Course Change Request

Date Submitted: 04/11/24 12:48 am

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

Last approved: 04/21/23 6:07 am

Last edit: 04/17/24 4:33 pm

Changes proposed by: blaisten

Catalog Pages referencing this course

[Computational and Data Sciences (CDS)](#)

[Department of Computational and Data Sciences](#)

Select modification type:

Substantial

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

No

Effective Term: Fall 2024

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

Bundled Courses:

Is this course replacing another course?   No

In Workflow

1. **CDS Chair**
2. **SC Curriculum Committee**
3. SC Assistant Dean
4. Assoc Provost-Undergraduate
5. Registrar-Courses
6. Banner

Approval Path

1. 04/11/24 9:31 am Jason Kinser (jkinser): Approved for CDS Chair

History

1. Dec 18, 2018 by Estela Blaisten-Barojas (blaisten)
2. Apr 21, 2023 by Estela Blaisten-Barojas (blaisten)

Equivalent Courses:

Catalog Title: Molecular Dynamics and Monte Carlo Simulations

Banner Title: Mol Dyn/Monte Carlo Simulation

**Will section titles   No
vary by semester?**

Credits: 3

Schedule Type: Lecture

**Hours of Lecture or Seminar per   3
week:**

Repeatable: May ~~be~~ only be taken once for credit, limited   **Max Allowable
                                to 2 ~~3~~ attempts (N2) ~~(N3)~~   Credits:**

                                                                                      6 ~~9~~

**Default Grade   Undergraduate Regular
Mode:**

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

**Recommended
Corequisite(s):**

**Required
Prerequisite(s) /
Corequisite(s)
(Updates only):**
   CDS 251 and PHYS 243

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 of structure and thermodynamics of condensed systems in liquid and solid phases while implementing numerically the Molecular Dynamics and Monte Carlo methods. Applications and projects include a variety of atomistic and molecular simulations based on pairwise interatomic interactions.

Justification:

What: Request "required" prerequisites instead of recommended

Why: Practice has shown that the students register for the course without having the needed programing and college physics knowledge required for performing well in the course.

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

Learning Outcomes:

Will this course be scheduled as a cross-level cross listed section?

Attach Syllabus

Additional Attachments

> **Specialized Course Categories:**

Additional Comments:

Reviewer Comments

Key: 1925