Course Change Request

Date Submitted: 12/03/18 3:29 pm

Viewing: **CDS 461 : Molecular Dynamics and Monte Carlo Simulations**

Last edit: 12/03/18 3:29 pm

Changes proposed by: blaisten

Catalog Pages referencing this course	Computational and Data Sciences (CDS) Computational and Data Sciences, BS Department of Computational and Data Sciences

In Workflow

1. **CDS Chair**
2. **SC Curriculum Committee**
3. SC Associate Dean
4. Registrar-Courses
5. Banner

Approval Path

1. 12/04/18 1:06 pm
   Jason Kinser
   (jkinser): Approved
   for CDS Chair

Select modification type:
   Simple

Are you completing this form on someone else's behalf?
   No

Effective Term: Fall 2019

Subject Code: CDS - Computational and Data Sciences   **Course Number:** 461

Bundled Courses:

Is this course replacing another course? No

Equivalent Courses:

Catalog Title: Molecular Dynamics and Monte Carlo Simulations

Banner Title: Mol Dyn/Monte Carlo Simulation

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: Undergraduate Regular

Recommended Prerequisite(s): Competency in programming at CDS 251 level, college physics, and MATH 214 or MA TH 216, or permission of instructor.

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):

Degree(s):

School(s):

Catalog Description:

Covers particle methods to solve variety of physical systems. Emphasizes study ~~and development~~ of **structure and thermodynamics of condensed systems in liquid** ~~numerical results~~ and **solid phases while implementing numerically the Molecular Dynamics and Monte Carlo methods.** ~~visualization of these results in complex physical systems.~~ Applications and projects include **a variety of atomistic** ~~stellar~~ and **molecular simulations based** ~~galaxy dynamics, smoothed particle hydrodynamics, plasma simulations, and semiconductor device theory algorithms~~ on **pairwise interatomic interactions.** ~~parallel and vectorized systems.~~

Justification:

This catalog description reflects the current content of the course, which was created ten years ago and had not undergone a modification of the language used in the description since insertion.

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: 1925