**Section 001 Instructor:** Requena Torres, Miguel Angel   
**Email:** mrequenatorres@towson.edu  
**Office hours:** SC1141 (or online) Tuesdays 11:00-11:50 AM.

**Section 002 Instructor:** Etchemaite-Walborn, Laura   
**Email:** letchemaitewalborn@towson.edu  
**Office hours:** SC3150 (or online) TBD

**Lab location: SC1141**

**Times:** Section 001: Monday, 9:00 -10:50 AM

**S**ection 002: Monday, 12:00 -1:50 PM

Practical laboratory experiments will be conducted following the lecture schedule (see lecture Syllabus). Although mainly designed to complement what was covered in class, some labs may be used to introduce new topics. Lab experiments will be posted to [Blackboard](https://blackboard.towson.edu/) ahead of each session. You will **need to print out the lab write up/worksheet. We will have a printer in the lab.** All lab work is to be completed and turned in at the end of each lab session. Plan to write neatly or print out a couple of copies if you’d like to turn in a human-readable version of your lab. **Late lab submissions will not be accepted unless arrangements have been made *prior* to the due date/time of that particular lab.**

**Electronic Devices**

1) Laptops are optional. There is one desktop computer for every workstation of two students.

2) You will need a calculator to help you with the math calculations.

3) Cell phones are a distraction to everyone in the room. Please turn them off while you are in lab. If you have an emergency, please let the lab instructor know.

2 points will be removed from the lab grade every time people is texting and using the phone instead of working on the lab.

## Collaborative Labs

1. You will work in groups.
2. Group size is based on the number of people on the meeting, from 2 to 3. This groups will be random the first day, but fix for the rest of the semester.
3. One lab packet per group. Include the name of all the lab partner(s) working that day in the lab.
4. You are working in groups, please be focus on your work and do not use your phone for texting or talking during this time.
5. Feedback will be given the following lab.

## Lab Time & Extensions

1. Labs will begin promptly. See lab schedule for start and end times.
2. Each group must complete the lab assignment and turn it in before departure. Late lab submissions will not be accepted unless arrangements have been made prior to the due date/time of that particular lab.
3. If your group needs more time to complete the lab, your lab instructor can (at their discretion) extend the lab time.

# Missed Labs

1. If you cannot attend a lab for any reason, you will get a 0 for that lab.
2. You can schedule a make-up lab for an excused reason as defined by University policies and if you provide documentation of that absence. You must email your lab instructor as soon as possible about your situation and request a day and time to make-up the missed lab. Note: Make-up time for excused absent is limited to the availably the lab instructor.

**Life Happens**

Occasionally you may have a good reason for missing your scheduled lab time. Please, contact me in advance, or as soon as possible within the lab session period. Labs will be accepted late on a case-by-case basis if notice is given prior to the due date of the lab. The lower grade lab will not be used for your average grade, this is to help you, in case you need to miss any lab session.

# Grading

Your final lab grade will be the average of all but your lowest-scoring lab and will account for 25% of your final grade. **Note that failing the lab will result in an automatic failure of the class, therefore you need to have more than 60% of your final lab average to pass the class.**

**Attendance and Lateness**

1. **Attendance is mandatory. Absences will result in a 0 for the lab.**
2. **Your lab grade will be reduced 10% for every 10 minutes you are late. If you are 30 minutes late, the instructor will decide if you should complete the lab alone, with only the time remaining or if you get a 0, as you can not complete the lab in time. No work in groups after 30 minutes late.**

**Weekly Lab Worksheet (grade to 100)**

As you complete the lab, you will be guided by a worksheet packet that you can download and print/read from Blackboard. The worksheet will contain questions, tables, and graphs that you will need to fill in as you conduct the lab.

1. Your data and answers to these questions are graded for completeness (20%) and for accuracy (80%). Your accuracy lab grade will be determined by the percent of correct answers, correct mathematical format, acceptable data and acceptable observations. Each question will have different weight if needs mathematical work or deep thinking.
2. If there are multiple written answers to a particular problem, each answer should indicate which question is being addressed.
3. Your quantitative answers are always boxed or highlighted if no underlined space is provided.
4. Your handwriting must be clear, if your answers are not legible, then you will not receive credit.
5. Don’t just write legibly, but clearly communicate what you’re trying to say. If I don’t understand what you’re saying, I’ll have to assume you don’t either, and will grade accordingly.

**Other Important Things**

Any subjects pertaining to Student Conduct, Special Accommodations, Academic Integrity, etc. can be found on in Lecture syllabus. The rules of engagement in the class apply in this lab as well.

**Academic Integrity**

Because you may work in lab groups, be very aware of the line between collaboration and cheating. Cheating includes, but is not limited to plagiarism of someone else’s words, copying answers from another student, and copying collected data without contributing to its collection.

All students are responsible for reading and abiding by the Towson University Code of Conduct and Academic Integrity Policy. Towson University policies prohibit all forms of academic dishonesty, including cheating, plagiarism, falsification, and fabrication. It is the student's responsibility to understand what these terms mean.

Any violation of the Academic Integrity Policy will result in a score of zero for the assignment in question and letters to the Chair of the Department of Physics, Astronomy, and Geosciences and to the Registrar's Office. Particularly egregious and/or repeated offenses may result in failure of the course.

**Diversity Statement**

The Department of Physics, Astronomy, and Geosciences (PAGS), in accordance with the Fisher College of Science and Mathematics (FCSM) and with the Towson University Strategic Plan, support initiatives that promote diversity among FCSM faculty, staff and students. We are committed to increasing the quality and diversity of our students, faculty, and staff while increasing retention and curriculum initiatives. To obtain further information related to diversity initiatives, please visit

<http://wwwnew.towson.edu/fcsm/diversity/> ht[tp://wwwnew.towson.edu/physics/Diversity\_Plan.asp](http://wwwnew.towson.edu/physics/Diversity_Plan.asp)

ASTR 161 Lab Schedule Monday: sect. 001 (9:00 AM)/sect. 002 (12 PM)

1. Intro Labs 01/30

2. Phases of the Moon 02/6

3. Kepler’s Laws (naap) 02/13

4. Orbit of Mars 02/20

5. Moon’s of Jupiter 02/27

6. Spectroscopy 03/06

7. Extrasolar Planets (naap) 03/13

8. Planetary Positions 03/27

9. Blackbody Rad. (naap) 04/03

10. Parallax (sky) 04/10

11. Rot. Of Saturn 04/17

12. Met. and Asteroids (sky) 04/24

13. Stellar Spectra 05/01

14. Rot. of the Sun 05/08

Skynet intro (sky)

Holidays: Spring Break March 20th to 24th.

We will provide for you: ruler (in cm/mm), protractor, color pencils. But you will need a calculator to help you with the math calculations. You can try to download and install in your computers the following:

NAAP labs: <https://astro.unl.edu/downloads/> (naap in above table)

Stellarium: <https://stellarium.org/> (ST in above table)

Skynet: <https://skynet.unc.edu/> (sky in above table)