ASTR 102: OBSERVATIONAL ASTRONOMY
(FALL 2012)

Meeting:

Observatory Phone Number: (979) 845-0536
Map to Observatory: http://observatory.tamu.edu/directions.html

All sections begin meeting the first week of classes.

Section 501 meets on Monday nights from 7:30 to 10:30 PM, beginning August 27th
Section 502 meets on Tuesday nights from 7:30 to 10:30 PM, beginning August 28th
Section 503 meets on Wednesday nights from 7:30 to 10:30 PM, beginning August 29th
Section 504 meets on Thursday nights from 7:30 to 10:30 PM, beginning August 30th

Students are responsible for their own transportation to and from the observatory. While on the property, drive slowly and be cautious of wildlife as this is also a preservation area. The maximum speed limit is 25 mph. Speed is restricted to 10 mph in the parking area. Failure to obey these speed restrictions will result in a significant decrease in your final point total!

Managing the Gate:

The “white” gate noted on the map will either be opened or closed when you arrive for your first class at the observatory. If it is closed, wait patiently in your vehicle and your instructor will meet you at the gate and lead you to the observatory. If the gate is opened when you arrive, carefully follow the map and drive directly to the observatory.

Once you have been introduced to the area and after the first week of classes, you are responsible for managing the white gate. When you arrive, let yourself in the gate and lock it behind you. This gate must remain locked at all times. Failure to manage the gate properly becomes a burden on the entire class as the class lock will have to be removed. The combination to the class lock is: 0218 Note: this lock is only on the gate during class time.

Fire Danger Notice:

Due to the extended drought, the fire danger is extreme. Absolutely no object that emits a flame i.e.(matches, cigarette lighter) is permitted on any property owned by Ecology Conservation and Range Science or the Department of Physics & Astronomy (Observatory). Likewise, no smoking is allowed on the property, regardless of your physical location. Do not drive your vehicle onto any grass unless an emergency or unavoidable conditions warrant such behavior. This especially includes the area along the unpaved roadway.
Attendance:

You are expected to arrive on time. You will only receive half credit for arriving after a lab assignment has been given to the class. There are no make-ups for students who do not have an official, written excuse as outlined in the student rules. For those with an excused absence, make-ups are given on an as-needed basis and coordinated with your instructor. You must attend the section for which you are enrolled. You will not receive credit for work completed while attending another section.

Quizzes & Exam:

There will be a minimum of five (5) quizzes given during the course. The dates for these quizzes may not be announced in advance. Quiz questions are generated from discussions in class and the readings in the text. You may elect to take an optional exam at the end of the term. If so, your quiz and exam scores will account for 20% (each) of your final grade. If no exam is taken, your quiz grades will account for 40% of your final grade.

Lab Practicals:

You will have two lab practicals during the course to test your knowledge of the night sky and your telescope pointing skills. Dates for lab practicals are dependent on the weather and progress of the individual class. Therefore, dates for lab practicals will be announced by the instructor at least one class night in advance of the practical.

Correspondence:

Throughout the course, any additional information regarding the class will be sent via email to your Neo email account. It is your responsibility to check your email before coming to class each class night. Typically, emails will not be sent after 5:00 PM. If you need assistance with your Neo email, visit the Student Computing Center on campus.

Additional Course Rules:

- Students must have: red filtered flashlight; something with which to write; star charts; and a calculator with common functions such as Sin, Cosine, etc. We will discuss the flashlight in our first class.

- Students must print the star charts, which can be found on the web site. Bring these charts with you to your first class. http://observatory.tamu.edu/courses/observational/

- Do Not Bring Food To The Observatory! Eat dinner or a snack before coming to class. Drinks are okay to bring into the classroom/observing area; however, you must take it with you when you leave. Drinks are not allowed near the computers in the classroom. Failure to obey these simple guidelines will result in a 40 point reduction in your final grade!

Lab Manual:

You must visit the url below to download and print the lab manual. The manual must be printed, punched and placed inside of a simple 3-hole folder. Hard binders are discouraged and your instructor may require that you replace a hard binder with a folder. You will be leaving the manual at the observatory for the duration of the course. You must have the manual with you on your first class day. Instructors grade the work in your lab manual. If you fail to bring a manual, you cannot receive credit for any work completed.

Lab Manual Download: http://observatory.tamu.edu/courses/observational/manuals/

Grading:

(Grading will be on a 100-point scale. There is no curve.)

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* Equipment and Facilities Care: This category cannot increase your final grade, but can significantly reduce your grade. Misuse of any equipment; not driving at appropriate speeds; not putting the equipment away properly; and not obeying the general rules outlined in this syllabus including the Observatory Safety Rules (below), can all result in a decrease in points for the term. Your instructor has sole discretion to remove points from your total for the reasons stated above.
Observatory Safety Rules

The following is a list of safety and related rules that must be followed by all who visit or attend classes at the observatory. The rules are separated into three main categories: Fire and Emergency, Telescope and General Safety. A list of emergency telephone numbers can also be found below for reference. Students are required to sign the Observatory Safety Rules Agreement online through Howdy. If you fail to do this by the end of the drop/add period, your name will be removed from the grade book and you will not receive credit for your work. Further, you will not be allowed at the observatory. Students who do not follow the rules may have their final grade reduced significantly as mentioned in the “Grading” section. If the agreement is not available to sign via Howdy, your instructor will inform you to sign and return the physical copy at the end of this document.

Emergency Telephone Numbers

Emergency Operator (All life-threatening Emergencies) 9-911

Area Maintenance V (Building Problems and Repair) 5-5542
24 hr Radio Room (Elevator & Pest problems, After-hours Maintenance) 5-4311

Environmental Health & Safety Dept. (Chemical spills/problems) 5-2132
After normal work hours call the Radio Room at 5-4311.

Evacuation Coordinator 5-0536

University Police 5-2345
University Hospital 5-1511

College Station Fire Department (Non-Emergency) 764-3700
College Station Police Department (Non-Emergency) 764-3600

Bryan Police Department (Non-Emergency) 361-3680
Bryan Fire Department (Non-Emergency) 361-3888

Fire and Emergency Safety

The "grassy area" mentioned below refers to the intersection of the parking area and eastern fence line. Your instructor will familiarize you with this area. It is important to know the location of the grassy area as it is the meeting place for all persons during any emergency that requires you to exit the buildings. Do not drive away in your vehicle! Remain in the grassy area until you are dismissed by your instructor or emergency personnel.
There are two numbered buildings at the observatory:

1. **Building #1238 (0.5 Meter Observatory):** The small, double room observatory near the east fence line.

2. **Building #1239 (Student Observatory / Classroom):** The large building containing the classroom, restrooms and water fountains. The restrooms and water fountains are located in Rm 109.

Four fire extinguishers are located inside the observatory that are accessible to all persons:

1. **Inside the classroom against the west wall near the exit door.**

2. **Inside the main entrance door to the student observatory against the east wall.**

3. **Second floor of the student observatory between the elevator and stairwell exit.**

4. **Inside the door leading into the 0.5 meter observatory.**

There are Fire Alarm Pull Stations located next to each exit door in both buildings and on the second floor inside the stairwell of the student observatory.

If you are in Building #1238 (0.5 Meter Observatory): All occupants are to proceed through the only marked exit door to the grassy area.

If you are in Building #1239 (Student Observatory / Classroom) First Floor: If in the classroom (Rm 106), exit through either of the marked exit doors and proceed to the grassy area. If in any area other than the classroom and if possible, proceed through the marked exit door in Rm 109. Proceed to the grassy area.

If you are in Building #1239 (Student Observatory / Classroom) Second Floor: All occupants are to proceed down the stairs and exit through the marked exit door in Rm 109 (first floor where the restrooms and water fountains are located). Proceed to the grassy area.

The observatory is at the top of a hill near the Easterwood Airport and is exposed to all weather conditions. Severe weather can develop suddenly, especially during the summer months when prevailing winds are from the south. Straight Line Winds exceeding 80 mph have been recorded during summer thunderstorms and are dangerous conditions. As a result, your instructor may not allow you to leave until the threat has passed, even if class is officially over by the clock! You are required to remain at the observatory until you are dismissed by your instructor.

In the event of an emergency, follow the instructions given to you by your instructor. Above all, remain calm and quiet so that instructions can be heard by all. If you are asked to perform a duty by your instructor, follow their instructions.
Telescope Safety

When picking the telescope up from ground level, be certain to lift with your legs and not your back. Although the 8" telescopes weigh less than 30 pounds, serious back injury can occur from improper lifting.

Before moving the telescope to an object in the night sky, be certain that all persons are clear of the telescope to prevent getting hit.

Warning! Never look directly at the Sun with the naked eye or with a telescope. Permanent and irreversible eye damage may result. Never use a telescope to project an image of the Sun onto any surface. Internal heat build-up can create a fire causing personal injury. Damage to the telescope and/or any accessories attached to it can also occur.

Never use an eyepiece solar filter or a Herschel wedge. Internal heat build-up inside the telescope can cause these devices to crack or break, allowing unfiltered sunlight to pass through to the eye.

Never leave the telescope unsupervised when children are present or with adults who may not be familiar with the correct operating procedures of the telescope.

Never point the telescope at the Sun unless you have the proper solar filter. When using the telescope with the correct solar filter, always cover the finder scope. Although small in aperture, finder scopes have enough light gathering power to cause permanent and irreversible eye damage. In addition, the image projected by the finder is hot enough to burn skin or clothing.

The 12' safety ladders in the domed observatories must be set so they cannot roll when a person is climbing. The first step of the ladder releases the wheels to prevent rolling. Hold the ladder up by the hand rails and press down on the first step with your foot and gently lower the ladder to the ground. Hold the hand rails at all times when climbing or standing on the ladders.

General Safety

All persons must wear shoes that completely cover the feet, such as tennis shoes or boots. Sandals or open toe shoes or open heel shoes are prohibited.

The student observing deck is where you will setup a telescope to complete your observational laboratory assignment. The deck is made of wood planks that can become detached and pose a tripping hazard. Likewise, notebooks and other necessary items can be laying on the deck while you are working and can pose a tripping hazard. You are required to have a red filtered flashlight at all times when outdoors at the observatory. Red light allows you to maintain your night vision while working in the dark. Use your light when walking on the deck or between the deck and the classroom building to avoid tripping.
The maximum speed limit on the unpaved section of road leading to the observatory is 25 mph. Speed is restricted to 10 mph in the parking area next to the observatory. Be cautious of automobiles, tractors and utility vehicles that may be moving without headlights. Be cautious of pedestrian traffic, especially near the observatory. Pedestrians can be very difficult to see since the road is narrow and there are trees and tall grass along the road's edge.

All persons should be aware that the property surrounding the Physics Teaching Observatory is open rangeland and prone to poachers (a person who hunts illegally), especially during the fall and winter months. If you witness any person(s) with a rifle or any firearm within the property, contact University Police immediately! If you are at the observatory, let your instructor know immediately and they will be responsible for contacting law enforcement.

During active mosquito months, all persons visiting or taking classes at the observatory must use insect repellent when outside for protection against viruses that can be transmitted by mosquitoes and other biting insects.

Bats are flying mammals indigenous to our region. The bat population living near the observatory have been known to carry rabies. If you find a bat on the ground whether dead or alive, do not touch or come in contact with the animal in any way! Alert the person in charge. Environmental Health and Safety will be contacted and will be responsible for the proper handling of the animal. If a bat flies inside any building, leave the building; prop open an outside door; and stand clear of the door. Bats will typically fly out on their own within 10 or 15 minutes. If the bat cannot get out, contact University Pest Control to remove the animal. Do not attempt to catch or handle the bat! If you do come in contact with a bat, let your instructor know immediately so the animal can be quarantined if possible and tested properly. Wash the area of contact vigorously with soap and water and see your health professional as soon as possible for guidance.
Observatory Safety Rules Agreement
(ASTR 102 ALL SECTIONS)

I acknowledge that I have received the course syllabus either from my instructor or by internet download and that my instructor has reviewed the syllabus with me personally or with my class.

By signing below, I agree to follow all of the Course Requirements and Observatory Safety Rules as established in the course syllabus. This includes following the instructions given to me by my instructor and new rules that may be adopted during the course of the semester.

In addition, I acknowledge that I have read the information below regarding the Americans with Disabilities Act; the Aggie Honor Code; and syllabus amendment information.

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Room B118 of Cain Hall, 979-845-1637.

The Aggie Honor Code is “An Aggie does not lie, cheat, or steal or tolerate those who do.” For more information, refer to the Honor Council Rules and Procedures on the web at http://www.tamu.edu/aggiehonor/

While the information in this syllabus was accurate at the time of writing, it may be necessary to amend information and policies during the course of the semester. Such amendments to this syllabus will be announced via email and by your instructor.

Print Full Name _______________________________________________________________

Signature ___________________________ Date ____________________