

**AST 103****Introductory Astronomy****Course Details**

- Prerequisites: None
- Course description: A study of the structure and evolution of the universe with emphasis on the solar system, stellar evolution, galaxies, cosmology, and planetary systems.
- This course meets the Doane University Foundational Areas of Knowledge outcomes for Scientific Perspectives
- Course credit hours: 3
- Textbook: OpenStax, Astronomy 2e. OpenStax CNX. <https://cnx.org>  
Latest Web Version Revision: Jan 23, 2024. The textbook is licensed by Rice University under a Creative Commons Attributions License (v4.0). Run by OpenStax, the textbook consists of content Pages. There is also a Contents menu on the left and a search box at the top for easy navigation.

**Instructional Details**

- CANVAS - There are 4 Exam Modules to be completed during the semester. Within each Module, you will find links to the textbook sections, quizzes, assignments, simulations, and videos which I have selected that give an overview of the material.
- Outside of the classroom, I expect that you complete the modules in a timely manner, although due dates are set just before each exam. This course is run at a rather fast pace, and it is important that you do not fall behind with the material. There is sufficient information on Canvas that will help explain and supplement the material if you are unable to attend class and enable you to work ahead if desired.

**Course Evaluation**

- EXAMS

There are four scheduled exam days plus a **comprehensive** final exam. If you have an **excused** absence, I will work with you to reschedule an exam. Please inform me as soon as possible of any conflicts you anticipate.

- ASSIGNMENTS

There are six (6) Assignments listed in the Assignments / Activities Module on Canvas. These are to be completed by the due dates listed. I expect that you complete these activities individually and that you submit your own work. Two of the Assignments (1 and 2) are semester-long projects that are listed in Module 1.

- QUIZZES

Quizzes are available for each chapter of the textbook and are listed within each Module. These short quizzes can be taken as many times as you wish, with the highest score being

recorded.

- **GRADING:**

Your final grade will be based on accumulated points from the following categories:

Category	Points
Exam 1	100
Exam 2	100
Exam 3	100
Exam 4	100
Final Exam	100
Assignments (6 x 20 points)	120
Quizzes (29 x 5 points)	145
TOTAL	765

Your course grade will be based on the following minimum percentages of total points.

Final Grade	Minimum %	Accumulated Points		Final Grade	Minimum %	Accumulated Points
A+	95	727		C+	76	581
A	90	688		C	70	535
A-	88	673		C-	68	520
B+	86	658		D+	66	505
B	80	612		D	60	459
B-	78	597		D-	58	444

## AST 103 Course Schedule and Topics

<b>Module 1 – Introduction and Tools of Astronomy</b>
1 – Science and the Universe: A Brief Tour 2 – Observing the Sky: Birth of Astronomy 3 – Orbits and Gravity 4 – Earth, Moon, and Sky 5 – Radiation and Spectra 6 – Astronomical Instruments Exam 1 – Monday, Sep 9
<b>Module 2 – The Sun and the Stars</b>
7 – Other Worlds: An Introduction to the Solar System 15 – The Sun: A Garden-Variety Star 16 – The Sun: A Nuclear Powerhouse 17 – Analyzing Starlight 18 – The Stars: A Celestial Census 19 – Celestial Distances Exam 2 – Monday, Oct 7
<b>Module 3 – Stellar Evolution</b>
20 – Between the Stars: Gas and Dust in Space 21 – The Birth of Stars and the Discovery of Planets outside the Solar System 22 – Stars from Adolescence to Old Age 23 – The Death of Stars 24 – Black Holes and Curved Spacetime Exam 3 – Monday, Nov 11
<b>Module 4 – Galaxies and Cosmology</b>
25 – The Milky Way Galaxy 26 – Galaxies 27 – Active Galaxies, Quasars, and Supermassive Black Holes 28 – The Evolution and Distribution of Galaxies 29 – The Big Bang 30 – Life in the Universe Exam 4 – Friday, Dec 6
<b>Final Exam (comprehensive), Wednesday, Dec 11, 3:00-6:00</b>

- **ATTENDANCE:**

Attendance in class every day is expected. Through the videos on Canvas, there should be sufficient learning support on-line in case you are absent from class for any reason, and we can always set up a meeting during office hours if needed. Unless you fall into one of the following categories, the

absence will be considered unexcused and a score of zero will be recorded for any exam. I can work with you on a make-up schedule for any of the following reasons:

Doane-related absences:

Doane has a long tradition of supporting student-athletes and academic course excuses, and I certainly will continue to support this. You should let me know ahead of time (at least three days) of any personal competing Doane-related schedule conflicts you may have. I can then also check the Doane-maintained spreadsheet on excused absences.

Illnesses:

If you are ill for any reason, you must contact Student Health Services, and **they** will notify me of any health-related excused absence. Simply e-mailing me that you don't feel well enough to come to class is NOT a sufficient excuse.

Personal Emergencies:

This is usually a serious illness or death in the immediate family. If you have a scheduled doctor's appointment, you should let me know ahead of time (at least three days; exceptions are allowable in emergencies). Any other reason will be evaluated by me with a possible consultation with appropriate Doane staff.

### **Technical Support Contact Information**

If you are in need of technical assistance please access the [Self Service Portal](#). You may reach the help desk at 402-826-8411 or by email at [helpdesk@doane.edu](mailto:helpdesk@doane.edu).

**Academic Integrity** Fundamental to our mission, our core values, and our reputation, Doane University adheres to high academic standards. Students of Doane University are expected to conduct themselves in a manner reflecting personal and professional integrity. Disciplinary actions may be taken against students whose academic behavior is not congruent with the expectations of the University. Students are responsible for adhering to the standards detailed in this policy. Not being familiar with these standards does not mean that the students will not be accountable for adherence to them. Additional details on the Academic Integrity policy for violating academic integrity are published in the undergraduate and graduate catalogs. **AI Statement** <https://web.doane.edu/offices-services/registrar/syllabus-addendum#AIStatement>

### **Academic Resources**

Academic Resources, including Peer Tutoring, Peer Mentoring, Academic Coaching, Accommodations, and Time Management Resources, can be found in the Academic Success Center in the Communications Building. To meet with staff or access peer services, please go to [doane.mywconline.com](http://doane.mywconline.com) and schedule an appointment.

### **Accommodations**

Any student who thinks they may need an accommodation based upon the impact of a disability should contact the Office of Disability Services (<https://www.doane.edu/disability-services>) to coordinate reasonable accommodations as soon as possible.

### **Course Participation**

Doane University expects active participation by a student in a course, whether the course is on-ground or online. A student is expected to be prompt and regularly attend on-ground classes in their entirety. Regular engagement is expected for online courses.

### **Syllabus Changes**

The instructor and Doane University reserve the right to make changes as necessary to this course syllabus. All students will be notified of any changes.

### **Doane Syllabus Addendum**

Each student is responsible for being aware of the policies, resources, and expectations as specified in the Doane Syllabus Addendum found at: <https://www.doane.edu/Syllabus>