Astrophysics BS sample plan

Freshman Year
Fall Semester 15cr-17cr
MATH 1371: Calculus I (placement into course or pre-req) 4
PHYS 1301W: Intro Phys I (& Math 1371) 4
Lib Ed or WRIT 1301/1401 3/4
Lib Ed 3/4
CSE 1001: 1st yr. experience 1

Spring Semester 14cr-16cr
MATH 1372: Calculus II (1371) 4
PHYS 1302W: Intro Phys II (PHYS 1301, & MATH 1372) 4
Lib Ed or WRIT 1301/1401 3/4
Lib Ed 3/4

Sophomore Year
Fall Semester 14cr-15cr
MATH 2373: Lin Alg/Diff Eq. (1372) 4
PHYS 2201: Thermo and Stat Physics (1302, MATH 1372) 4
PHYS 2503: Phys III: Waves, Optics (1302, MATH 1372) 4
Lib Ed or WRIT 1301/1401 3/4
Lib Ed 3/4

Spring Semester 14cr
AST 2001: Int Astrophysics (MATH 1372 and PHYS 1302, or instr consent) 4
PHYS 2601: Quantum Phys 4
PHYS 2605: Quantum Phys Lab (& 2601) 2
MATH 2374: Multivariable Calc (1372) 4

Junior Year
Fall Semester 14cr-16cr
PHYS 4001: Analytical Mech 4
MATH 2283/3283W, 3xxx, or 4xxx 3/4
AST 4xxx or 5xxx 4
Lib Ed 3/4

Spring Semester 14cr-16cr
PHYS 4002: Elec & Magnet (2503 or 2601 or CHEM 4501 or 4502) 4
AST 4xxx or 5xxx 4
Lib Ed 3/4
Elective 3/4

Senior Year
Fall Semester 12cr-16cr
AST 4994W: Senior Thesis 3/4
Tech Elective 3/4
Upper Div Ast Elective 3/4

Spring Semester 12cr-16cr
Elective 3/4
Tech Elective 3/4
Upper Div Ast Elective 3/4

About This Plan
- This plan is not a contract. Curriculum can change.
- Shaded courses are only offered in the indicated semester.
- Course pre-requisites and co-requisites (designated by &; can be taken concurrently) are listed below the course number and title.
- Students can take either the CSE or non-CSE version of the math courses (MATH 1371/1271, 1372/1272, 2373/2243, 2374/2263). Double boxed courses are required for this major.
- All courses in the first three semesters must be completed for application to the major, except that either one (not necessarily both, and not necessarily a particular one) of the courses with a dashed outline must be completed prior to application.
- Liberal Education Requirements with an asterisk (*) will be fulfilled by taking courses required for this major at UM-TC.

Applying to your Major
Students who have completed the required courses for admission to this major and have a 3.2 UM-TC technical GPA at the end of the fall semester will be guaranteed admission. All other students who have completed the required courses will be considered for admission on a space-available basis. Admission following spring semester is based on space-availability.

Astrophysics Department Contact Information
- Website: http://www.astro.umn.edu
- Phone: 612-624-4811
- Main Office: 345 Fraser Hall
- Director of Undergraduate Studies: Liliya Williams (llrw@astro.umn.edu)
- Advisor: Terry Jones (tjj@astro.umn.edu)

Liberal Education Requirement
All students must complete the following liberal education requirements. See full Core & Theme names at http://z.umn.edu/liberaleducation.

Writing Requirements:
Freshman Writing:
Writ 1301/1401 or equivalent
Writing Intensive (WI):
Two: 1xxx or 2xxx level
One: 3/4/5xxx level (in major)
One: 3/4/5xxx level (any dept)

Total Credits Needed for Degree: 120