**Minor in Astrophysics**  
*SPHA*

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<td>Student Number:</td>
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<td>Primary Major:</td>
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<td>Expected Major Completion Term:</td>
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**Required Courses (11 – 12 credits)**

- PH1600 Introductory Astronomy (2)
- PH2200 University Physics II - Electricity & Magnetism (3) or PH2260 Honors Physics III (4)

*Two of the following courses:*

- PH4610 Stellar Astrophysics (3)
- PH4620 Galactic Astrophysics (3)
- PH4630 Particle Astrophysics (3)

**Elective Courses**  
*Select five additional credits from the following:*

- EE4256 Fourier Optics (3)
- EE4257 Digital Image Processing (3)
- GE4250 Fundamentals of Remote Sensing (3) or FW4540 Remote Sensing of the Environment (3)
- MA2720 Statistical Methods (4) or MA3710 Engineering Statistics (3)
- PH4640 Introduction to Atmospheric Physics (3)
- PH5610 High Energy Astrophysics (2)

*Courses listed in this minor have the following prerequisites (shown in parenthesis). Concurrency is illustrated by the letter C: PH4610 (PH1600 and (PH1360 or PH2400) and (MA3520 or MA3521 or MA3530 or MA3560)), MA2720 (MA1020 or MA1032 or MA1031), MA3710 (MA2160), EE4256 (EE3190), PH4620 (PH1600 and (PH1360 or PH2400) and (MA3520 or MA3521 or MA3530 or MA3560)), PH4630 (PH2400 and (MA3520 or MA3530)), PH4640 ((PH1200 or PH2260) and (PH1360 or PH2300) and (MA3520 or MA3521 or MA3530 or MA3560)), EE4257 (EE3160 and EE3190), PH2200 ((PH1200 C or PH2261) C and (PH2100 or PH1160) and MA2160), GE4250 (PH2200 and MA2160), PH4630 (PH2400 and (MA3520 or MA3530))

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Academic Year 2013-14