Minnesota State University Moorhead

AST 365: Cosmology

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:
This course requires the following prerequisite
MATH 323 - Multi-Variable and Vector Calculus

Corequisites: None

MnTC Goals: None

Theoretical principles and observational evidence regarding the large-scale structure and evolution of the universe.

B. COURSE EFFECTIVE DATES: 04/05/2005 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Observational evidence for an expanding universe
2. Introduction to general relativity, with an emphasis on physical description of curvature and the relationship between curvature and density
3. Friedmann models of an expanding universe
4. Distance and time measures in cosmology
5. Evidence for dark matter & dark energy
6. Evolution of the universe
7. Observational measures of the expansion history of the universe

D. LEARNING OUTCOMES (General)

1. Apply concepts in each of the major content areas
2. Communicate scientific ideas both orally and in writing

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted