ARTH/AFST 488. African-American Art. 3 credits.
This course examines visual arts produced by people of African descent in
the United States from the colonial period until the present. Course themes
include debates about the relationship between racial identity and artistic
production; the complex interchange between African-American art and
the cultural traditions of Africa and Europe; black artists’ engagement with
popular representations of African-Americans; and the intersection of race
with class, gender, and sexuality. Prerequisite: GARTH 208 or GASTF 200.

ARTH 489. Topics in Art History. 3 credits. Offering varies.
Study of selected topics in art history at the advanced level. May be
repeated when course content changes. See MyMadison for current topics.

ARTH 490. Independent Studies in Art History. 1-3 credits, repeatable.
Offering varies.
Independent activity, such as research or studio practice, under faculty
supervision. Projected studies in any area of the school’s offering must be
arranged with the instructor who will direct them. Offered only with
consent of the instructor.

ARTH 491. Exhibition Seminar. 3 credits.
Advanced seminar explores museum theory and practice through the
collaborative design of an exhibition for an on-campus gallery space.
The course focuses on developing and researching the exhibition topic,
investigating the specific art objects and preparing critical educational
materials or catalogue. The class project also includes mounting the
exhibit in a real or virtual installation space. Prerequisite: GARTH 205 or
GARTH 206.

ARTH/ANTH/HIST 482. Material Culture. 3 credits.
A broad introduction to the multidisciplinary “field” of material culture
studies through readings, written assignments, in-class exercises and field
trips. The course introduces ways of looking at and learning from objects
and examines how scholars from several disciplines have used material
culture in their work. Prerequisite: HIST 385. Instructor’s permission required
to waive HIST 385 prerequisite for non-history majors.

ARTH/HIST 492. Historic Preservation. 3 credits.
An introduction to the philosophy and techniques of historic preservation,
guidelines for restoration, state and national register forms and procedures,
historic architecture, structural analysis, restoration techniques, as well as
the business aspects of historic preservation projects. Field trips are a major
component of the course. Prerequisite: HIST 385. Instructor’s permission required
to waive HIST 385 prerequisite for non-history majors.

ARTH 495. Internship in Art History. 1-3 credits.
An off-campus program prepared and monitored on an individual basis.
Internships are designed to provide practical experience in the arts.
Prerequisites: Permission of the instructor and ARTH 394 if in museums
and galleries.

ARTH 499. Honors. 6 credits total for three semesters (1,3,2).

Astronomy

Department of Physics and Astronomy

*ASTR 128. The Solar System. 3 credits.
An introductory course in astronomy, which includes the following topics:
motions of celestial objects, eclipses, historical development, the nature of
light, telescopes, properties and evolution of the solar system.

*ASTR 121. Stars, Galaxies and Cosmology. 3 credits.
An introductory course in astronomy which includes the following topics:
the Sun, stellar properties, stellar evolution, black holes, the Milky Way,
galactic evolution, quasars, cosmology.

ASTR 220. General Astronomy I: The Night Sky, the Solar System and
Stars. 3 credits.
ASTR 220 is the first in a two-course sequence in general astronomy
intended for students with a background in physics. Topics covered include:
appearance and movements of the night sky; astronomical coordinate
systems and timekeeping; seasons, eclipses and planetary configurations;
planetary motions and gravitation; fundamental forces; electromagnetic
radiation and its detection; content, structure, formation and evolution of
solar system; observations and models of the Sun, stellar interior models;
stellar magnitudes and spectra, classifications; Hertzsprung-Russell
diagram. Prerequisite: PHYS 140 or PHYS 240.

ASTR 221. General Astronomy II: Star Systems, the Interstellar
Medium and Cosmology. 4 credits.
ASTR 221 is the second in a two-course sequence in general astronomy intended
for students interested in science. Topics covered include: stellar evolution;
variability and high-energy phenomena in stars and multiple-star systems;
content, structure, and dynamics of the Milky Way, external galaxies, quasars
and AGN, large-scale structure and the distance scale of the universe; the Big
Bang model and alternative cosmologies, possible geometries and eventual
terminologies of the universe. An observational astronomy laboratory component is part
of this course. The lab component will cover basics of telescope set up and
operation as well as astronomical coordinate systems. Prerequisite: ASTR 220.

ASTR 297. Topics in Astronomy. 1-4 credits.
Topics in astronomy at the second year level. May be repeated for credit
when course content changes. Topics selected may dictate prerequisites.
Students should consult instructor prior to enrolling for course. Prerequisite:
Permission of the instructor.

ASTR 301. Searching for Life in the Universe. 3 credits.
A study of the search for life in the universe, with emphasis on teacher
preparation. Topics include how life on earth can guide the search, conditions
for life within our solar system, extraterrestrial planets that may be conducive
to life, possible radio communications with other civilizations and technologies
necessary for search. Significant time is spent developing student lesson plans.
Prerequisites: GSCI 181, GSCI 182, GSCI 383 and GSCI 184.

ASTR 320. Astronomical Techniques. 3 credits.
An overview of modern astronomical techniques with an emphasis on
quantitative data collection and analysis. The design and use of various
astronomical devices will be covered. Topics will include visible light
telescopes and radio telescopes as well as CCD data collection in addition
to other current astronomical techniques. Data reduction software will also be
addressed. Prerequisites: ASTR 220 and ASTR 221.

ASTR 397. Topics in Astronomy. 1-4 credits.
Topics in astronomy at the intermediate level. May be repeated for credit
when course content changes. Topics selected may dictate prerequisites.
Students should consult instructor prior to enrolling for course. Prerequisite:
Permission of the instructor.

ASTR/PHYS 398. Independent Study in Physics or Astronomy. 1-3
credits, repeatable to 4 credits.
An individual project related to some aspect of physics or astronomy. Must
be under the guidance of a faculty advisor. A student may not earn more
than a total of four credits for PHYS/ASTR 398.

ASTR 480. Astrophysics. 3 credits.
An introduction to the problems of modern astronomy and the quantitative
application of physical principles to these problems. Topics of study include
stellar structure and evolution, the interstellar medium and star formation,
cosmic rays, pulsars, galactic structure, extragalactic astronomy and
cosmology. Prerequisites: PHYS 340 and PHYS 380.

ASTR 497. Topics in Astronomy. 1-4 credits.
Topics in astronomy at the advanced level. May be repeated for credit
when course content changes. Topics selected may dictate prerequisites.
Students should consult instructor prior to enrolling for course. Prerequisite:
Permission of the instructor.

ASTR/PHYS 498R. Undergraduate Research in Physics or Astronomy.
1-4 credits, repeatable to 6 credits.
Research in a selected area of physics or astronomy as arranged with a
faculty research adviser. A student may not earn more than a total of six
credits for PHYS/ASTR 498R. Prerequisite: Proposal for study must be
approved prior to registration.

Athletic Training Education Program

Department of Health Sciences

ATEP 205. Introduction to Athletic Training (2, 2). 3 credits. Offered fall,
spring and summer.
This course provides a broad introduction to the profession of athletic
training. Lectures will focus on the domains of athletic training. Emphasis
will be placed on basic emergency management as well as injury prevention
including environmental issues, strength and conditioning, and selection of
equipment. Laboratory will mirror lecture. Prerequisites: ATEP or HS major,
coaching minor, or permission of the instructor.