BACHELOR OF ARTS IN ASTRONOMY DEGREE COURSES

Open Electives to be added as appropriate to bring the total number of hours to the minimum of 120 needed for graduation with a B.A.

Six hours of Mathematics and Natural Science (Physics) double counted towards SAGES Breadth Requirement and 1 required math course double counted towards SAGES Quantitative Reasoning requirement.

Astronomy Hours: 20 required, up to 23 with Astronomy capstone
ASTR 151 Doing Astronomy (1) (Suggested but Not Required For the Major)
ASTR 221 Stars and Planets...........................................(3-0-3)
ASTR 222 Galaxies and Cosmology.................................(3-0-3)
ASTR 306 Astronomical Techniques (SAGES Dept Seminar)...(3-0-3)a
ASTR 309 Astrophysics Seminar I..................................(1-0-1)
ASTR 310 Astrophysics Seminar II.................................(1-0-1)
ASTR 311 Stellar Physics.............................................(3-0-3)a
ASTR 323 The Local Universe ......................................(3-0-3)a
ASTR 328 Cosmology and the Structure of the Universe ......(3-0-3)a
ASTR 333 Dark Matter.................................................(3-0-3)a
ASTR 351 SAGES Astronomy Capstone...........................(4-0-(3-4)b

a. 300 level Astronomy Courses: 4 of the following 5 are required: (ASTR 306, 311, 323, 333, 328)
b. A SAGES Capstone Experience is required of all students. The Astronomy BA does not require the Astronomy Capstone but only that a Capstone be taken. The Astronomy Capstone requires 1 hour in the Senior Fall Semester and 2-3 hours in the Senior Spring Semester. If another Capstone is taken the number of hours may be different.

Physics Hours: 26
PHYS 121 General Physics I: Mechanics............................(4-0-4)
PHYS 122 General Physics II: Electricity and Magnetism......(4-0-4)
PHYS 221 General Physics III: Modern Physics.................(3-0-3)
PHYS 250 Mathematical Physics & Computing....................(3-0-3)
PHYS 310 Classical Mechanics.....................................(3-0-3)
PHYS 313 Thermodynamics & Statistical Mechanics..........(3-0-3)
PHYS 324 Electricity & Magnetism I...............................(3-0-3)
PHYS 331 Quantum Mechanics I..................................(3-0-3)

Math Hours: 14
MATH 121 Calculus for Science & Engineering I.................(4-0-4)
MATH 122 Calculus for Science & Engineering II..............(4-0-4)
  or MATH 124 Calculus II...........................................(4-0-4)
MATH 223 Calculus for Science & Engineering III............(3-0-3)
  or MATH 227 Calculus III.........................................(3-0-3)
MATH 224 Elementary Differential Equations.....................(3-0-3)
  or MATH 228 Differential Equations............................(3-0-3)

ENGR/Computing Hours: 3
ENGR 131 Elementary Computer Programming...................(3-0-3)

Technical Electives Hours: 6
Technical Electives are additional courses which satisfy interests of the student but also fall within the science / mathematics objectives of the major. For a complete list of approved technical electives see advisor.

Approved Technical Electives - B. A. In Astronomy (This is not an exhaustive list):
CHEM 107 Properties and Structure of Matter I
CHEM 108 Properties and Structure of Matter II
PHYS 204 Advanced Instrumentation Lab
PHYS 316 Introduction to Nuclear and Particle Physics
PHYS 325 E&M II
PHYS 332 QM II