95.121 Exploring the Universe  
SPRING 2012

COURSE POLICY / INFORMATION

Coordinator  Dr. Stimets

Section Info  
102 – MWF; 10:00 – 10:50 in Olney 150 (Dr. Cook)  
101 – MWF; 12:00 – 12:50 in Olney 150 (Dr. Laycock)

Instructors  
Dr. Cook (Timothy_Cook@uml.edu/Olney (NC) –  
Dr. Laycock (Silas_Laycock@uml.edu/Olney (NC) – 127 / 978.934.3777)

Corequisite  
96.121 Lab for Exploring the Universe (see page 5 of this document)

Websites  
Course:  http://faculty.uml.edu/rstimets/95.121/  
Text:  http://mhhe.com/arny

Catalog Description  
Topics covered will include: planet Earth, its structure, plate tectonics, greenhouse effect, ozone layer, craters and dinosaurs; our satellite - Moon; other planets; our star - Sun and its energy source; other stars, the HR diagram and stellar evolution, white dwarfs, neutron stars, supernovae, blackholes; our galaxy, the Milky Way, its structure; other galaxies; the universe, its structures and expansion; evolution of galaxies, quasars, cosmology, the Big Bang and unification of the forces of nature.

General Education  
This course counts towards the Science with Laboratory (SCL) General Education requirement if and only if it is taken with the corequisite 96.121 Exploring the Universe Laboratory. Please note that taking just 95.121 will NOT satisfy the Science (SC) General Education requirement regardless of whether you have satisfied your lab science requirement.

Required Materials  

b) Study Guide and Lab Manual:  Exploring the Universe (revised) by Richard W. Stimets, Kendall Hunt (needed for both 95.121 and 96.121)

c)  Response Pad (clicker): Personal Response System (PRS) by eInstruction

(Course Materials are available at the UML bookstore.)

Course Coverage  
Arny : Chapters 1-4, 6-18;  Stimets: Chapters 1-17
95.121 Exploring the Universe  
Spring 2012

Attendance required for all classes

Restrictions No consumption of any FOOD or DRINKS is allowed in the classroom. During class time all electronic devices (except response pads, calculators, and computers – allowed in the front rows) must be turned off.

Hand-in Homework

a) The first sheet must be labeled on the top right with: Your NAME (printed with family name first: in capital letters), section number, and the assignment label. Failure to follow this guidelines may result in lost work.

b) Only 8.5 x 11 inch paper with straight edges may be used.

c) Multiple pages for a given assignment must be stapled together.

d) Typewritten or hand-printed homework assignments are preferred. Handwritten assignments are acceptable only if they are clear and legible.

e) Keep your answers brief and to the point.

f) Hand-in homework must be turned in at the beginning of the class on the date indicated on the assignment schedule. (If class is cancelled on a quiz day, the quiz will be given and the homework collected on the next class day.)

g) No LATE or EARLY hand-in homework will be accepted for any reason.

In-class Questions / Quizzes

a) Questions: Bring your response pad (clicker) to every class as questions will be given daily.

Possession of more than one response pad constitutes academic dishonesty. Any communication during the answering of questions will also be considered academic dishonesty.

You will NEVER be able to use paper in place of your response pad.

No makeup questions will be given.

b) Quizzes: Bring a number 2 pencil, eraser, and scientific calculator.
Grading

In-class questions 10 %
In-class quizzes 25 %
Hand-in homework 25 %
Final Exam 40 %

Your grade for in-class questions will be determined by dropping the lowest scores for 25 % of the questions asked.

Your grade for in-class quizzes will be determined by dropping the lowest 3 quiz scores.

Your grade for hand-in homework will be determined by dropping the lowest 4 homework scores.

FINAL EXAM -- consists of 94 questions from the quizzes and 6 questions from the topic of cosmology; time/date/place to be announced by the registrar's office

Make-up Work May be permitted but only in cases of documented unavoidable absence due to acceptable cause (such as serious illness, death in the family, court summons, etc.). Only students who have authorized absences from at least 3 in-class quizzes are eligible for makeups.

Academic Conduct You are responsible for proper academic conduct - please refer to the university's academic integrity policy at the following URL:

www.uml.edu/catalog/undergraduate/policies/academic_dishonesty.htm

Policy for In-Class Quizzes and Final Exam

1. The work is to be your own work. No communication with other students is permitted. The only items which are allowed on your work space are:
   a) the question sheet(s)
   b) your answer sheet (bubble form)
   c) an electronic calculator
   d) pencil and eraser

2. Electronic communication devices such as cell phones, ipods, etc. must be turned off and placed in your book bag or on the floor. If you have one of these in your hand or on your work space, it will be presumed that it is being used for academically dishonest purposes.

3. Any student observed violating rules 1 and/or 2 above will at a minimum be asked to leave the room and forfeit that quiz or exam score, i.e. you will receive a score of zero.
COURSE GOALS and STUDENT LEARNING OBJECTIVES

Course Goals

● illuminate the excitement of the field of astronomy
● develop a thirst for a better understanding of what astronomy is
● explain how science is done (and that it is never done)
● explain how we know what we think we know
● clearly define the fundamental science that astronomy rests on
● develop an appreciation of the relative size of things in the cosmos
● provide scientific explanations of material related to astronomy
● enhance the ability of solving simple scientific numerical problems

Student Learning Objectives

● develop an awareness of orders of magnitude
● understand meaning of proportionality and ratios
● be able to use logarithmic scales
● be able to interpret graphical data
● discern the meaning of tabular data
● know the scientific method; meaning of 'theory'
● be able to express yourself clearly on the course topics
96.121  Exploring the Universe Laboratory (SPRING 2012)

(Sections will NOT meet during the first week of classes, Jan 23-27)

Lab sections meet on Monday, Wednesday, or Friday in either Olney 103A or Olney 108A. There are only six (6) meetings and all are required.

The initial meeting (1 of the 6!) for each section is given below:

**ODD-NUMBERED SECTIONS**

M Sep. 12  sect. 807 / 809 / 817 / 819 / 821 / 823 / 829 / 833
W Sep. 14  sect. 825 / 827 / 835
F Sep. 09   sect. 801 / 803 / 805 / 811 / 813 / 815 / 831 / 837

**EVEN-NUMBERED SECTIONS**

M Sep. 19  sect. 808 / 810 / 818 / 820 / 822 / 824 / 830 / 834
W Sep. 21  sect. 826 / 828 / 836
F Sep. 16   sect. 802 / 804 / 806 / 812 / 814 / 816 / 832 / 838

___________________________
Registration Questions for 96.121 labs?

Contact Dr. Mittler using one of the following ways:

a) email:  Arthur_Mittler@uml.edu
b) office:  Olney 137
c) telephone ext.:  3775

physics lab website:  http://faculty.uml.edu/amittler/phlabs/