EAPS First Year Course (Fall 2019)

Professor: Andrew Babbin (contact redacted)
TA: Julia Wilcots (contact redacted)
Slack: [redacted]

SCHEDULE
MONDAYS: Class 3:30-5
FRIDAYS: Class 3:30-4:30, EATS 4:30-5, Peer hour at 5
Meet in room 54-209 except for Faculty Fridays and Final Presentations in 54-915

Sep. 6*	**F1**	**Welcome, introductions, tour of EAPS spaces, 3:30-5. NO EATS.**
Sep. 9^	**M1**	**Paper discussion 1: A Planet is Born**
Sep. 13	**F2**	**Writing resources, fellowship apps (with grad student panel)**
Sep. 16^	**M2**	**Paper discussion 2: Crazy Little Thing Called Life**
Sep. 20	NO CLASS: LONG POND RETREAT	
Sep. 23^	**M3**	**Paper discussion 3: Under the Sea**
Sep. 27	**F3**	**Faculty Friday 1**
Sep. 30^	**M4**	**Paper discussion 4: As the World Turns**
Oct. 4	NO CLASS: PAOC RETREAT	
Oct. 7**	**M5**	**Graduate student advising and mentoring workshop [3:00-5:00]**
Oct. 11	**F4**	**Faculty Friday 2**
Oct. 14	NO CLASS: COLUMBUS DAY	
Oct. 18	**F5**	**Panel on graduate student life**
Oct. 21^	**M5**	**Paper discussion 5: Winter is Coming**
Oct. 25	**F6**	**Faculty Friday 3**
Oct. 28^	**M6**	**Paper discussion 6: Welcome to the Anthropocene**
Nov. 1	**F7**	**Presenting your science: Posters/talks/figures/conferences**
Nov. 4^	**M8**	**Mini review paper work time: brainstorm + pitch**
Nov. 8	**F8**	**Faculty Friday 4**
Nov. 11	NO CLASS: VETERANS DAY	
Nov. 15	**F9**	**Mental health / imposter syndrome / VPR / Title IX**
Nov. 18^	**M9**	**Coding: Redfield Ratio; Paper to read, in-class assignment**
Nov. 22	**F10**	**Faculty Friday 5**
Nov. 25^	**M10**	**Written peer review**
Nov. 29	NO CLASS: THANKSGIVING	
Dec. 2	**M11**	**Graduate student panel: Generals Exam**
Dec. 6^^	**F11**	**FINAL PRESENTATIONS. Party!**
Dec. 9	NO CLASS: AGU	

* Weird class time: 3:30-5pm (no EATS)
** Department-wide grad student training
^ Something is due on this day (reading assignment, presentation, paper)

Paper discussion days:

On each six Mondays over the first half of the semester, we will spend class time discussing a major topic in the Earth Sciences. Each week, you will pick **one** paper from the four options provided, and read that paper **and the required popular science article** before that Monday's class. In class, you will first discuss the paper you read with the other students who chose the same paper as you. Then, we will scramble the groups and you'll present a summary of your paper to other students who read a different paper than you. We encourage you to select papers outside of your comfort zone! You should read at least one from each EPCL theme over the first 5 topics. This class is a low-pressure environment in which you will become more familiar with the breadth of research that falls under the beautifully encompassing umbrella of Earth, Atmospheric, and Planetary Sciences (and Oceanography; don't worry JP students).

Topic 1: A PLANET IS BORN

Everyone: "Kelvin, Perry and the age of the Earth"

Options:

Earth. Wood et al. 2006

Planets. Batygin and Laughlin 2015

Climate. Feulner 2012 (read only through section 3)

Life. Woese et al. 1990

Topic 2: CRAZY LITTLE THING CALLED LIFE

Everyone: RNA world, earliest life on Earth, Drake Equation

Options:

Earth. Alvarez et al. 1980

Planets. Sagan et al. 1993

Climate. Lyons et al. 2014

Life. Corliss et al. 1979

Topic 3: UNDER THE SEA

Everyone: Decline of coral reefs

Options:

Earth. Vine 1966

Planets Choblet et al. 2017

Climate. Forget and Ferreira 2019

Life. Chisholm et al. 1988

Topic 4: AS THE WORLD TURNS

Everyone: "How Marie Tharp changed geology forever"

Options:

Earth. Royden et al. 2008

Planets. Buffett 2000

Climate. Schneider et al. 2014

Life. Follows et al. 2007

Topic 5: WINTER IS COMING

Everyone: Nuclear winter

Options:

Earth. Hoffman et al. 1998

Planets. Hays et al. 1976

Climate. DeConto and Pollard 2003

Life. Dansgaard et al. 1975

Topic 6: WELCOME TO THE ANTHROPOCENE

Everyone: Stratigraphic expression of the Anthropocene

Options:

Solomon et al. 1986

Emanuel 2005

Broecker 1975

Joughin and Alley 2011

(Mini) Review paper assignment:

For the second half of the class, you will be split into groups of ~3 students and together write a short review paper (~3 pages) on a unique topic of your choice that is accessible to all. Ideally, the students in each group will be part of different subdivisions within EAPS and/or the Joint Program with WHOI.

Assignment class 1: Initial brainstorm + quick pitch of ideas

In class **Monday, Nov. 4**, meet in groups, discuss the theme you'd like to explore, pitch your idea(s) to the class in a quick presentation

Assignment class 2: In-class peer review

Full draft of your paper due on **Monday, Nov. 18**. Read all other groups' proposals by **Monday, Nov. 25**. In class 1-on-1 discussions of feedback.

Assignment class 3: FINAL PRESENTATIONS

Friday, Dec. 6, Hand in written review and give your final presentation. End of semester celebration! There will be cake.