**PURDUE UNIVERSITY**

REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF AN UNDERGRADUATE COURSE
(10000-40000 LEVEL)

**DEPARTMENT** Physics

**EFFECTIVE SESSION** Fall 2010

**INSTRUCTIONS:** Please check the items below which describe the purpose of this request.

- [ ] 1. New course with supporting documents
- [x] 2. Add existing course offered at another campus
- [ ] 3. Expiration of a course
- [ ] 4. Change in course number
- [ ] 5. Change in course title
- [ ] 6. Change in course credit/typetype
- [ ] 7. Change in course attributes (department head signature only)
- [ ] 8. Change in instructional hours
- [ ] 9. Change in course description
- [ ] 10. Change in course requisites
- [ ] 11. Change in semesters offered (department head signature only)
- [ ] 12. Transfer from one department to another

**PROPOSED:**

<table>
<thead>
<tr>
<th>Subject Abbreviation</th>
<th>Subject Abbreviation ASTR</th>
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</thead>
<tbody>
<tr>
<td>Course Number</td>
<td>Course Number 26400</td>
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**EXISTING:**

<table>
<thead>
<tr>
<th>Long Title</th>
<th>Descriptive Astronomy: Stars and Galaxies</th>
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**TERMS OFFERED**

Check All That Apply:
- [x] Summer
- [ ] Fall
- [x] Spring

**CAMPUS(ES) INVOLVED**

- Calumet
- Cont Ed
- Ft. Wayne
- Indianapolis
- N. Central
- Tech Statewide
- W. Lafayette

**COURSE ATTRIBUTES:** Check All That Apply

- 1. Pass/No Pass Only
- 2. Satisfactory/Unsatisfactory Only
- 3. Repeatable
- 4. Credit by Examination
- 5. Special Fees
- 6. Registration Approval Type
- 7. Variable Title
- 8. Honors
- 9. Full Time Privilege
- 10. Off Campus Experience

**CREDIT TYPE**

<table>
<thead>
<tr>
<th>Fixed Credit: Cr. Hrs.</th>
<th>2</th>
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**Schedule Type**

<table>
<thead>
<tr>
<th>Lecture</th>
<th>50</th>
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<tbody>
<tr>
<td>Recitation</td>
<td>2</td>
</tr>
<tr>
<td>Presentation</td>
<td></td>
</tr>
<tr>
<td>Laboratory</td>
<td>110</td>
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<tr>
<td>Lab Prop</td>
<td></td>
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<tr>
<td>Studio</td>
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<tr>
<td>Distance</td>
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<tr>
<td>Clinic</td>
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<td>Experiential</td>
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<tr>
<td>Research</td>
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<td>Ind. Study</td>
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<tr>
<td>Pract/Observ</td>
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**Minutes Per Week**

| 15 |

**Meetings Per Week**

| 2 |

**% of Credit Allocated**

| 67 |

**COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):**

A descriptive, non-mathematical course in astronomy intended for non-physics majors. Topics include properties of stars; stellar birth and death; the Hertzsprung-Russel diagram; main sequence stars; binary systems; stellar clusters; red giants and white dwarfs, nova and supernova; neutron stars and black holes; galaxies and the cosmological red shift.

**COURSE LEARNING OUTCOMES:**

Students will describe the basic physics of stars, clusters, gravitation, and Doppler shifts to describe astronomical observations.

**Cross-Listed Courses**

- [ ]
- [ ]
- [ ]
- [ ]

**COURSES AND DEPARTMENTS INVOLVED:**

- Calumet Department Head: Date
- Calumet School Dean: Date
- Fort Wayne Department Head: Date
- Fort Wayne School Dean: Date
- Indianapolis Department Head: Date
- Indianapolis School Dean: Date
- North Central Faculty Senate Chair: Date
- Vice Chancellor for Academic Affairs: Date
- West Lafayette Department Head: Date
- West Lafayette College/School Dean: Date
- West Lafayette Registrar: Date

**OFFICE OF THE REGISTRAR**
Tentative Syllabus

Course: Physics/Astr 264  
Instructor: David P. Maloney  
Office Phone: 481-6292  
Office Hours: 10-10:30 M, W & F and 3 – 4:30 M, W, Th & F

Semester: Spring 20--  
Office: KT 121  
email: maloney@ipfw.edu


Retakes will be T 29 Apr or Th 1 May.  
Final: Monday - May, from 8 to 10.

Grading: The grading scale is given below:

A ⇒ 1000-900  
B ⇒ 899-800  
C ⇒ 799-700  
D ⇒ 699-600

Each test will be worth a maximum of 150 pts. The final will be worth a maximum of 200 pts. Homework problems will total a maximum of 200 pts.

Attendance Policy: Attendance is expected and you are responsible for EVERYTHING that occurs in class or lab whether you are there or not. (Since this class will be built around active investigations and discussion, participation will be critical so it will be very difficult, if not impossible to make up class sessions. Consequently I do not consider it reasonable to schedule dental appointments, or course advising appointments, or a lube/oil/filter for your car during class periods.) Attendance and class participation will be taken into account in any borderline grade decisions at the end of the semester. I do expect you to be ON TIME for all classes you do attend!

Section 1 – Stellar Formation


Phenomena: Formation of stars, stellar energy generating mechanism and radiation
The goal of this course is for you to learn the basic phenomena of stars and stellar collections, as well as develop some understanding of how we know these things. It is critical to understand that accomplishing these goals will require you to actively think about the ideas and issues we are studying. You cannot learn effectively learn a subject by having someone talk to you, or by watching someone else doing it; you have to try to apply the ideas and think the issues through for yourself. You may be able to learn some aspects of a subject by listening or watching, but the only way to learn how to do it, is to do it yourself. Consequently, much of our time will be devoted to you doing actively thinking about the ideas and issues and discussing them with your classmates. **YOU WILL BE ACTIVE IN THIS CLASS!** Class periods will be devoted to working tasks, talking to your classmates about the ideas, issues and evidence, responding to questions from the instructor, and participating in whole class discussions. There will be very little lecturing by the instructor and what there is will be occasional short mini-lectures. You will be expected to read the text ahead of time so that you can talk about the ideas and issues during class.