

Course Change Request

Date Submitted: 10/19/23 3:44 pm

Viewing: **CSI 783 : Computational Quantum Mechanics**

Last edit: 10/19/23 3:44 pm

Changes proposed by: blaisten

Catalog Pages
referencing this
course

[Chemistry \(CHEM\)](#)

[Computational Sciences and Informatics \(CSI\)](#)

Select modification type:

[Substantial](#)

In Workflow

1. CDS Chair

2. SC Curriculum
Committee

3. SC Assistant Dean

4. Assoc Provost-
Graduate

5. Registrar-Courses

6. Banner

Approval Path

1. 10/26/23 5:49 pm

Jason Kinser

(jkinser): Approved
for CDS Chair

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

[No](#)

Effective Term: Spring 2024

Subject Code: CSI - Computational Science & Informatics

Course Number: 783

Bundled Courses:

Is this course replacing another course? No

Equivalent Courses: CHEM 736 - Computational Quantum Mechanics

PHYS 736 - Computational Quantum Mechanics

Catalog Title: Computational Quantum Mechanics

Banner Title: Cmputatnl Quantum Mchnic

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):

PHYS 502 and ~~PHYS 613~~/ CSI 690 ~~780~~; 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):

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. (SCRDEG_NO_NDU)

School(s):

Catalog**Description:**

Studies fundamental concepts of quantum mechanics from computational point of view, review of systems with spherically symmetric potentials, many electron atom solutions to Schrodinger's equation, electron spin in many-electron systems, atomic structure calculations, algebra of many-electron calculations, Hartree-Fock self-consistent field method, molecular structure calculations, scattering theory computations, and solid-state computations.

Justification:

What: adds CSI 690 as optional prerequisite and discontinues PHYS 613/CSI 780

Why: Currently CSI 780 is not equivalent to PHYS 613 since both courses have been modified in a direction that is not relevant for a prerequisite in this 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? No

Attach Syllabus**Additional Attachments**

Specialized Course Categories:

Additional Comments:**Reviewer Comments**

Key: 3369