

CORE CURRICULUM COMPONENT APPLICATION

CORE COMPONENT AREA	Life and Physical Sciences
COURSE TYPE	Existing Core
DEPARTMENT	Physical Science
COURSE RUBRIC & NUMBER	Phys 1403
COURSE NAME	Astronomy I (Stars and Galaxies)
CATALOG DESCRIPTION	Stars and Galaxies are a studied in the light of current knowledge and techniques of modern day astronomy. Course content focuses on the universe beyond the solar system including a look at galaxies (including the Milky Way), nebulae, stars, black holes, and dark matter. The course ends with a brief survey of stellar and galactic topics. Emphasis is placed on current knowledge of the universe and how astronomical measurements are made. Some night observing sessions are required.
NUMBER OF SECTIONS OFFERED/FALL	1
NUMBER OF SECTIONS OFFERED/SPRING	1
EXTIMATED ANNUAL ENROLLMENT	20
COURSE LEVEL	Freshman
CONTACT PERSON (dept. representative)	Leland Estep
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PHONE	6321
DEPARTMENT APPROVAL STATUS	Select One - Date Click here to enter a date.
CORE COMMITTEE COMMENTS <small>(REQUEST FOR ADDITIONAL INFORMATION)</small>	
CORE COMMITTEE APPROVAL STATUS	Select One - Date Click here to enter a date.

Best practices and accreditation guidelines generally place the faculty in a position of responsibility for curricular decisions.

CORE CURRICULUM COMPONENT APPLICATION

Indicate below how each learning objective will be supported, what strategies or activities will be used to introduce each objective and how student learning will be assessed.

***NOTE: Component Area Option –**

- A. A minimum of 3 SCH must meet the definition and corresponding Core Objectives specified in one of the foundational component areas
- B. As an option for up to 3 semester credit hours of the Component Area Option, an institution may select course(s) that:
 - i. Meet(s) the definition specified for one or more of the foundational component areas; and
 - ii. Include(s) a minimum of three Core Objectives, including Critical Thinking Skills, Communication Skills, and one of the remaining Core Objectives of the institution's choice.

#	THECB CORE OBJECTIVE "ICO"	PROGRAM GOALS/OUTCOMES	COURSE LEARNING OUTCOMES	KEY IDENTIFIERS	LEARNING EXPERIENCE	ASSESSMENT
1	<p>Critical Thinking Skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.</p> <p><i>Must be addressed in all core curriculum courses</i></p>		Understand basic concepts of gravity, light, and stellar formation, evolution, and membership in galaxies.	Have the ability to tie various concept together concerning stellar populations and ask pertinent questions concerning these concepts.	Many example problems are worked in a variety of contexts several lab experiments address the key concepts.	This core objective will be assessed by an interdepartmental assessment committee using the Critical Thinking rubric.
2	<p>Communication Skills - to include effective development, interpretation and expression of ideas through written, oral and visual communication.</p> <p><i>Must be addressed in all core</i></p>		Discuss Physical Laws in Q&A sessions.	Answer in-class queries and exam questions and, in laboratory, verbally expressing an understanding of key ideas.	Multimedia, oral lecture, Q and A sessions, and Laboratory provide the setting for course delivery.	This core objective will be assessed by an interdepartmental assessment committee using the Communication rubric.

	<i>curriculum courses</i>					
3	<p>Empirical and Quantitative Skills - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions</p> <p><i>Must be addressed in all Mathematic, Life and Physical Sciences, AND Social & Behavioral Sciences component area core curriculum courses. Optional for all other component areas.</i></p>		<p>Perform straightforward calculations relating to gravity and light related phenomena.</p>	<p>Have the ability to tie concepts and examples together, to predict outcomes.</p>	<p>Many example problems are illustrated for a variety of contexts several lab quantitative experiments address key concepts.</p>	<p>This core objective will be assessed by an interdepartmental assessment committee using the Empirical and Quantitative Skills rubric.</p>
4	<p>Teamwork - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.</p> <p><i>Must be addressed in all Communication, Life & Physical Sciences, and Creative Arts component area core curriculum courses. Optional for all other component areas.</i></p>		<p>Basic laboratory experiments to highlight important ideas. Team work is emphasized throughout.</p>	<p>Student will be able to follow the steps of a procedure in an experiment to get to desired results.</p>	<p>Most experiments are to give students hands-on experience with concepts from lecture.</p>	<p>This core objective will be assessed by an interdepartmental assessment committee using the Teamwork rubric.</p>
5	<p>Personal Responsibility - to include the ability to connect choices, actions</p>		<p>The lecture and laboratory tie what is learned about Earth and its environment</p>	<p>Class discussion allows assessment of concept understanding.</p>	<p>Interaction with other students with respect to choices made via policy is</p>	<p>This core objective will be assessed by an interdepartmental</p>

	<p>and consequences to ethical decision-making.</p> <p><i>Must be addressed in all Communication, Language, Philosophy & Culture, American History and Government/Political Science component area core curriculum courses. Optional for all other component areas.</i></p>		<p>to the state of the world and the consequences of political decisions.</p>		<p>encouraged.</p>	<p>assessment committee using the Personal Responsibility rubric.</p>
6	<p>Social Responsibility: to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities</p> <p><i>Must be addressed in all Language, Philosophy & Culture, Creative Arts, American History and Government/Political Science, and Social & Behavioral Sciences component area core curriculum courses. Optional for all other component areas.</i></p>					
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Communication Skills -

To include effective development, interpretation and expression of ideas through written, oral and visual communication.

Empirical and Quantitative Skills

To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Must be addressed in all core courses that satisfy the following requirements:

- Mathematics
- Life and Physical Sciences
- Social and Behavioral Sciences
- Component Area Option of Mathematics and Logic

Teamwork

To include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

Must be addressed in all core courses that satisfy the following requirements:

- Life and Physical Sciences
- Creative Arts
- Government/Political Science

Personal Responsibility

To include the ability to connect choices, actions and consequences to ethical decision-making.

Must be addressed in all core courses that satisfy the following requirements:

- Communication
- Language, Philosophy and Culture
- American History
- Government/Political Science
- Social and Behavioral Sciences
- Component Area Option

Social Responsibility

To include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national and global communities.

Must be addressed in all core courses that satisfy the following requirements:

- Communication
- Language, Philosophy and Culture
- Creative Arts
- American History
- Government/Political Science
- Social and Behavioral Sciences
- Component Area Option