FACULTY CURRICULUM COMMITTEE
COURSE FORM

Instructions:
• Please fill out one of these forms for each course you are adding, changing, deactivating, or reactivating.
• Fill out the parts of the form specified in part B. You must do this before your request can move forward!
• Remember that your changes will not be implemented until the next catalog year at the earliest.
• If you have questions, start by checking the instructions on the website. Please feel free to contact the committee chairs with any remaining questions you might have.

A. CONTACT/COURSE INFORMATION.

Name: P. Chris Fragile Phone: 953-3181 Email: fragilep@cofc.edu

Department or Program: Physics & Astronomy School: SSM

Subject Acronym and Course Number: ASTR 377

Catalog Year in which changes will take effect: FALL 2014

B. TYPE OF REQUEST. Please check all that apply, then fill out the specified parts of the form.

☐ Add a New Course (complete parts C, D, F, G, H, I, J, K)
☒ Change Part of an Existing Course (complete parts C, D, E, F, G, I, J, K)

☐ Course Number
☐ Course Name
☐ Course Description
☐ Credit/Contact Hours
☒ Restrictions (prerequisites, co-requisites, junior/senior standing, etc.)
☐ Deactivate an Existing Course (complete parts C, D, E, G, I, J, K)
☐ Reactivate a Previously-Deactivated Course (complete parts C, D, E, G, I, J, K)

C. RATIONALE AND EXPLANATION. Please describe your request and explain why you are making it.

In a separate proposal, we are introducing a new Introduction to Astrophysics course (ASTR 231) as a sophomore-level bridge between our Introductory Physics courses and our upper-level astrophysics electives. Here we propose that this new course become the pre-requisite for ASTR 377.

D. IMPACT ON EXISTING PROGRAMS AND COURSES. Please briefly describe the impact of your request on your own programs and courses as well other programs and courses. If another program requires the course, you must submit their written acknowledgement with this proposal. Also, the affected program must describe any change in the number of credit hours they require. Include a list of similar courses in other departments and explain any overlap.

This change will have very little effect on existing programs and courses. It is simply changing the prerequisite for an existing course.

This form was last updated on 06/03/13 and replaces all others.
E. **EXISTING COURSE INFORMATION.** If you are proposing a new course, just leave this blank. Otherwise, please fill out all fields.

- Department: Physics & Astronomy  
- School: SSM  
- Subject Acronym: ASTR  
- Course Number: 377

**Credit hours:**  
____ lecture  _4_ lab  ____ seminar  ____ independent study  

**Contact hours:**  
____ lecture  _6_ lab  ____ seminar  ____ independent study

**Course title:** Experimental Astronomy

**Course description (maximum 50 words, exactly as it appears in the catalog):**

A course designed to emphasize the concepts, principles, and experimental techniques of modern observational astronomy and astrophysics. Topics include astrometry, multi-wavelength instrumentation and imaging, and data analysis techniques. Hands-on projects plus lecture. Observatory work will be required. Scientific report writing will also be required.

**Restrictions (pre-requisites, co-requisites, majors only, etc.):**

- Prerequisite: PHYS 230 or permission of the instructor.

**Cross-listing, if any:**

- Is this course repeatable?  □ yes  ❌ no  
- If yes, how many total credit hours may the student earn? ____

F. **NEW COURSE INFORMATION.** If you are deactivating a course, leave this blank. Otherwise, please fill out all fields. For changed courses, use **boldface** for the information that is changing.

- Department: Physics & Astronomy  
- School: SSM  
- Subject Acronym: ASTR  
- Course Number: 377

**Credit hours:**  
____ lecture  _4_ lab  ____ seminar  ____ independent study  

**Contact hours:**  
____ lecture  _6_ lab  ____ seminar  ____ independent study

**Course title:** Experimental Astronomy

**Course description (maximum 50 words, exactly as it appears in the catalog):**

A course designed to emphasize the concepts, principles, and experimental techniques of modern observational astronomy and astrophysics. Topics include astrometry, multi-wavelength instrumentation and imaging, and data analysis techniques. Hands-on projects plus lecture. Observatory work will be required. Scientific report writing will also be required.

**Restrictions (pre-requisites, co-requisites, majors only, etc.):**

- Prerequisite: ASTR 231

If this is a newly-created course, is it intended to be the equivalent of an existing course and replace it?  □ yes  □ no  
- If so, which course? _____________

*Note: You must deactivate that course by submitting an additional Course Form.*

**Cross-listing, if any (submit approval from relevant department):**

- Note: Cross-listed courses are equivalent.

- Is this course repeatable?  □ yes  ❌ no  
- If yes, how many total credit hours may the student earn? ____

- Is there an activity, lab, or other fee associated with this course?  □ yes  ❌ no  
- What is the fee? $______

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This form was last updated on 06/03/13 and replaces all others.
Note: The Senate cannot approve new fees; Business Affairs will submit any such request to the Board of Trustees. The course can still be created, but the fee will not be attached until the Board has approved it.

G. COSTS. List all of the new costs or cost savings (including new faculty/staff requests, library, equipment, etc.) associated with your request.

None.

H. STUDENT LEARNING OUTCOMES AND ASSESSMENT.

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Method and Performance Expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>What will students know and be able to do when they complete the course?</td>
<td>How will each outcome be measured? Who will be assessed, when, and how often? How well should students be able to do on the assessment?</td>
</tr>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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<td>4.</td>
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</tbody>
</table>

How does this course align with the student learning outcomes articulated for the major, program, or general education? What program-level outcome or outcomes does it support? Is the content or skill introduced, reinforced, or demonstrated in this course?

I. PROGRAM CHANGES. Will this course be added to the existing degree requirements or list of approved electives of a major, minor, or concentration? □ yes ☒ no

If yes, please attach a Change Minor and/or Change Major/Program Form as appropriate.

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J. CHECKLIST.

☒ I have completed all relevant parts of the form.

☒ I have attached a cover letter that describes my request and lists all the documents I am submitting.

☐ (For new courses only) I have attached a syllabus.

☐ (For courses used in any way by other departments, including cross-listing) I have attached an acknowledgement from the relevant department.

☐ (For courses intended to fulfill a Gen Ed requirement) I have submitted the proposal to the Gen Ed committee.

☒ I have submitted one Signature Form that lists all of the different forms I am submitting.