Course Change Request

Date Submitted: 02/23/22 5:01 pm

Viewing: ASTR 764 / CSI 764 : Computational Astrophysics

Last edit: 03/08/22 11:15 am

Changes proposed by: ebarreto

Catalog Pages referencing this course

ASTR 764:

Astronomy (ASTR)

Select modification type:

Substantial

Are you completing this form on someone else's behalf?

No

Effective Term: Fall 2022

In Workflow

1. **Registrar Courses:Crosslisted**
2. **CDS Chair**
3. **PHYS GR Committee**
4. **SC Curriculum Committee**
5. SC Associate Dean
6. Assoc Provost-Graduate
7. Registrar-Courses
8. Banner

Approval Path

1. 02/25/22 12:14 pm Tory Sarro (vsarro): Approved for Registrar Courses:Crosslisted
2. 03/04/22 4:02 pm Jason Kinser (jkinser): Approved for CDS Chair
3. 03/04/22 4:36 pm Ernest Barreto (ebarreto): Approved for PHYS GR Committee

Subject Code: ASTR - Astronomy **Course Number:** 764

Bundled Courses: CSI 764

Is this course replacing another course? No

Equivalent Courses:

Catalog Title: Computational Astrophysics

Banner Title: Computatnl Astrophysics

Will section titles vary by semester? No

Credits: 3

Schedule Type: Lecture

Hours of Lecture or Seminar per week: 3

Repeatable: May only be taken once for credit (NR)
GRADUATE ONLY

Default Grade Mode: Graduate Regular

Recommended Prerequisite(s):
ASTR 601 or permission of instructor. ~~ASTR 530.~~

Recommended Corequisite(s):

Required Prerequisite(s) / Corequisite(s) (Updates only):

Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?

Registration Restrictions (Updates only):

Registrar's Office Use Only - Registration Restrictions:

Field(s) of Study:

Class(es):

Level(s):

Include

Enrollment limited to students with a level of Non-Degree (SCRRLVL_ONLY_ND)

Limited to graduate level students only. (SCRRLVL_ONLY_GR)

Degree(s):

Exclude

Non-Degree Undergraduate Degree students may not enroll. (SCRRDEG_NO_NDU)

School(s):

Catalog Description:

Covers statistical mechanics concepts important in astrophysics. Presents unified approach to particle acceleration and interaction theory based on analytical and numerical analysis of Boltzmann and Liouville equations. Discusses computational methods relevant to particle transport problems, with emphasis on **Fokker-Planck** ~~Fokker-lanck~~ and Monte Carlo solution techniques. Applications from space sciences include studies of cosmic ray acceleration, photon comptonization, particle transport in the near-Earth environment, energy transport in stellar atmospheres, and self-gravitating system dynamics.

Justification:

What: Removing ASTR 530 as a prerequisite.

Why: We wish to remove the recommended prerequisite because the course no longer exists.

Does this course cover material which crosses into another department? No

Learning Outcomes:

Attach Syllabus

Additional Attachments

Specialized Course Categories:

Additional Comments:

Reviewer Comments

Key: 934