# 96.121 Lab for Exploring the Universe (Spring 2015)

## COURSE POLICY

(Please fill in the information immediately below and keep these pages for reference.)

<table>
<thead>
<tr>
<th>Course Section Info.</th>
<th>Section number _________ / meeting time _________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Instructor</td>
<td>________________________________________________________</td>
</tr>
<tr>
<td>Office/Email</td>
<td><em><strong><strong><strong><strong><strong><strong>/</strong></strong></strong></strong></strong></strong></em>_________________________</td>
</tr>
<tr>
<td>Faculty Supervisor</td>
<td>________________________________________________________</td>
</tr>
<tr>
<td>Office/Email</td>
<td><em><strong><strong><strong><strong><strong><strong>/</strong></strong></strong></strong></strong></strong></em>_________________________</td>
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</tbody>
</table>

**Corequisite Course**

95.121 Exploring the Universe

**Course Coordinator**

Dr. Mittler (Olney 137, tel. 978.934.3775, email Arthur_Mittler@uml.edu)

**Rooms**

Experiments are performed in either Olney 103A or Olney 108A. Please see posting on lab doors for your section's lab room.

**Lab Rules**

No consumption of any **FOOD** or **DRINKS** is allowed in the laboratories. You will **NOT** be allowed to perform the experiments # 2-6 unless you have all the required materials listed below.

**Required Materials**

- **a)** text: *Exploring the Universe* by Richard W. Stimets, (Kendall Hunt)
- **b)** metric ruler (15 to 30 cm long, preferably transparent)
- **c)** pencil with eraser
- **d)** calculator

**Make-up Work**

Permitted **only** in case of documented unavoidable absence due to acceptable cause (such as serious illness, death in the family, court summons). You must submit a completed authorization form (available in Olney 111) to your laboratory section instructor. Your instructor will indicated whether your makeup is authorized. If authorized, you must do the makeup as scheduled.

**Assistance**

Please contact your laboratory section instructor for assistance in the course.

**Information**

Notices concerning the physics service laboratory courses will be posted in the display cases opposite Olney 111 and on the lab room doors.

- **Schedules:** [http://faculty.uml.edu/Arthur_Mittler/Teaching/96.121.aspx](http://faculty.uml.edu/Arthur_Mittler/Teaching/96.121.aspx)
- **Rooms:** [http://faculty.uml.edu/Arthur_Mittler/Teaching/Teaching.aspx](http://faculty.uml.edu/Arthur_Mittler/Teaching/Teaching.aspx) (click on Announcements)

**Academic Conduct**

You are responsible for appropriate academic conduct. Please refer to the university's academic integrity policy at: [http://www.uml.edu/Catalog/Undergraduate/Policies/Academic-Integrity1.aspx](http://www.uml.edu/Catalog/Undergraduate/Policies/Academic-Integrity1.aspx)
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96.121 Experiments (Please see last page for listing of the meeting dates for your section.)

The Laboratory Exercises, LE1 – LE5, are in the back of Exploring the Universe (Stimets).

Exp. #1 Local Viewing of the Sky - hour-by-hour (Starry Night software)
Exp. #2 The Moon's Orbit (LE1)
Exp. #3 Orbits of Visual Binary Stars (LE2)
Exp. #4 The Blackbody Spectrum and Stellar Spectra (LE3)
Exp. #5 Our Place in the Milky Way Galaxy (LE4)
Exp. #6 Hubble's Law and High Redshifts (LE5)

Grading

Your course grade will be based on:

Exp. #1 100 % for lab report
Exp. #2-6 10 % for pre-lab quiz
90 % for lab report

The following table will be used to determine approximate course letter grades:

<table>
<thead>
<tr>
<th>average</th>
<th>grade range</th>
</tr>
</thead>
<tbody>
<tr>
<td>90's</td>
<td>A</td>
</tr>
<tr>
<td>80's</td>
<td>B</td>
</tr>
<tr>
<td>70's</td>
<td>C</td>
</tr>
<tr>
<td>60's</td>
<td>D</td>
</tr>
<tr>
<td>&lt; 60</td>
<td>F</td>
</tr>
</tbody>
</table>
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Course Rules

I Pre-lab quizzes will be given at the beginning of the lab meeting.

II In order to receive a passing grade, all 6 (six) experiments must be performed.

III All lab reports must be signed by your instructor and turned in at the end of the lab period in which the experiment is performed.

IV You may not perform any of the experiments in a section that you are not registered for.

V REPORTS (All parts below must be handed in stapled together.)

Use the Lab Report handout sheets.

Page 1 Cover & Questions Page

A) Student's Name (printed)
   Section Number
   Student Identification Number (SID)
   Instructor's Name
   Date Experiment was Performed
   Experiment # / Experiment Title
   Partner’s Name (printed)

B) ANSWERS TO QUESTIONS (Answers must be in complete sentences.)

Page 2 Notes & Calculations (back side of Page 1)

Pages 3/4 Notes & Calculations (front and back of second sheet)

Pages 5+ Additional pages (handed out during lab session as needed)

VI Only one authorized makeup will be allowed.