

ASTR 380 Life in the Universe

Syllabus, Spring 2015

Tu-Th 12:30-1:45 CSS 2400

Professor: L. Drake Deming (office: PSC 1116, e-mail: ddeming@astro.umd.edu)

Office Hours: Monday 10:00-11:30, Wednesday 11:00-12:30, also immediately after class, or by appointment

Required text: "Life in the Universe" by Jeffrey Bennett & Seth Shostak, 3rd edition, Addison-Wesley. ISBN-13: 978-0-321-68767-8

The textbook is excellent, but there *are new developments in this fast-moving field that are not in the text*. So class notes will be essential. There will also be required reading of articles and papers on special topics, to be assigned in class. These readings will be posted to the class site on ELMS, and I will also post my class powerpoint slides on ELMS.

Schedule of Topics

Jan	27	Overview of the Universe - I - Text Ch. 1
	29	Overview of the Universe - II - Text 3.1, 3.2
Feb	3	Overview of the Universe - III - Text 3.3
	5	Observational Tools of Astronomy - Text 2.4 & 3.4
	10	Historical Context of Extraterrestrial Life - Text 2.1, 2.2, 2.3
	12	Formation of the Solar System - Text 3.3
	17	History of the Earth - Text Ch. 4
	19	Life on Earth: Nature and Diversity - Text Ch. 5
	24	Life on Earth: Origin - Text Ch. 6
Mar	26	Life on Mars I - Text 8.1 & 8.2
	03	Life on Mars II - Text 8.3 & 8.4
	05	Life on Mars III - reading to be assigned
	10	Mid-term Exam Number 1
	12	Life in the Outer Solar System - Text Ch. 9
	24	Pre-biotic Components of our Galaxy - reading to be assigned
	26	Extrasolar Planets I - Text 11.1 & 11.2
Apr	31	Extrasolar Planets II - reading to be assigned
	02	Extrasolar Planets III - reading to be assigned
	07	Super-Earth Exoplanets - reading to be assigned
	09	Kepler and the Search for Exo-Earths - reading to be assigned
	14	Mid-term Exam Number 2
	16	Biosignatures, and the Rare Earth Hypothesis - Text 11.3

- 21 The Drake Equation - Text 12.1
- 23 The Technological Singularity and the Simulation Hypothesis
(reading to be assigned)
- 28 The Search for Extraterrestrial Intelligence 1 - Text 12.2
- 30 The Search for Extraterrestrial Intelligence 2 - Text 12.3
- May 05 The Fermi Paradox - Text 13.3
- 07 Interstellar Travel - Text 13.1 & 13.2 & 13.4
- 12 UFOs and Alien Encounters - Text 12.4

FINAL EXAM: Tuesday May 19, 1:30-3:30 PM

Grades in the course will be determined by this weighting: Mid-term exams each 20%, Final exam 30%, homework and in-class exercises 30%. There may be some extra credit questions on exams, but there will be no extra credit term papers. I guarantee you will receive a grade *at least* this good, for the following percentages of total points:

A+ 100-97%	A 97-93%	A- 93-90%
B+ 90-87%	B 87-83%	B- 83-80%
C+ 80-77%	C 77-71%	C- 71-68%
D+ 68-65%	D 65-60%	D- 60-57%
	F < 57%	

Depending on the distribution of points in the class, the course grades may be adjusted upward from this scale.

There will be 8 to 10 assignments, some as homework and some as in-class exercises. Homework will be assigned in class, and also posted on ELMS/CANVAS. It will be due on the specified due date. If, for whatever reason, the University is officially closed (e. g., snowstorms) on the due date for homework, the due date will be moved to the next lecture. I DO NOT accept homework submissions by e-mail - you must bring hardcopy. If a student has a planned absence for an academic or other valid reason (including religious holidays), homeworks must be handed in before the due date by the student, or brought to class on the due date on behalf of the absent student. In class exercises can be done as homework only with an excused absence from class. An excused absence does not mean that you can skip that assignment, only that you can make it up for full credit. Homework may be handed in late with no excuse, up to one week after the due date, for half credit. After one week late, no homework or activities will be accepted. In the case of absence due to illness on the date an assignment is due, it must be submitted within one week. Contact Professor Deming in cases of prolonged illness.

Per University policy, a self-signed note, attesting to the date of illness must be submitted by the student for absence from ONE lecture. University policy requires that MORE THAN ONE medically-necessary (consecutive or non-consecutive)

absences must be documented by the Health Center or an outside health care provider, verifying the dates of treatment and the time period during which the student was unable to meet academic responsibilities. Following any absences, students are responsible for obtaining class notes and any missed assignments.

Students who will miss an exam for a valid reason may take a full credit makeup exam, but only if they CALL or E-MAIL Professor Deming BEFORE the exam. At the discretion of Professor Deming, students who miss an exam might be required to take an oral or "all essay" written exam.

University regulations regarding academic integrity apply to all work performed for credit in this course. Particulars regarding the University policy on academic integrity, including the Honor Pledge, are provided at:

<http://www.studentconduct.umd.edu/Info/Students/Default.aspx>

The University's Code of Academic Integrity is administered by the Student Honor Council, and as a student you are responsible for upholding these standards for this course. **The rules regarding academic integrity apply to homeworks as well as to exams.** Students are encouraged to discuss assignments and other class material with each other, but copying or paraphrasing from other students' written answers is not permitted; all written work must be a student's own.

Students with a documented disability who wish to discuss academic accommodations should contact Professor Deming as soon as possible. Students with religious conflicts must also contact Professor Deming in advance before missing class.

I have read the Syllabus for Astr 380, Spring Semester 2015,
and I understand the policies for the course.

>>> Print Name: _____

>>>> Sign: _____

>>>> Date Signed: _____