FAU

FLORIDA ATLANTIC UNIVERSITY

COURSE CHANGE REQUEST
Undergraduate Programs

Department Physics

College Science

UUPC Approval 3/25/24
UPS Approval _____
SCNS Submittal _____
Confirmed _____
Banner Posted _____
Catalog _____

***Current* Course Prefix and Number**	AST 3110	***Current* Course Title**	Solar System Astronomy

Syllabus must be attached for ANY changes to current course details. See Template. Please consult and list departments that may be affected by the changes; attach documentation.

Change title to:

Change prefix
From: **To:**

Change course number
From: **To:**

Change credits*
From: **To:**

Change grading
From: **To:**

Change WAC/Gordon Rule status**
Add ☐ **Remove** ☐

Change General Education Requirements***
Add ☐ **Remove** ☐

*See Definition of a Credit Hour.
**WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See WAC Guidelines.
***GE criteria must be indicated in syllabus and approval attached to this form. See Intellectual Foundations Guidelines.

Change description to:

Change prerequisites/minimum grades to:
AST 2002 and (PHY 2053 or PHY 2048)
All with "C" or higher

Change corequisites to:
(PHY 2053 or PHY 2048)

Change registration controls to:

Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).

Effective Term/Year for Changes: Fall 2024

Terminate course? Effective Term/Year for Termination:

Faculty Contact/Email/Phone Korey Sorge / ksorge@fau.edu / 7-3380

Approved by	***Date***
Department Chair	3/11/24
College Curriculum Chair	3/13/24
College Dean	3/13/24
UUPC Chair Korey Sorge	3/25/24
Undergraduate Studies Dean Dan Meeroff	3/25/24
UFS President	
Provost	

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.

AST 3110-001
Solar System Astronomy

MWF 11:00 – 11:50
3 credits

Semester, Year
Prof. XXXXX YYYYY
Office: XXXXXX
Office hours: MWF 11-12
Classroom: XXXX
Telephone: 561-297-XXXX
Email: zzzzz@fau.edu

TA name	xxxxxx xxxxxxxxx
Office	xxxxxxxx
Office hours	MWF xx:xx – xx:xx
Telephone	561-297-xxxx
Email	xxxxxx@fau.edu

Course Description

An intermediate, interdisciplinary course on the nature and dynamics of the solar system through applications of physics, atmospheric science, chemistry and geology. The course expands students' understanding of the different bodies in the solar system, of the fundamental principles of Earth processes to explain/predict processes on other bodies in or outside the solar system and to help them to consider the bodies for future exploration.

Instructional Method

In-Person. There is no remote option for this course.

Prerequisites

- AST 2002 and
- (PHY 2053 or PHY 2048)
- All prerequisites with a "C" or higher

Corequisites

- (PHY 2053 or PHY 2048)

Course Objectives/Student Learning Outcomes

- **Demonstrate Knowledge of Celestial Bodies:** Students will be able to identify and describe the key characteristics of various celestial bodies in the solar system, including planets, moons, asteroids, and comets.
- **Explain Orbital Mechanics:** Students will understand the fundamental principles of orbital mechanics, including the laws of planetary motion and gravitational interactions, and apply them to predict the motion of celestial bodies in the solar system.
- **Interpret Planetary Geology:** Students will analyze the geological features of planets and moons, interpreting their surface structures, impact craters, volcanism, and other geological processes that shape the solar system's diverse landscapes.
- **Apply Scientific Inquiry:** Through hands-on activities and observations, students will develop and apply scientific inquiry skills, including hypothesis formulation, data collection, and analysis, to investigate specific phenomena within the solar system.
- **Explore Astrobiology Concepts:** Students will explore the potential for life beyond Earth, considering factors such as habitable zones, extremophiles, and the search for biosignatures on other celestial bodies, fostering an understanding of astrobiology concepts.

Course Evaluation Method

- Homework 20%
- Midterm Exam 1 20%
- Midterm Exam 2 20%
- Final Exam 40%

Course Grading Scale

A	92.5 – 100%
A-	87.5 – 92.5%
B+	82.5 – 87.5%
B	77.5 – 82.5%
B-	72.5 – 77.5%
C+	67.5 – 72.5%
C	62.5 – 67.5%
C-	60 – 62.5%
D+	55 – 60%
D	50 – 55%
D-	45 – 50%
F	<45%

Policy on Makeup Tests, Late Work, and Incompletes (if applicable)

Late Assignment Policy:

I do not accept late homework submissions for credit. Submissions made late will still be graded as normal, but for no points. Technological problems are not a valid reason for late work. I suggest that you start early so that if there is a technical glitch, we can come up with a solution to work around it.

Make-up Policy for Exams:

Please note that you must have a genuine and valid reason for missing or taking a test at a later time. This could be something like surgery (with a doctor's note) or proof of jury duty. An excuse such as "I had a headache," or "my boss wanted me to work an extra shift" is unacceptable. The exam schedule is given. Valid reasons for missing the test must be given in advance. Not following this rule means that I don't have to reschedule a test for you.

Incomplete Policy:

A student who is passing a course, but has not completed all work due to exceptional circumstances, may, with consent of the instructor, temporarily receive a grade of incomplete ("I"). The assignment of the "I" grade is at the discretion of the instructor, but is allowed only if the student is passing the course.

Policy on the Recording of Lectures

Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

Attendance Policy

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

Counseling and Psychological Services (CAPS) Center

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to http://www.fau.edu/counseling/

Disability Policy

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/.

Code of Academic Integrity

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001.

Required Texts

"Moons and Planets," 5th Edition, Hartmann
ISBN: 0534493939

Course Topical Outline

- Week 1 – Solar System Overview
- Week 2 – Celestial Mechanics
- Week 3 – Orbital Transfers and Tides
- Week 4 – Nucleosynthesis
- Week 5 – Minerology and Planetary Formation
- Week 6 – Planetary Migration and Exam 1
- Week 7 – Meteorites, Comets, and Asteroids
- Week 8 – Planetary Interiors and Structure
- Week 9 – Impacts
- Week 10 – Surfaces and Regolith
- Week 11 – Atmospheres and Exam 2
- Week 12 – Aeolian Phenomena
- Week 13 – Orbits and Ice Ages
- Week 14 – Exoplanets

- Final Period – Final Exam