PHYS475 F12
Astrophysics III: Galaxies and Cosmology
https://learn.uwaterloo.ca

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Office hours: T 3:30-4:30 or email me

TA: Laura Henderson
Email: TBA

Lectures: TR 2:00-3:20, second week of September-first week of December

Text: *Introduction to Cosmology* by Barbara Ryden (A copy is on 3hr reserve at the DC library, but I strongly recommend buying your own.) This text covers introductory cosmology at a fairly approachable level. I will supplement the material on galaxies with slides.

Other Materials: Lecture slides, supplementary notes and assignments will be posted on the course web page listed above. Only students registered in the course will be able to see this material. Check the site at least once a week for announcements and updates.

Course Assignments and Grading: The final grade in the course will be based on weekly work (~7 short assignments), two quizzes, and a final exam. Assignments will be posted on the webpage a week or more in advance, and solutions will be provided after the due date. The quizzes will be held on approximately the 5th and 10th weeks of class. Grading will be based on whichever of the following options produces the higher mark individually:

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<tr>
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<th>Option 1</th>
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<tbody>
<tr>
<td>Assignments</td>
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<tr>
<td>Tests</td>
<td>30% (15% each)</td>
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<td>Final Exam</td>
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<td><strong>Total</strong></td>
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Course Outline:

2. Describing the Geometry of the Universe [2 lectures] text: chapter 3
3. Describing the Evolution of the Universe [2 lectures] text: chapter 4
4. Some Simple Examples: [4 lectures] text: chapters 5-6
7. Galaxy Properties; The Origin of Galaxies [~3 lectures] supplementary slides
8. Physics of the Late Universe: dark matter, gravitational lensing, the formation of structure [~4 lectures] text: chapters 8,12
The Fine Print:
The following rules will be repeated and clarified in class as need arises.

Work expected: Students are expected to attend lectures, complete assigned readings, complete and submit assignments, sit both tests and sit the final. No exceptions to these requirements will generally be made in cases where students miss classes and/or tests, or do not complete assignments. The work-load for the course should be 3 hours of lectures, 2-3 hours of reading and 2-3 hours of other work (assignments etc.) a week. Students should also check the course web-site regularly for course announcements.

Group Work/Discussion of Results:
* Collaboration and/or discussion with other students are allowed on take home assignments. Take-home assignments must nonetheless be written up individually; copies are not acceptable. If you are working with others please indicate this on your work.
* No form of collaboration, copying, discussion or use of notes or aids other than those provided by the instructor is allowed on the final examination, nor on the tests.

For information on academic offenses and types of penalties, students should refer to Policy # 71, Student Academic Discipline, http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm

Graded Assignments: Graded assignments will be handed back in class. Uncollected assignments will generally be kept for 1-2 months after the end of the course, but no longer (exams are kept for longer, as per faculty requirements)

Examinations: Attendance at examinations is mandatory, and exams will not generally be rescheduled, except in cases of severe illness or personal trauma. Any medical exceptions must be documented by a signed medical note from a doctor or clinic, indicating the date and severity of the illness, and will only be accepted at the instructor’s discretion. Exams will not be excused for minor complaints. Students with chronic health problems should consult with the Office of Disabilities for alternate exam arrangements.

Note for Students with Disabilities: The Office for Persons with Disabilities, located in Needles Hall Room 1132, collaborates with all academic departments to arrange appropriate accommodation for students with disabilities; this is done without compromising the academic integrity of the curriculum. If you require academic accommodation to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.

Drop-dates: Students concerned about the level of the course, course requirements, or their performance should keep in mind cut-off dates for dropping courses without penalty. Please check these with the undergraduate advisor or the Faculty of Science office.