

FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: AST 1002L

COURSE TITLE: Astronomy Lab

PREREQUISITE(S): None

COREQUISITE(S): None

STUDENT ADVISING NOTES: Suggested Course: MAT 0024
Also Recommended: AST 1002 or following AST 1002

CREDIT HOURS: 1

CONTACT HOURS/WEEK: 2

CONTACT HOUR BREAKDOWN:

Lecture/Discussion:

Laboratory: 2

Other _____:

FACULTY WORKLOAD POINTS: 1.40

STANDARDIZED CLASS SIZE ALLOCATION: 24

CATALOG COURSE DESCRIPTION:

This is a laboratory course which is intended to supplement AST 1002, Introduction to Astronomy. Students should have a working knowledge of mathematics at a level equivalent to MAT 0024, recommend a grade of B or a higher-level mathematics course. Students will learn to use various types of equipment and simple procedures for obtaining useful data.

SUGGESTED TEXT(S): Basic Astronomy Labs, Huebner / Reynolds / Smith, 1st ed., Prentice-Hall.

IMPLEMENTATION DATE: Fall Term, 1978 (was AST 00125)

REVIEW OR MODIFICATION DATE: Fall Term, 2002 (20031)
Fall Term, 2006 (20071)
Fall Term, 2008 (20091) - Outline Review 2007

COURSE TOPICS	<u>CONTACT HOURS PER TOPIC</u>
I. Introduction and Terminology	2
II. Star Wheels	1
III. Coordinate Systems	1
IV. Sky Patterns	1
V. Dark Sky Observing	1
VI. The Messier List	1
VII. Telescopes	2
VIII. Colors and Spectra	2
IX. Imaging	2
A. Astrophotography	
B. Electronic Imaging	
C. Diffraction and Interference	
X. Kepler's Laws of Planetary Motion	2
XI. Orbiting Bodies	2
XII. Solar Lab	2
XIII. Lunar Lab	2
XIV. Observing Comets and Planets	2
XV. Magnitude Scale	1
XVI. Hertzsprung-Russell Diagram	1
XVII. Elements and Supernovae	1
XVIII. Blackbody Radiation	1
XIX. Binary Stars and Variable Stars	2
XX. Other topics as decided by instructor	1



**Florida State College
At Jacksonville**

**General Education Requirements
Categories & Courses Review Checksheet**

Course Prefix and Number: AST 1002/1002L Semester Credit Hours: 3/1

Course Title: Introduction to Astronomy / Astronomy Laboratory (to be taken with or following AST 1002)

Discipline Area for the Course:

Communication **Mathematics** **Social & Behavioral Sciences**
 Humanities & Visual/Performing Arts **Natural Sciences** **Other-Designated Option**

INTELLECTUAL COMPETENCIES:

X Reading **X Speaking** **X Critical Analysis** **X Quantitative Skills** **X Scientific Method of Inquiry**
X Writing **X Listening** **X Information Literacy** **X Ethical Judgment** **X Working Collaboratively**

KNOWLEDGE	Primary	Secondary	N/A	VALUE	Primary	Secondary	N/A
A. Global and Historical Knowledge & Understanding				Intellectual honesty	X		
• Comprehends a general knowledge of the nature, origins and contributions of major civilizations		X		Curiosity and openness to new ideas	X		
• Comprehends the workings and interrelations of personal, business and government economies			X	Recognition of one's own creative potential		X	
• Comprehends political, social and economic systems and their effects upon society			X	Acceptance of and respect for differences among people and cultures		X	
B. Cultural and Aesthetic Knowledge and Understanding							
• Comprehends the contributions of the arts and humanities to the human experience on a personal, national or global level			X	Civic Engagement			X
• Comprehends the historical development of the arts and sciences		X		Lifelong Learning		X	
• Comprehends religious and cultural systems and their effects upon society		X					
C. Human Awareness and Understanding							
• Comprehends the dynamics of human behavior and the process of increasing self-awareness, growth and development			X				
• Comprehends the stages of human development and the dynamics of human relationships in diverse cultures			X				
• Comprehends the factors that promote physical, mental and social well-being			X				
D. Mathematics, Science and Technology							
• Comprehends the basic concepts and investigative processes of the natural sciences	X						
• Comprehends the breadth, significance and development of the mathematical sciences	X						
• Comprehends the ways science and technology have shaped and continue to reshape human cultures and the environment	X						

Name of Person Completing This Form: Mike Reynolds

Signature: _____ Date: 3/3/05



Course Prefix and Number: AST 1002/1002L	Semester Credit Hours: 3/1
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Course Title: Introduction to Astronomy/Astronomy Laboratory

Discipline Area for the Course:					
<input type="checkbox"/> Communication	<input type="checkbox"/> Mathematics	<input type="checkbox"/> Social & Behavioral Sciences			
<input type="checkbox"/> Humanities & Visual/Performing Arts	<input checked="" type="checkbox"/> Natural Sciences	<input type="checkbox"/> Other-Designated Option			

INTELLECTUAL COMPETENCIES:					
<input checked="" type="checkbox"/> Reading	<input checked="" type="checkbox"/> Speaking	<input checked="" type="checkbox"/> Critical Analysis	<input checked="" type="checkbox"/> Quantitative Skills	<input checked="" type="checkbox"/> Scientific Method of Inquiry	
<input checked="" type="checkbox"/> Writing	<input checked="" type="checkbox"/> Listening	<input checked="" type="checkbox"/> Information Literacy	<input checked="" type="checkbox"/> Ethical Judgment	<input checked="" type="checkbox"/> Working Collaboratively	

Learning Outcomes

Method Of Assessment

	Learning Outcomes	Method Of Assessment
1	Explain and apply major concepts in astronomy including planets, satellites, stars, meteors, galaxies and theories of the universe.	Written tests, reports and/or use of equipment to demonstrate student competency in field.
2	Demonstrate knowledge of scientific method.	Formulate problem, make observations, derive and test hypothesis and make conclusions.
3	Communicate scientific ideas through oral or written assignments.	Students use analytical reasoning skills to solve problems on written tests and/or laboratory work.
4	Interpret scientific models such as formulas, graphs, tables and schematics, draw inferences from them and recognize their limitations.	Written reports of lab experiments and/or written tests demonstrate student competency in the application of scientific knowledge.
5	Demonstrate problem solving methods in situations that are encountered outside of the classroom.	Students use demonstrations, group discussions, written tests, laboratory reports, research projects and/or field experiences to illustrate competence in recognizing and evaluating various scientific processes.
6	Demonstrate proper laboratory technique including safety in the use and care of laboratory equipment and materials.	Results from laboratory work and experiments demonstrate student awareness of science and society.

Name of Person Completing This Form: Mike Reynolds

Signature: _____ Date: 3/3/05