

# Course Change Request

Date Submitted: 02/26/18 10:36 am

Viewing: **PHYS 346 : Quarks to Strings**

Last approved: 08/25/17 4:17 am

Last edit: 02/26/18 10:36 am

Changes proposed by: prubin

Catalog Pages  
referencing this  
course

[Department of Physics and Astronomy](#)  
[Physics \(PHYS\)](#)

## In Workflow

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

## Approval Path

1. 03/12/18 10:44 am  
Philip Rubin  
(prubin): Approved  
for PHYS UG  
Committee
2. 03/12/18 12:10 pm  
Paul So (paso):  
Approved for PHYS  
Chair

## History

1. Aug 25, 2017 by  
Priyanka  
Champaneri  
(pchampan)

Select modification type:

~~Specialized Course Designation~~  
**Simple**

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

No

Effective Term: Fall 2018

**Subject Code:** PHYS - Physics

**Course Number:**  
346

**Bundled Courses:**

**Equivalent  
Courses:**

**Catalog Title:** Quarks to Strings

**Banner Title:** Quarks to Strings

**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)

**Default Grade  
Mode:** Undergraduate Regular

**Recommended  
Prerequisite(s):**

**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?
		PHYS 262	C	UG		

**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:**

An non-technical introduction to the Standard Model of Elementary Particles and String Theory, in the context of the philosophy of science. Conceptual mastery will be demonstrated through writing assignments rather than calculations. Notes: This course does not satisfy **elective-category requirements for the physics and astronomy majors.** ~~PHYS elective requirement.~~

**Justification:**

**Since restructuring, the PHYS elective requirement no longer exists, replaced by concentration-specific electives.**

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

**Learning Outcomes:**

**Attach Syllabus  
(PDFs only)**

**Additional  
Attachments (PDFs  
only)**

**Specialized Course  
Categories:**

Mason Core

**Select the Mason Core Requirement the course is proposing to fulfill:**

**Foundation  
Courses:**

**Exploration  
Courses:**

**Integration  
Courses:**

Synthesis

## Synthesis

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### Course must meet learning outcomes 1 and 2:

1. Communicate effectively in both oral and written forms, applying appropriate rhetorical standards (e.g., audience adaptation, language, argument, organization, evidence, etc.)
2. Using perspectives from two or more disciplines, connect issues in a given field to wider intellectual, community or societal concerns

### Course must meet one additional learning outcome:

- 3a) Apply critical thinking skills to evaluate the quality, credibility and limitations of an argument or a solution using appropriate evidence or resources OR
- 3b) Apply critical thinking skills to judge the quality or value of an idea, work, or principle based on appropriate analytics and standards

### Describe the overall rationale for designating this course as Synthesis Mason Core.

previously approved

**For each learning outcome, what assignments or activities will you give that allow students to demonstrate their competence on each outcome? Please confirm these are reflected in the attached syllabus or uploaded as additional documents as needed.**

previously approved

#### Additional Comments:

~~administrative changes made for CIM launch~~

#### Reviewer Comments