

UNIVERSITY OF CALGARY
DEPARTMENT OF PHYSICS AND ASTRONOMY
COURSE OUTLINE

1. **Course:** ASPH 401, Galactic Astrophysics

Lecture Sections:

L01: MWF, 14:00-14:50, ST 055

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Course information: <http://d2l.ucalgary.ca>

Department of Physics and Astronomy, Science B SB605, 403-220-5385, office@phas.ucalgary.ca

2. **Prerequisites:** ASPH 213, PHYS 325, 381, and one of MATH 349 or 375 or AMATH 307.

3. **Grading:** The University policy on grading and related matters is described sections [F.1](#) and [F.2](#) of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Assignments (5)	25%	Due dates to be announced
Class Test 1	20%	Friday, October 17 in class
Class Test 2	20%	Friday, November 21 in class
Final Examination	35%	To be scheduled by the Registrar

The course grade is calculated from the percentage grades of the separate course components with weights indicated above. A table for the conversion of percentage grades to letter grades is provided on page 3 of this course outline. **The percentage grades in this table are threshold values.** The percentage grade for the course must be **equal to or larger than** the stated value to obtain a certain letter grade.

A **passing grade for the final exam is required** in order to obtain a letter grade higher than D+ for this course. Students who do not score a passing grade on the final exam can only obtain a letter grade D+ or less for the course. **Exams and tests are cumulative.** Use of books is not allowed on the exams or tests. Use of a calculator is allowed and recommended. Exams can include multiple-choice questions and open-answer questions. Exam regulations as outlined in the university calendar are also applicable to the midterm exam.

Grading of exams, tests, and assignments will be based on **clarity and completeness of the method used to derive the answer**, and **correctness of the answer including correct units**. Illegible text will not be marked. Scratched-out sections of exam papers will not be marked.

Any **missed course component** will be assigned a **zero grade**, unless a valid reason as described in the University Calendar is presented with appropriate documentation (for example a doctor's note).

Homework. Five homework assignments will be posted and due dates will be announced during the term. **Assignments are due at the beginning of class on the posted due date.** Assignments may include a worksheet that must be turned in along with the solutions. A zero grade will be assigned to any assignment turned in late.

4. **Missed Components of Term Work:** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in [Section 3.6](#). It is the student's responsibility to familiarize himself/herself with these regulations. See also [Section E.6](#) of the University Calendar

5. **Scheduled out-of-class activities:** There are no scheduled out-of-class activities for this course.

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a clash with this out-of-class-time-activity, please inform your instructor as soon as possible so that alternative arrangements may be made for you.

6. **Course Materials:** *"Galaxies in the Universe. An Introduction.", 2nd Edition*
by L. S. Sparke and J. S. Gallagher (Cambridge University Press)

7. **Examination Policy:** Exams are closed-book. Use of books is not allowed on the exams. Use of a calculator is allowed and recommended. Use of electronic devices with a camera, mass storage, or wireless communication is not

allowed on exams, except when determined a necessity for students that qualify under section 11(c) below. Students should also read the Calendar, [Section G](#), on Examinations.

8. **Approved Mandatory and Optional Course Supplemental Fees:** There are no mandatory or optional supplemental fees.
9. **Writing across the curriculum statement:** Exams will be graded based on clarity and completeness of answers provided. Otherwise, there is no assessment of student's writing in this course. See also [Section E.2](#) of the University Calendar.
10. **Human studies statement:** Students will not be asked to participate in or be subjects of any human studies. See also [Section E.5](#) of the University Calendar.

11. OTHER IMPORTANT INFORMATION FOR STUDENTS:

- (a) **Academic Misconduct:** (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#), Student Misconduct to inform yourself of definitions, processes and penalties
- (b) **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
- (c) **Academic Accommodation Policy:** Students with documentable disabilities are referred to the following links: [Calendar entry on students with disabilities](#) and [Student Accessibility Services](#).
- (d) **Safewalk:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- (e) **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence, students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information see also <http://www.ucalgary.ca/secretariat/privacy>.
- (f) **Student Union Information:** VP Academic Phone: 220-3911 Email: suvpaca@ucalgary.ca.
SU Faculty Rep. Phone: 220-3913 Email: sciencerep@su.ucalgary.ca
[Student Ombudsman](#)
- (i) **Internet and Electronic Device Information:** You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.

The following signature lines should be added to the course outline as appropriate

Department Approval _____ Date _____

Associate Dean's Approval for
out of regular class-time activity: _____ Date: _____

Associate Dean's Approval for
Alternate final examination arrangements: _____ Date: _____

Grading scheme

Your Course Letter Grade for ASTR 207 will be based on the weighted average percentages of the various course components (Test 1, Test 2, in-class participation, homework challenge questions, and final examination) using the weighting scheme on the first page of this course outline. The conversion from weighted average percentage to course letter grade is (minimum scores required to obtain a letter grade):

90%	A+	75%	B+	60%	C+	47%	D+
85%	A	70%	B	55%	C	45%	D
80%	A-	65%	B-	50%	C-	<45%	F

YOU MUST PASS THE FINAL EXAM TO GET A LETTER GRADE HIGHER THAN D+ FOR THE COURSE

Course Syllabus

At the end of this course, students are expected to have basic knowledge of different types of galaxies and their gaseous and stellar components in relation to their cosmic environment, dynamics, time scales for evolution, and elements of evolutionary forces that shape galaxies. Observational and theoretical subjects will be covered. Students are expected to apply the course subjects in short to moderately long calculations, and be able to answer knowledge review and conceptual questions about the course material.

The core material of ASPH 401 is made up of Chapters 1 to 6 of the textbook. We will cover elements of the chapters 7 to 9. Selected sections will be skipped, for example sections that explain telescopes or detectors. The lectures are intended to facilitate studying from the textbook. At times, lecture notes will offer enrichment and updates that can be part of the tests/exams.