

# North Central Michigan College

NCMC MASTER COURSE SYLLABUS

Last Date Revised 3/5/2012

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**INSTRUCTIONAL AREA:** Liberal Arts

**DEPARTMENT:** Science

**ASSOCIATE DEAN:** Samantha McLin

**ORIGINATOR:** David Rodgers

**DEAN OF INSTRUCTION:** Christine Hammond, Ph.D.

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**COURSE ALPHA/NUMBER:** ESC 201

**COURSE TITLE:** Foundations of Astronomy

**HOURS OF INSTRUCTION:**

Credit hours: 4

Lecture: 3

Lab: 2

Clinical:

Variable Hours:

Total Hours of Instruction: 5

Total Contact Hours: 88

*(Total Contact Hours Formula: (lecture hours + lab hours + clinical hours) x 17.6*

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**CATALOG DESCRIPTION:** An introductory course in astronomy for students who are interested in science. The course is a survey of the solar system, stars, and galaxies. Application of ideas and mathematical relationships is a fundamental part of this course.

**PREREQUISITE(S):** MATH 112 or MATH 120 or higher

**COREQUISITE(S):**

**GENERAL EDUCATION DISTRIBUTION AREA:**

Communications, Writing

Natural Science Group A

Communications, Communications

Natural Science Group B

Humanities Group A

Social Science Group A

Humanities Group B

Social Science Group B

Mathematics

Non Applicable

Science

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**GENERAL EDUCATION OUTCOMES:**

Write and Speak Effectively

Think Critically & Analytically

Write & Speak Effectively and Think Critically & Analytically

Non Applicable

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**COURSE OBJECTIVES AND OUTCOMES:**

Upon successfully completing this course, you should be able to: (1) interpret astronomical observations in terms of physical concepts and principles to arrive at a scientific model of the universe, (2) apply the basic concepts and principles of astronomy to your area of academic interest, (3) apply careful observation, critical thinking and problem-solving skills to the interpretation of astronomical data, and (4) effectively use selected laboratory instruments and techniques to collect, analyze, and interpret astronomical data.

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**METHODS OF INSTRUCTION:** Lecture, lab, discussion

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**METHODS OF EVALUATION:** Lab Reports, Quizzes, Projects, Exams

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**REQUIRED TEXT AT TIME OF COURSE ADOPTION/REVISION:**

TEXTS: Astronomy, The Evolving Universe, 9/e, by Michael Zeilik

OPTIONAL SUPPLEMENTARY MATERIALS:

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**Reasonable accommodations can be provided for students with documented disabilities. Please contact Learning Support Services for assistance: (231)348-6817.**

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**SUGGESTED TIME ALLOWANCE AND SEQUENCE OF INSTRUCTION:**

*(List general content description of what is being covered each week)*

*(If you need more than one line for a week, hit enter at the end of row; second line will begin)*

WEEK 1	Charting the Heavens
WEEK 2	The Heliocentric Universe
WEEK 3	Light and Matter
WEEK 4	Telescopes
WEEK 5	The Solar System
WEEK 6	Earth and its Moon
WEEK 7	The Terrestrial Planets
WEEK 8	The Jovian Planets
WEEK 9	Moons, Rings, and Pluto
WEEK 10	The Sun
WEEK 11	Measuring the Stars
WEEK 12	Star Formation
WEEK 13	Stellar Evolution
WEEK 14	The Milky Way Galaxy
WEEK 15	Normal Galaxies
WEEK 16	Cosmology

APPROVED FOR ADOPTION/REVISION BY THE CRD/AP COMMITTEE ON \_\_\_\_03/21/12\_\_\_\_