Michigan Technological University
Minor in Astrophysics
Program Code SPHA, Academic Year 2022-23
Department of Physics
Total Credits Required: 18

Required Courses: 5 credits
- PH 1600 Introductory Astronomy (2) Prereqs: none
- PH 2400 University Physics IV – Waves and Modern Physics (3) Prereqs: PH2200 or PH2260

Upper-level Elective Courses: minimum 9 credits
Select at least two of the following three astrophysics courses
- PH 4610 Stellar Astrophysics (3) Prereqs: PH1600 and PH2400 and (MA3520 or MA3521 or MA3530 or MA3560)
- PH 4620 Galactic Astrophysics (3) Prereqs: PH1600 and PH2400 and (MA3520 or MA3521 or MA3530 or MA3560)
- PH 4630 Particle Astrophysics (3) Prereqs: PH2400 and (MA3520 or MA3521 or MA3530 or MA3560)

Select additional upper-level courses to bring total 3000-level or higher credits to 9
- EE 3160 Signals and Systems (3) Prereqs: (EE2110 or EE2112) and (MA2320 or MA2321 or MA2330) and (MA3520 or MA3521 or MA3530 or MA3560)
- EE 3190 Optical Sensing and Imaging (3) Prereqs: MA3520 or MA3521 or MA3530 or MA3560
- EE 4252 Digital Signal Processing and its Applications (4) Prereqs: EE3160
- MA 3710 Engineering Statistics* (3) Prereqs: MA2160 or MA3160
- FW 4540 Remote Sensing of the Environment (3) Prereqs: none
  or GE 4250 Fundamentals of Remote Sensing (3) Prereqs: PH2200 and MA2160
- PH 5640 Atmospheric Physics (3) Prereqs: PH2300 and (MA3520 or MA3521 or MA3530 or MA3560)

Other Elective Courses: Complete 4 credits to reach 18 credits overall
- PH 1500 Extraordinary Concepts in Physics (2)
- MA 2720 Statistical Methods* (4) Prereqs: MA1020 or MA1030 or MA1031 or MA1032 or MA1120