

**Fond du Lac Tribal and Community College**  
**COURSE OUTLINE FORM**

Updated 9/23/14

Please return this form to the college vice president of academic affairs and the chairperson of the Academic Affairs and Standards Council (AASC)

1. Prepared by: \_\_\_\_\_

2. Date submitted: \_\_\_\_\_

3. Date approved: \_\_\_\_\_ Date revised 10/14/14

4. Department/discipline: Physics

5. Department(s) endorsement(s): \_\_\_\_\_

(Signatures of the person(s) providing the endorsement are required.)

6. Course Title: Introductory Astronomy

Abbreviated course title (25 characters or less): \_\_\_\_\_

7. Course Designator: PHYS 8. Course Level: 1020 9. 2XXX

10. Number of Credits: Lecture 4 Lab \_\_\_\_\_

11. Control Number (on site) 70 Control Number (online) \_\_\_\_\_

12. Catalog/Course description:

An introductory study of the nature and dynamics of the Solar System and universe beyond. Emphasis will be on astronomical bodies that can be directly observed such as the Sun, Moon, stars, meteors, and aurora borealis. Students will perform lab-like activities involving observation and measurement of celestial objects and cycles using instruments, sky charts, and hand measurement systems. (Meets MnTC goal area 3).

13. Course prerequisite(s) or co-requisite(s): Accuplacer scores/ Other courses

Prerequisite(s):

Co-requisite:

14. **Course Materials** (Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers).

Text and observing aids determined on a yearly basis depending on availability and content.

Three-Ring Binder, Metric Ruler, and Colored Pencils.

Handouts, Overheads, Slides, and Videos.

15. **Course Content** (Provide an outline of major topics covered in course)

- Historical Astronomy
- Light and the Atom
- Tools of the Astronomer
- Earth and Sky Motions
- The Moon
- The Solar System: Planets and Moons

- Asteroids, Comets, and Meteors
- The Sun
- Properties of Stars
- Multiple Star Systems
- Stellar Evolution
- Variable Stars
- The Milky Way
- Galaxies
- Cosmology

**16. Learning Goals, Outcomes, and Assessment**

At FDLTCC we have 4 Competencies Across the Curriculum (CAC) areas. They are as follows:

- A. Information Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information)
- B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)
- C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)
- D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one’s own traditions and culture, knowledge of others’ traditions and cultures, culture of work, culture of academic disciplines and/or respect for global diversity.)

*Course learning outcomes will fulfill the identified competencies.*

*Course Learning Outcomes:*

Upon completion of this course, students will be able to:

1. Explain why the moon goes through phases. (B, C)
2. Identify three Polar Zone constellations. (B, C)
3. Conduct internet research, and present in written report form, an assigned astronomy topic. (A, B)
4. Demonstrate methods used to measure angular distances on the sky. (B, C)

**17. Minnesota Transfer Curriculum (MnTC):** If this course fulfills an MnTC goal area, state the goal area and list the goals and outcomes below:

See [www.mntransfer.org](http://www.mntransfer.org)

Goal Area(s):     3    

Goal and Outcomes:

Goal 3: Natural Sciences