

ASTRO49 : Astronomy Independent Study

General Information

Author:	<ul style="list-style-type: none">Jennifer Krestow
Course Code (CB01) :	ASTRO49
Course Title (CB02) :	Astronomy Independent Study
Department:	ASTRO
Proposal Start:	Spring 2025
TOP Code (CB03) :	(1911.00) Astronomy
CIP Code:	(40.0201) Astronomy.
SAM Code (CB09) :	Non-Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	No
Course Control Number (CB00) :	CCC000502144
Curriculum Committee Approval Date:	06/12/2024
Board of Trustees Approval Date:	07/16/2024
Last Cyclical Review Date:	06/12/2024
Course Description and Course Note:	ASTRO 49 provides independent exploration to familiarize students with research techniques, career options, and special academic interests in astronomy. Emphasis shall be on individual research projects, library research, and/or preparation of research papers. There is no prescribed course content. Students develop and complete a research project approved by the sponsoring instructor and division chairperson. Note: Registration is open to any student at GCC who is currently registered for six or more units and who is admitted to Independent Study by the instructor. A student is limited to one Independent Study per semester and no more than 12 units credit toward the AA Degree or Certificate, and no more than six units per division. The units received may be acceptable for college transfer subject to the approval of the individual college. This course may be taken 3 times; a maximum of 9 units may be earned.
Justification:	Mandatory Revision
Academic Career:	<ul style="list-style-type: none">Credit
Mode of Delivery:	
Author:	<ul style="list-style-type: none">Jennifer Krestow
Course Family:	

Academic Senate Discipline

Primary Discipline:	<ul style="list-style-type: none">Astronomy
Alternate Discipline:	<ul style="list-style-type: none">Physics/Astronomy
Alternate Discipline:	No value

Course Development

Basic Skill Status (CB08)

Course is not a basic skills course.

 Allow Students to Gain Credit by Exam/Challenge**Course Special Class Status (CB13)**

Course is not a special class.

Pre-Collegiate Level (CB21)

Not applicable.

Grading Basis

- Grade with Pass / No-Pass Option

Course Support Course Status (CB26)

Course is not a support course

General Education and C-ID**General Education Status (CB25)**

Not Applicable

Transferability

Transferable to CSU only

Transferability Status

Approved

Units and Hours**Summary****Minimum Credit Units (CB07)** 1**Maximum Credit Units (CB06)** 3**Total Course In-Class (Contact) Hours** 54 - 162**Total Course Out-of-Class Hours** 0 - 0**Total Student Learning Hours** 54 - 162**Credit / Non-Credit Options****Course Type (CB04)**

Credit - Degree Applicable

Noncredit Course Category (CB22)

Credit Course.

Noncredit Special Characteristics

No Value

Course Classification Code (CB11)

Credit Course.

 Variable Credit Course**Funding Agency Category (CB23)**

Not Applicable.

 Cooperative Work Experience
 Education Status (CB10)
Weekly Student Hours

	In Class	Out of Class
Lecture Hours	0	0
Laboratory Hours	3 - 9	0
Studio Hours	0	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	54
Course In-Class (Contact) Hours	
Lecture	0
Laboratory	54 - 162
Studio	0
Total	54 - 162

Course Out-of-Class Hours

Lecture	0
Laboratory	0
Studio	0
Total	0

Time Commitment Notes for Students

No value

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Pre-requisites, Co-requisites, Anti-requisites and Advisories

Co-Requisite

Concurrent registration in 6 or more units.

Entry Standards

Entry Standards

Varies with subject and research area choice.

Course Limitations

Cross Listed or Equivalent Course

Specifications

Methods of Instruction

Methods of Instruction Other

Out of Class Assignments

- Research project

Methods of Evaluation

Other

Rationale

Faculty evaluation of research project

Textbook Rationale

No required textbooks. Faculty advisor and staff at the host institution may assign readings from discipline-specific sources.

Textbooks

Author	Title	Publisher	Date	ISBN
No Value	No Value	No Value	No Value	No Value

Other Instructional Materials (i.e. OER, handouts)

No Value

Materials Fee

No value

Learning Outcomes and Objectives

Course Objectives

Conduct independent discipline-specific research activities.

Demonstrate a specific in-depth knowledge in the discipline involved.

SLOs

Apply concepts and knowledge of discipline-specific materials to research projects, essays, and other assignments.

Expected Outcome Performance: 70.0

ILOs Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions; cultivate creativity that leads to innovative ideas.

Core

ILOs

Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.

Practice ethical and responsible behavior within personal, academic, professional, social, and societal contexts; recognize and welcome diverse lifestyle choices that promote physical, intellectual, psychological, and social well-being.

Course Content

Lecture Content

No value

Laboratory/Studio Content

Research project (54-162 hours)

Total Hours: 54-162

Additional Information

Is this course proposed for GCC Major or General Education Graduation requirement? If yes, indicate which requirement in the two areas provided below.

No

GCC Major Requirements

No Value

GCC General Education Graduation Requirements

No Value

Repeatability

Not Repeatable

Justification (if repeatable was chosen above)

No Value

Resources

Did you contact your departmental library liaison?

No

If yes, who is your departmental library liaison?

No Value

Did you contact the DEIA liaison?

No

Were there any DEIA changes made to this outline?

No Value

If yes, in what areas were these changes made:

No Value

Will any additional resources be needed for this course? (Click all that apply)

- No

If additional resources are needed, add a brief description and cost in the box provided.

No Value