

IDH2930 – The Science of Starship Troopers

Instructor

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Office Hours

Tuesday 2 PM

Course Description

Robert Heinlein's classic novel *Starship Troopers* is widely considered as one of the best science-fiction novels written in the 20th century. Although it was written roughly sixty years ago, many of its technological aspects are strikingly modern and quite prescient. The class will focus primarily on the scientific and technological aspects encountered in the story. The novel is a very good example of "hard" science fiction where the essence of many of the fantastic devices that exist in the Starship Troopers universe are based on real physics recognizable in our present day (and perhaps near-future).

Students in this course will learn about these (and other) topics:

- Exoskeletal power-suits (robotics)
- Interstellar travel at relativistic speeds (modern physics)
- Exo/Xenobiology (extraterrestrial biology and life science)
- Directed-energy and atomic weapons (lasers and nuclear fusion)
- Realities of spacecraft dogfighting and maneuvering (space vehicle kinetics and thermodynamics)

The course consists of weekly discussions of a single chapter in the book (assigned previously) and short lectures on some of the technical aspects contained in that chapter.

Required Text

"Starship Troopers", Robert Heinlein

Material and Supply Fee

none

Evaluation of Grades

Attendance -- 25%

Participation – 50%

Reading Assignments – 25%

Late assignments will not be accepted.

Grading Policy

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Attendance and Participation Policy

Class attendance is expected. Each unexcused absence will result in a 5% reduction in the final grade. Excused absences are consistent with university policies in the undergraduate catalog (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>) and require appropriate documentation.

Students are expected to arrive to class on time and behave in a manner that is respectful to the instructor and to fellow students. Please avoid the use of cell phones and restrict eating to outside of the classroom. Opinions held by other students should be respected in discussion, and conversations that do not contribute to the discussion should be held at minimum, if at all.

Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.”

Evaluations

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open.

University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Schedule

(see Canvas Calendar)