

# Descriptive Astronomy 2010

## Syllabus - Putschke - Fall 2013

### WEB COURSE

- READ THIS SYLLABUS THOROUGHLY BEFORE WRITING TO OR CALLING THE INSTRUCTOR WITH QUESTIONS ABOUT THE COURSE.
- QUESTIONS SUBMITTED BY EMAIL MAY BE ANSWERED IN BULK - GIVEN THERE ARE APPROXIMATELY 300 STUDENTS IN THIS CLASS, IT MAY NOT ALWAYS BE POSSIBLE FOR THE INSTRUCTOR TO ANSWER QUESTIONS ON AN INDIVIDUAL BASIS -- ALSO READ THE FAQ PAGE ON BLACKBOARD BEFORE AND AFTER WRITING TO THE INSTRUCTOR.

Prerequisites: none

#### Intended audience:

- General audience including science and non-science majors.
- Minimal knowledge of mathematics (elementary algebra) and sciences.
- Ideal for Students seeking to satisfy their GEN-ED Science requirement.
- Must have access to a computer and be familiar to browser usage.
- Must have email access and read Wayne State email REGULARLY.
- **Must be familiar with the WAYNE STATE BLACKBOARD system.**

#### Synopsis:

This course is an elementary introduction and survey of Astronomy. It covers a very large range of introductory topics including: The Sky, Orbits and Gravity, Earth-Moon-Sun System, Electromagnetic Radiation, Telescopes, The Solar System, Planet Earth, The Moon, Inner Planets, Outer Planets, Minor Bodies of the Solar System, The Sun, The Stars, Stellar Evolution, Relativity and Black Holes, The Milky Way, Galaxies, Quasars and Active Galaxies, Order in the Universe, Big Bang Cosmology.

#### Course Format:

The course material/content is comprised of reading material from the course textbook (see below) and online material delivered through BLACKBOARD and the Instructor's course website. Online material includes power point lectures, assignments, study guides, self-tests. Home work assignments and exams will all be taken ONLINE through the Blackboard system.

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### Instructor/Lecturer:

Assoc. Professor Joern Putschke,

- ✦ E-Mail :[joern.putschke@wayne.edu](mailto:joern.putschke@wayne.edu)
- ✦ Office phone: 313 577 5407
- ✦ Office: Room 318, Physics Building, Wayne State University
- ✦ Office hours: Any day of the week but by appointment only.
- ✦ **Communication via email is preferable.**

### Course Web Site:

- ✦ <http://ast2010.physics.wayne.edu>  
The access to this website is controlled and limited to students of this class.  
Username: ast2010  
Password: Fall2013
- ✦ Weekly reading assignments and study unit objectives
- ✦ Self-tests questions
- ✦ Link to lecture notes
- ✦ Lexicon/glossary

### Blackboard System (<http://blackboard.wayne.edu>)

- ✦ Blackboard is used for general information related to the course, course announcements, online **weekly quizzes**, and for **exams**.
- ✦ If you are not familiar with Blackboard, obtain your login ID, and password as soon as possible and immediately test your ability to log on, navigate, and understand Blackboard's different features.
- ✦ **Weekly quizzes** (home work assignments) and **exams** will be taken through Blackboard.

### Course ANNOUNCEMENTS:

- ✦ Course related general announcements will be carried out through the Blackboard system, and by email.
- ✦ Logon to the BLACKBOARD website to see announcements and read your **Univeristy email** on a regular basis (e.g. at least every other day) to stay up-to-date with class information.
- ✦ **Make sure your University E-MAIL BOX is NOT FULL.**

### Lectures: NONE

No in-class meeting or lecture for students registered in this section.

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## Textbook

Author: Seeds, Backman, Pruneau  
Title: Foundations of Astronomy,  
Edition: Special Edition for Wayne State (Based on 12th Edition)  
Publisher: Brooks/Cole Cengage Learning  
ISBN: 9781285889276

- ✦ **It is imperative you read the textbook in conjunction with the reading assignments (online lectures see below) on a regular basis and do not wait till the last minute to learn the material.**

## Reading Assignments:

- ✦ Reading Assignments are given weekly -- **see table below**.
- ✦ Reading material include the textbook chapters, and the lecture notes posted on the course website <http://ast2010.physics.wayne.edu>.

## Remark on Reading Assignments & Textbook

Be aware that the reading assignments available online (see above) are not a one-to-one excerpt of the textbook. This is was done on purpose to expose you to a slightly difference perspective and alternative ways of explaining the material.

**It is imperative in order to be successful in the quizzes and exams to read both, the textbook chapter and the online reading assignments chapters!**

## Self-Study Tests (Self-Tests)

- ✦ Self-test questions are available online on the course website:
  - ✦ <http://ast2010.physics.wayne.edu> for each study unit.
- ✦ The self-tests are provided to help you identify the material to read, focus on, understand, and remember.
- ✦ You do NOT submit your answers to the self-test questions. You will not be graded on the self-tests.
- ✦ Answers to the self-test questions will not be posted. It is your responsibility to find them - and if needed discuss with your peers.

## Weekly Quizzes:

- ✦ Weekly quizzes are given ONLINE using the Blackboard automated grading system.
- ✦ Quizzes can be taken from home, campus, or anywhere you have access to a computer equipped with a browser, and connected to the internet. Use of wifi devices (such as smart phones and pads) is **NOT** recommended and should be AVOIDED.
- ✦ Each quiz consists of a few multiple choice, true-false, or fill the blank questions.
- ✦ There are **12 quizzes** to be taken.

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- ✦ **No partial credit for ONLINE quizzes.**
- ✦ **ABSOLUTELY No makeup for ONLINE quizzes. NO EXCEPTION!!**
- ✦ Do not wait till the last minute to complete a quiz. Quizzes **CANNOT** be taken after their due date and time.
- ✦ **Do not forget to press/click the SUBMIT button.** Note that once the SUBMIT button is clicked your answer is submitted and cannot be changed. So **think twice before clicking but do not forget to click...**
- ✦ **Quiz #0 is an optional practice quiz** in order for all students to familiarize themselves with the Blackboard system. You get points just for doing it.
- ✦ **TWO lowest quiz scores (excluding quiz #0) will be dropped for the calculation of your final grade.**
- ✦ **Self-pace RULE:**
  - ✦ Quizzes and exams will automatically appear once a week in Blackboard under the Quiz/Exams tab.
  - ✦ You will nominally have UP TO 11 days to complete a quiz. Quizzes will nominally become available on Thursday morning (5am) and remain available until the due date on Sunday end-of-day (11:59 PM).
  - ✦ You can access and take each quiz multiple times (maximum of 3 times) to improve your score.
  - ✦ The nominal schedule is shown in the table below.
  - ✦ You can **proceed faster than the nominal schedule** if you obtain more than 70% in quizzes. If you complete a quiz with a score of more than 70%, the next quiz automatically becomes available until its nominal due date i.e. you will have a lot more time to complete it. This also applies to the exams, meaning if you completed all the quizzes that will be covered in the exam and you have always more than 70% you can take the exams! The next quiz after the exams becomes available if you had an exam score greater than 70%.
  - ✦ You cannot proceed slower than the nominal schedule: i.e. you must complete the quizzes by their due date otherwise, you will get a score of 0.

### Exams:

- ✦ There will be three hourly exams and one FINAL exam
- ✦ **Exams are taken on the web through Blackboard.**
- ✦ Hourly exams will consist of roughly 50 multiple choice, fill the blank, simple numerical calculations, or true/false questions. The FINAL will consist of roughly 100 multiple choice, or true/false questions.
- ✦ Material covered on each exam is shown in the table below. The final is a cumulative exam i.e. covers all the material seen through the semester.
- ✦ Exam Makeups are restricted to extreme circumstances. "I forgot about the exam" **is not** an extreme circumstance...
- ✦ The Final exam will be taken during the University Final's week.
- ✦ **If you do not take the final exam, your course final grade will be automatically F -- NO EXCEPTION**
- ✦ **If you do not take two or more exams, your course final grade will automatically be "F" -- NO EXCEPTION**

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- ✦ **ONLINE EXAMS ARE TAKEN THROUGH BLACKBOARD**
  - ✦ **QUESTIONS ARE RANDOMIZED --- EACH STUDENT GETS DIFFERENT SETS AND SEQUENCES OF QUESTIONS.**
  - ✦ **MAKE SURE YOU USE A RELIABLE, ROBUST, and STABLE INTERNET CONNECTION. DO NOT, UNDER ANY CIRCUMSTANCES, USE A WIFI (CELL PHONE, IPHONE, etc) DEVICE FOR TAKING AN EXAM - WIFI CONNECTIONS ARE OFTEN UNRELIABLE AND YOU WILL NOT BE ABLE TO COMPLETE THE EXAMS SUCCESSFULLY.**
  - ✦ **IF YOUR INTERNET CONNECTION FAILS, YOU WILL BE GIVEN ONE AND ONLY ONE ADDITIONAL ATTEMPT TO TAKE AN EXAM.**
  - ✦ ***IT IS YOUR RESPONSIBILITY TO INSURE YOUR INTERNET CONNECTION IS STABLE.***
  - ✦ **You have 2 hours and only 2 hours to complete an hourly exam when you have first accessed it (pressed the begin button). You can disconnect and reconnect into Blackboard but you must complete the tests in 2 hours (real time, NOT connected time).**
  - ✦ **You will loose credits if you exceed the time limit.**
  - ✦ **You will loose credits if you click submit after the due date of each exam.**
  - ✦ **The same rules apply for the final exam but you have 4 hours to complete it.**

### Schedule:

Quiz/Exam	Chapters Covered	Available in Blackboard at 5AM on	Due at 11:59PM on
0	NONE - Practice	8/28/2013	9/5/2013
1	1 & 2	9/5/2013	9/15/2013
2	3 & 4	9/12/2013	9/22/2013
3	6 & 7 (5 included in 3)	9/19/2013	9/29/2013
Exam #1	All chapters covered on Quizzes 1, 2, 3	9/19/2013	10/6/2013

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Quiz/Exam	Chapters Covered	Available in Blackboard at 5AM on	Due at 11:59PM on
4	8 & 9	9/26/2013	10/6/2013
5	10 & 11	10/3/2013	10/13/2013
6	12 & 13	10/10/2013	10/20/2013
Exam #2	All chapters covered on Quizzes 4, 5, 6	10/10/2013	10/27/2013
7	14 & 15	10/17/2013	10/27/2013
8	16 & 17	10/24/2013	11/3/2013
9	18 & 19	10/31/2013	11/10/2013
Exam #3	All chapters covered on Quizzes 7, 8, 9	10/31/2013	11/17/2013
10	20 & 21	11/7/2013	11/17/2013
11	22 & 23	11/14/2013	11/24/2013
12	24, 25 & 26	11/21/2013	12/1/2013
Final Exam	All Chapters covered	12/1/2013	12/17/2013

### Planetarium Visits

- ✦ **Two** visits to the College of Science and Liberal Arts *planetarium* will be organized.
- ✦ **Both of these visits are REQUIRED and will each count for 5 points (total 10 points).**
  - ✦ If you cannot visit the planetarium, contact your instructor to arrange for a special assignment that will count as a substitute for a visit.
- ✦ The planetarium has a limited/small number of seats. Many presentations will therefore be scheduled.

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- ✦ Date and time of the presentations will be posted by your instructor on Blackboard (separate pdf document)
- ✦ The **planetarium is located at the lower level of the Old Main Building.**

### E-Mails:

- ✦ **Look for announcements on BLACKBOARD, or BLACKBOARD FAQ PAGE (FREQUENTLY ASKED QUESTION), or read your email before sending e-mails to your instructor about quizzes due dates, exam dates, etc.**
- ✦ EMAIL WILL NOT ALWAYS BE ANSWERED ON AN INDIVIDUAL BASIS - CONSULT YOUR UNIVERSITY EMAIL, or BLACKBOARD FAQ (FREQUENTLY ASKED QUESTION) AND ANNOUNCEMENTS FOR ANSWER TO YOUR QUESTIONS.
- ✦ Please follow proper etiquette in your emails...
- ✦ Please be patient - there are many students in this class...

### Frequently Asked Questions (FAQ)

A list of frequently asked questions is posted on Blackboard and the instructor web site. Use either of the following links:

<http://ast2010.physics.wayne.edu/faq.htm>

Password required.

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### Performance Evaluation

Your final grade in this course will be based on the following items:

Home-works/Blackboard Quizzes:	30%
Three hourly exams:	30% - Each counts for 10%
Final exam:	30%
Planetarium Visits	10%
Total	100%

Final grades letters will be attributed according to the following table.

A	95 - 100 %
A-	90 - 94
B+	85 - 89
B	80 - 84
B-	75 - 79
C+	70 - 74
C	65 - 69
C-	60 - 64
D+	50 - 59
D-	<50
F	if two or more exams are missing.

Notes:

- ✦ All quizzes, hourly exams and final exam scores will be posted in the Blackboard Grade book.
- ✦ Final grade letters will posted in pipeline ONLY.

### Laboratory:

- ✦ The laboratory is a separate course (AST2011) - graded separately/independently - with a different instructor.
- ✦ The laboratory is required for all students taking Astronomy 2010+2011 for 4+1=5 credits.
- ✦ The astronomy 2010 laboratory manual must be purchased by those registered for Astronomy 2010+2011 for 4+1=5 credits.
- ✦ While the lab is not required for all programs, it is **highly** recommended.

### Observation of the Sky - LABORATORY COURSE ONLY

- ✦ Three evenings of observation are scheduled during the semester.
- ✦ Observations are carried on the roof of the Physics building during clear nights.
- ✦ It is extremely valuable to study the manual prior to coming to the laboratory.
- ✦ Laboratory reports are due at the start of the following week lab.
- ✦ For further details, please inquire with Dr. Scott Payson at 313-577-3280



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### Important Notes:

- ✦ There is a large amount of material in this class.
- ✦ It is absolutely critical you do not wait till the last minute to prepare for the exams.
- ✦ Read the chapters in the text book weekly.
- ✦ Solve/Complete the quiz questions/problems weekly.
- ✦ Try all self-test questions.

### Other textbooks of interest

- ✦ **Pathways to Astronomy, Schneider and Arny, 3rd Edition, McGraw Hill Publisher**
- ✦ Voyages Through the Universe, Fraknoi, Morrison, and Wolff, Saunders Publisher.
- ✦ The Cosmic Perspective, Bennett, Donahue, Schneider, Voit, Addison-Wesley Publisher.
- ✦ The Origin and Evolution of the Universe, Zuckerman, Matthew, Malkan, Jones and Bartlett Publisher.
- ✦ Astronomy, A beginner's Guide to the Universe, Chaisson and McMillan, Pearson Prentice Hall Publisher.
- ✦ Astronomy Journey to the Cosmic Frontier, J. D. Fix, McGrawHill Publisher, 2nd edition.
- ✦ Redshift, B. Walker, Harcourt.
- ✦ Discovering the Universe, Comins and Kaufmann III, Freeman Publisher.

### Attention Students with Disabilities

If you have a documented disability that requires accommodations, you will need to register with Student Disability Services for coordination of your academic accommodations. The Student Disability Services (SDS) office is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department. SDS telephone number is 313-577-1851 or 313-577-3365 (TTY: telecommunication device for the deaf; phone for hearing impaired students only). Once you have your accommodations in place, I will be glad to meet with you privately during my office hours to discuss your special needs. Student Disability Services' mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University.

See the SDS website for more information: <http://studentdisability.wayne.edu/>