

**Physics 103
Astronomy
Syllabus and Schedule
Fall 2013**

Instructor: April Hendley

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Office Hours: Mon. 1:30 p.m. - 3:30 p.m.

Tues. 3:30 p.m. - 4:30 p.m.

Wed. 1:30 p.m. - 3:30 p.m.

Thurs. 3:30 p.m. - 4:30 p.m.

Other times: By appointment

Textbook: *Astronomy: A Beginners Guide to the Universe* by Chaisson & McMillan, 7th Edition

Lab Manual: PHYS 103 Lab Manual

Lecture: MWF 10:00-10:50 AM; Neckers 440

Labs: In accordance with your class assignment and the distributed lab schedule (see below).

TENTATIVE PHYSICS 103 LAB SCHEDULE					
Dates	Time	Mon.	Tu.	Wed.	Th.
Aug. 26 – Aug. 29	5:00 p.m. 6:00 p.m.	1 2	3	5	7 8
Sept. 2 – Sept. 5	8:00 p.m. 9:00 p.m.	No Lab, tentative make up lab on Nov. 25	3	5	7 8
Sept. 9 – Sept. 12	5:00 p.m. 6:00 p.m.	1 2	3	5	7 8
Sept. 16 - Sept. 19	8:00 p.m. 9:00 p.m.	1 2	3	5	7 8
Sept. 23 - Sept. 26	5:00 p.m. 6:00 p.m.	1 2	3	5	7 8
Sept. 30 - Oct. 3	8:00 p.m. 9:00 p.m.	1 2	3	5	7 8
Oct. 7 - Oct. 10	5:00 p.m. 6:00 p.m.	1 2	3	5	7 8
Oct. 14 - Oct. 17 Fall Break	No Lab	No Lab	No Lab	No Lab	No Lab
Oct. 21 - Oct. 24	8:00 p.m. 9:00 p.m.	1 2	3	5	7 8
Oct. 28 - Oct. 31	5:00 p.m. 6:00 p.m.	1 2	3	5	7 8
Nov. 4 - Nov. 7	8:00 p.m. 9:00 p.m.	1 2	3	5	7 8

Nov. 11 - Nov. 14	5:00 p.m. 6:00 p.m.	No Lab, tentative make up lab on Dec. 2	3	5	7 8
Nov. 18 - Nov. 21	8:00 p.m. 9:00 p.m.	1 2	3	5	7 8
Nov. 25 - Nov. 28	8:00 p.m. 9:00 p.m.	1 (Tentative) 2 (Tentative)	No Lab	No Lab	No Lab
Dec. 2 - Dec 5	5:00 p.m. 6:00 p.m.	1 (Tentative) 2 (Tentative)	No Lab	No Lab	No Lab
Lab Instructor:		Brice Russell	Brice Russell	Russell Ceballos	Russell Ceballos

Learning Objectives:

In this course you will discover how information about celestial objects is obtained, the size of planets, stars, clusters, galaxies, etc. and an understanding of how models of the formation of planets, stars, galaxies, and the universe are tested by comparison to observations. Particular objectives are:

You will be able to:

- 1) describe the properties of light and other electromagnetic radiation, how light is produced, and how information about distant objects is obtained from light and other forms of electromagnetic radiation.
- 2) describe Newton's Laws of motion and gravity and how they define orbital motion. You will be able to explain how the mass of celestial objects are determined from these laws.
- 3) describe the source of energy for stars and the conditions necessary for nuclear fusion. You will be able to described how the requirements of heat flow defines the temperature distribution in stars.
- 4) describe the solar system and name the major bodies in the solar system. You will be able to describe unique features of the major bodies. You will be able to describe the classes of minor bodies and their properties.
- 5) explain the current theories on how stars form, evolve, and die. You will be able to describe the importance of mass in this evolution and how close companions can alter this evolution.
- 6) describe the structure of galaxies, galaxy types, and how galaxies form clusters. You will be able to describe the observational evidence which gave

rise to the Big Bang Theory, and what supporting evidence has been found, and what the current understanding of the evolution of the universe is.

Quizzes:

Quizzes will be given in classes in the end of the each chapter. Quizzes count **10%** of your total grade.

Midterm Tests 1-4:

Four midterm tests will be given in classes during the semester with the counting **15% each** of your total grade. They will be announced approximately one week before the test. The lowest score on one test will be dropped, so there will be no make-up tests unless your absence from the exam is properly authorized (see Missed Test Policy).

Missed Exam Policy:

Valid reasons for missing an Exam **are limited to properly documented:**

- Religious Observance;
- Military Duty;
- Bereavement (only members of the immediate family);
- Official University business;
- Jury Duty or Court Appearance;
- Properly documented medical reason (Doctor's certificate stating that the student was incapable of attending the exam; notes from the Student Health Services that the student was there at the time are **not** sufficient).

It is the student's responsibility to use the appropriate University form for Excused Absences to request accommodation from the instructor in case an exam is missed. Except in cases of medical emergency, this University form needs to be given to the instructor before the absence occurs.

Final:

The final is comprehensive and counts as **30%** of the course grade. The final is scheduled for **Thursday Dec. 12 from 12:50 to 2:50 pm in Neckers 440.**

Observation/Labs:

Observations and labs will meet on alternate weeks. One week you will meet in **Neckers 410** during the **late evening** for observations. Weather permitting; an outside observation will be done. During inclement weather, the lab instructor will show you to the room

where an inside lab will be done. The next week, you will meet in **Neckers 403 in the afternoon for lab**. If inclement weather prevents outside observations for a section for an extended period, it may be necessary to reschedule evening and afternoon lab sections. This will be announced if necessary in lecture well in advanced of the schedule change. You are responsible for all class related announcements given during the lecture. You must meet with the section in which you are assigned. Your Observation/Lab instructor cannot approve a change in section. This must be accomplished through the class registration process, drop/add. Failure to attend your assigned section will result in your receiving a zero for the lab work. There are no makeup labs. One lowest lab grade will be dropped.

Grading: Quizzes	10%
Midterm exam 1-4	45%
Observations/Labs	15%
Final	30%

Grades are based on your overall average.

A	80 and above
B	70 to 79
C	60 to 69
D	50 to 59
F	less than 50

Your current grade will be posted periodically on SIU Online.

The grades will be posted periodically during the semester, beginning after the first week of exams. The lab grades should be posted about three weeks after the lab. You should check your status regularly and address errors immediately. Errors must be addressed within two weeks after the grade is posted.

IMPORTANT REMARKS

1. Read the chapters in advanced of the lecture. If you don't understand the material in the text, **ask questions**.
2. **Attend class**. Most material is covered both in class and in the text, but from a different perspective and therefore complement each other. Almost all who fail, do so because they do no attend class.
3. Do not underestimate the **importance of the lab** grade. Failure to attend the labs can lower your grade by more than a letter grade.
4. Review your exams questions to find out where you made mistakes. Ask questions if you still don't understand. The Final is comprehensive; Don't make the same mistakes twice.
5. Turn off cell phones and pagers during the class.

Academic Dishonesty in PHYS 103

This is to inform you of the policy regarding academic dishonesty in PHYS 103.

Any individual found cheating on any exam, quiz, or assignment will be failed in the course. The possession of any *cheat-sheet* during the final will be considered cheating and treated as such. Plagiarizing will be considered cheating. If another individual takes the quiz or final for you, then both will be reported for cheating.

A report will be made to the proper authority for further disciplinary action including possible suspension from the university.

Tentative Lecture Schedule

Week	Lecture Dates	Chapter	Lecture Topic
1	8/19	0	The Sky
	8/21	0	The Sky
	8/23	0	The Sky
2	8/26	1	Copernican Revolution
	8/28	1/2	Copernican Revolution/Light/Matter
	8/30	2	Light/Matter
3	9/2	No Class	Labor Day
	9/4	2/3	Light/Matter/Telescopes
	9/6	3	Telescopes
4	9/9	3/4	Telescopes/Solar System
	9/11	Review for Exam 1	Review for Exam 1
	9/13	Exam 1	Exam 1
5	9/16	4	Solar System
	9/18	4/5	Solar System/Earth/Moon
	9/20	5	Earth/Moon
6	9/23	5/6	Earth/Moon/Terrestrial Planets
	9/25	6	Terrestrial Planets
	9/27	6	Terrestrial Planets
7	9/30	6/7	Terrestrial/Jovian Planets
	10/2	7	Jovian Planets
	10/4	7/8	Jovian Planets/Moons/Rings
8	10/7	8	Moons/Rings/Plutoids
	10/9	8/9	Plutoids/The Sun

Week	Lecture Dates	Chapter	Lecture Topic
	10/11	Review for Exam 2	Review for Exam2
9	10/14	No Class	Fall Break
	10/16	Exam 2	Exam 2
	10/18	9	The Sun
10	10/21	9	The Sun
	10/23	10	Stars
	10/25	10/11	Stars/Interstellar Medium
11	10/28	11	Interstellar Medium/Star Formation
	10/30	11/12	Star Formation/Lives and Death of Stars
	11/1	12	Lives and Death of Stars
12	11/4	12/13	Lives and Death of Stars/Neutron Stars/Black Holes
	11/6	13/14	Neutron Stars/Black Holes/Milky Way Galaxy
	11/8	Review for Exam 3	Review for Exam 3
13	11/11	No Class	Veteran's Day
	11/13	Exam 3	Exam 3
	11/15	14/15	Milky Way Galaxy/Normal and Active Galaxies
14	11/18	15	Normal and Active Galaxies/Dark Matter/Galaxy Collisions
	11/20	16	Dark Matter/Galaxy Collisions, Formation, Evolution
	11/22	17	Cosmology
15	11/25	18	Life in the Universe
	11/27	No Class	Thanksgiving Break
	11/29	No Class	Thanksgiving Break
16	12/2	Review for Exam 4	Review for Exam 4
	12/4	Exam 4	Exam 4
	12/6	Review for Final	Review for Final

April Hendley thanks Dr. A. Kolmakov for their help with the syllabus.

"We emphasize student achievement and success because achievement and success are essential if we are to shape future leaders and transform lives"

IMPORTANT DATES

Last day to add a class (without instructor permission) **8/30/2013**
Last day to withdraw completely and receive a 100% refund **9/01/2013**
Last day to drop a course using SalukiNet **10/27/2013**
Last day to file diploma application (for name to appear in Fall Commencement program) **11/01/2013**
Final examinations **12/9 – 12/13/2013**

Note: For outreach, internet, and short course drop/add dates, visit Registrar's Academic webpage <http://registrar.siu.edu/>

FALL SEMESTER HOLIDAYS

Labor Day 09/02/2013
 Fall Break 10/12—10/15/2013
 Thanksgiving Break 11/27—12/1/2013

WITHDRAWAL POLICY ~ Undergraduate only

Students who officially register for a session may not withdraw merely by the stopping of attendance. An official withdrawal form needs to be initiated by the student and processed by the University. For the proper procedures to follow when dropping courses and when dropping from the University, please visit <http://registrar.siu.edu/pdf/ugradcatalog1314.pdf>

INCOMPLETE POLICY~ Undergraduate only

An INC is assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments. An INC must be changed to a completed grade within one semester following the term in which the course was taken, or *graduation*, whichever occurs first. Should the student fail to complete the course within the time period designated, that is, by no later than the end of the semester following the term in which the course was taken, or graduation, whichever occurs first, the incomplete will be converted to a grade of *F* and the grade will be computed in the student's grade point average. *For More information please visit <http://registrar.siu.edu/grades/incomplete.html>*

REPEAT POLICY

An undergraduate student may, for the purpose of raising a grade, enroll in a course for credit no more than two times (two total enrollments) unless otherwise noted in the course description. For students receiving a letter grade of A,B,C,D, or F, the course repetition must occur at Southern Illinois University Carbondale. Only the most recent (last) grade will be calculated in the overall GPA and count toward hours earned. *See full policy at <http://registrar.siu.edu/pdf/ugradcatalog1314.pdf>*

GRADUATE POLICIES

Graduate policies often vary from Undergraduate policies. To view the applicable policies for graduate students, please visit <http://gradschool.siu.edu/about-us/grad-catalog/index.html>

DISABILITY POLICY

Disability Support Services provides the required academic and programmatic support services to students with permanent and temporary disabilities. DSS provides centralized coordination and referral services. To utilize DSS services, students must come to the disability office to open cases. The process involves interviews, reviews of student-supplied documentation, and completing Disability Accommodation Agreements. <http://www.siu.edu/dss>

STUDENT CONDUCT CODE

http://policies.siu.edu/other_policies/chapter3/conduct.html

SALUKI CARES

The purpose of Saluki Cares is to develop, facilitate and coordinate a university-wide program of care and support for students in any type of distress—physical, emotional, financial, or personal. By working closely with faculty, staff, students and their families, SIU will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community. For Information on Saluki Cares: (618) 453-5714, or siucares@siu.edu, <http://salukicare.siu.edu/index.html>

EMERGENCY PROCEDURES

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. We ask that you become familiar with the **SIU Emergency Response Plan** and **Building Emergency Response Team (BERT)** program.

Emergency response information is available on posters in buildings on campus, available on BERT's website at www.bert.siu.edu, Department of Safety's website www.dps.siu.edu (disaster drop down) and in Emergency Response Guideline pamphlet. Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. ***It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.***

INCLUSIVE EXCELLENCE

SIU contains people from all walks of life, from many different cultures and sub-cultures, and representing all strata of society, nationalities, ethnicities, lifestyles, and affiliations. Learning from and working with people who differ is an important part of education, as well an essential preparation for any career.

MORRIS LIBRARY HOURS

<http://www.lib.siu.edu/about>

LEARNING AND SUPPORT SERVICES

Help is within reach. Learning support services offers free tutoring on campus and math labs. To find more information please visit Center for Learning and Support Services website for:

Tutoring : <http://tutoring.siu.edu/>

Math Labs http://tutoring.siu.edu/math_tutoring/index.html

WRITING CENTER

The Writing Center offers free tutoring services to all SIU students and faculty. To find a Center or Schedule an appointment please visit <http://write.siu.edu/>

AFFIRMATIVE ACTION & EQUAL OPPORTUNITY

Our office's main focus is to ensure that the university complies with federal and state equity policies and handles reporting and Investigating of discrimination cases. *For more information visit <http://diversity.siu.edu/#>*

Additional Resources Available:

SALUKINET: <https://salukinet.siu.edu/cp/home/displaylogin>

ADVISEMENT: <http://advisement.siu.edu/>

PROVOST & VICE CHANCELLOR: <http://pvcaa.siu.edu/>