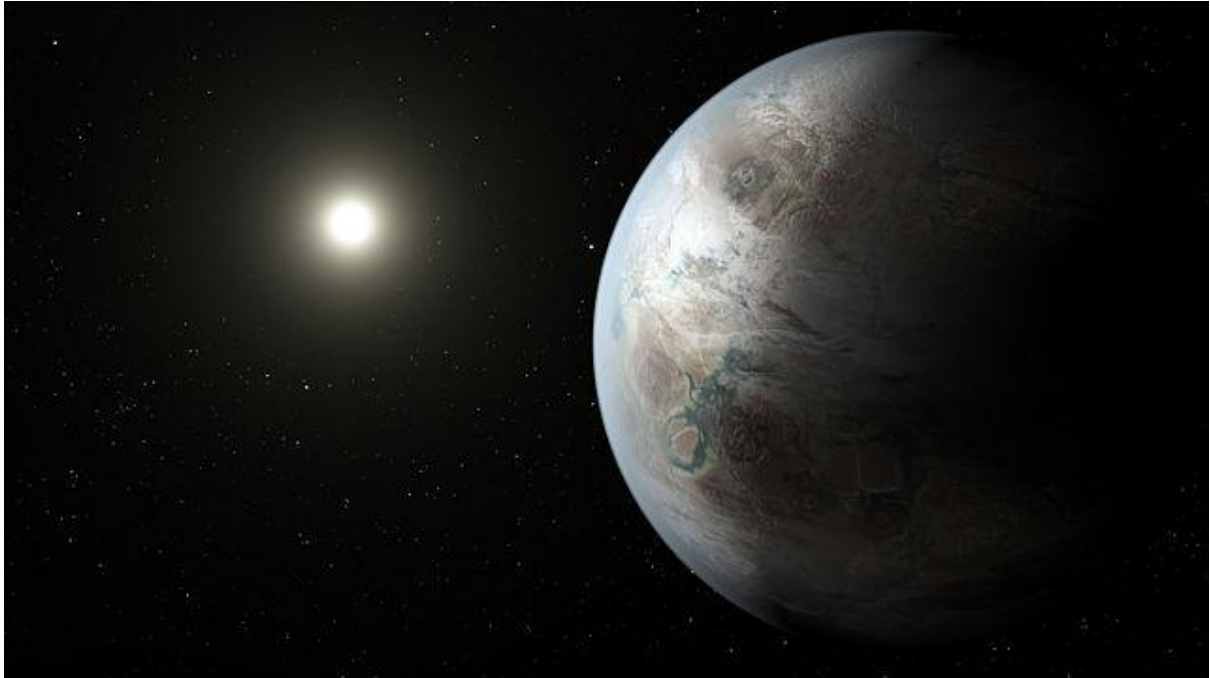


Searching for Extraterrestrial Intelligence



This 1-week MSc-level course provides an introduction to the field of SETI (Searching for Extra-Terrestrial Intelligence), i.e. the subfield of astronomy concerned with the search for technologically advanced life beyond Earth.

Teacher: Erik Zackrisson, Uppsala University, Sweden

Location: IIT Indore

Course period: Sept 9-11, 13-15, 2022

Topics covered:

Basic astronomy and astrobiology

The Drake equation

The Fermi paradox

The history of SETI

Technosignature search methods (radio signals, optical lasers, Dyson spheres etc.)

Messaging to Extra-Terrestrial Intelligence (METI)

Examination: In-class group exercises, digital quizzes

Students who pass the course will receive a course certificate.

Course plan:

- Lecture 1: Sept 9 - Course overview, basic astronomy & astrobiology + small in-class exercise

Slides in pdf format (1 slide per page in colour; 6 slides per page in black and white):

<https://uppsala.box.com/s/o6egf33tx9qiwfaajgmm0och76z1qsks>

- Lecture 2: Sept 10 - The Drake equation + small in-class exercise

Slides in pdf format (1 slide per page in colour; 6 slides per page in black and white):

<https://uppsala.box.com/s/656etp6cu34bns7p13ch5rwz2heyspsz>

- Lecture 3: Sept 11 - The Fermi paradox

Slides in pdf format (1 slide per page in colour; 6 slides per page in black and white):

<https://uppsala.box.com/s/or9qwacy3hp96xombd74ux3so1rl8pus>

- Lecture 4: Sept 13 - Schelling points in SETI + large in-class exercise

Slides in pdf format (1 slide per page in colour; 6 slides per page in black and white):

<https://uppsala.box.com/s/4bvix5ag95s8gb9h0vc48zxp08riy0kr>

- Lecture 5: Sept 14 - SETI search methods

Slides in pdf format (1 slide per page in colour; 6 slides per page in black and white):

<https://uppsala.box.com/s/rgpn54yd0f3t21avcfxusb9jzps6gz8e>

- Lecture 6: Sept 15 - Messaging to Extraterrestrial Intelligence + large in-class exercise

Slides in pdf format (1 slide per page in colour; 6 slides per page in black and white):

<https://uppsala.box.com/s/qz7knz61ysca5uzy9nnfajak087o7xb>

Note: Before attending lecture 6, please study the [Arecibo message wikipedia page](#) carefully - this will help you perform better in the in-class exercise

Digital quizzes

- Quiz 1 (covers lecture 1), deadline Sept 11. Join code: 4385 4077
- Quiz 2 (covers lectures 2-3), deadline Sept 13. Join code: 0891 6995

This one closed prematurely for some reason...

New join code: 4660 9155 (valid until Sept 14)

Please note that there is no need to redo the quiz if you already got a 100% score using the original join code.

- Quiz 3 (covers lectures 4-5), deadline Sept 17. Join code: 5172 0707

Instructions: Go to joinmyquiz.com and enter the join code for the quiz you are taking.

Remember to use your real name, and not an alias, when taking the quiz. Each quiz consists of ~10 multiple-choice questions. You need a 100% score for each quiz to get the course certificate, but you can attempt each quiz as many times as you like up until the deadline until you get 100%. The homepage is likely to pressure you into getting a quizziz account, but there is no need to get one for this course.

Known glitches: These quizzes work much better on a computer than a phone. On some phones, the font size may not be scaled appropriately, which makes it hard to read the full question and the answer options. Please note that if you take the quiz many times, the platform will add an asterisk (*) after your name for each new attempt. This is just the way quizziz is keeping track of how many attempts you have made, so no need to be alarmed by this. However, this procedure can cause problems if your name plus a large number of asterisks exceeds the maximum number of characters in the input field. If this happens, you should attempt to change some aspect of your name (e.g., switch order of first and second name), so that you still remain uniquely identifiable from other students in the course, but are using a different input string than before.