COURSE CALENDAR DESCRIPTION
An overview of modern geophysics: origin of the Earth, impact cratering, internal structure and rheology, earthquakes, plate tectonics, geomagnetism. Space geodetic positioning techniques such as VLBI, SLR and GPS are introduced as means of detecting and monitoring tectonic movements. Prerequisites: 12U calculus and vectors or 12U advanced functions or equivalent, or SC/MATH 1515 3.00; 12U physics or SC/PHYS 1510 4.00. Course credit exclusions: SC/NATS 1750 6.00. Previously offered as: LE/EATS 1010 6.00, SC/EATS 1010 6.00.

INSTRUCTOR(S)

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<tr>
<th>Name</th>
<th>Section / Format / Term</th>
<th>Contact Email</th>
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<tbody>
<tr>
<td>Tandon, Neil</td>
<td>Sec. A / LECT / F</td>
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ADDITIONAL INFORMATION

PRIMARY TEXT
This text is available from the York Bookstore and is on reserve at Steacie Library.

COURSE LEARNING OUTCOMES
Upon successful completion of this course, students should be able to:
1. Summarize the key stages of the origin and the structure of the Solar System and Earth.
2. Discuss the properties of rock forming minerals.
3. Describe the internal structure of Earth and its deformation processes.
4. Apply the principles of relative age dating and mathematics of geochronology.
5. Appreciate the contributions of Canadian Geologists and the development of modern geology.
6. Explain the cause of geomagnetism and its role in our understanding of plate tectonics.
7. Apply different metrics of earthquakes to determine earthquake characteristics.
8. Differentiate space geodetic positioning techniques such as VLBI, interferometry, SLR and GPS by key characteristics and performance, and acquire knowledge of GIS systems.
9. Apply relevant Earth and Geodetic formulae to mathematically analyse earth dynamics.

EVALUATION
Labs (5 labs each worth 5%): 25%
Class participation: 5%
Midterm: 30%
Final exam: 40%
CLASS PARTICIPATION
This course surveys a broad range of topics, and there is flexibility regarding which topics get emphasized. Thus, student participation in the class will ensure that the topics of greatest interest get due attention, and it will make the class much more fulfilling and enjoyable. Thus, class participation is not just a component of your grade, it is also essential for the success of this class. I may also administer in-class quizzes or offer opportunities for oral presentations, which will factor into the class participation grades.

LAB ASSIGNMENT PROCEDURES
1. Attendance will be taken at each lab session. Lab reports will not be accepted from students who were not physically present during the lab sessions.
2. Students should attend the lab section for which they are registered. Switching lab sections is not allowed.
3. Students can discuss labs with fellow students, but each student should submit his or her own individual lab assignment. Work must be explained and plagiarism will not be tolerated.
4. Students should read lab assignments prior to coming to the lab so that they understand the procedure and any materials they should bring to the lab.
5. Labs must be submitted to the TA by the end of the lab period. Submissions after that time will not be accepted.

Other Policies and Procedures
1. November 8 is the last day to drop the course without receiving a W grade.
2. Students are responsible for monitoring Moodle (http://moodle.yorku.ca) for any announcements, assignments and solutions.
3. Grades for each lab or exam problem will assess a combination of accuracy (50%), methodology (30%) and clarity of presentation (20%).
4. Much care is given to the grading of assignments and exams, especially when partial credit is awarded. If there appears to be a mistake in the grading process or the reason for a grade is not clear, the student is encouraged to speak with the TAs first. If that does not resolve the problem, then the student can speak with the instructor. Any request for a change of grade must be communicated to the instructor within two weeks of the assignment or exam receiving a grade.
5. Students requiring disability accommodation are encouraged to register with Student Accessibility Services and request a letter of accommodation.
6. Students requesting special accommodation for an exam or lab (due to a disability or significant religious observance) must send a request to the instructor within 7 days of the exam or lab date being announced.
7. Medical accommodation for a missed exam or lab must be requested from the instructor with an Attending Physician Statement as soon as possible after the scheduled exam.
8. Students should familiarize themselves with York’s policy on Academic Honesty (including its definition of plagiarism) and the Code on Student Rights and Responsibilities. Do not plagiarize!
https://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/
https://oscr.students.yorku.ca/student-conduct/9. Students found to be excessively disruptive to the class may be asked to leave the class. Disruptive behaviour includes but is not limited to having lengthy conversations with other students during a lecture and using cellphones.

ACADEMIC INTEGRITY LINKS
- Senate Policy on Academic Honesty - http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/
- Academic Integrity - http://lassonde.yorku.ca/academic-integrity

STUDENT LINKS
- Student Rights and Responsibilities - http://oscr.students.uit.yorku.ca/student-conduct
- Religious Observance - https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs
- Student Accessibility Services (SAS) - https://accessibility.students.yorku.ca/
• York University’s Policies on Sexual Violence - http://secretariat-policies.info.yorku.ca/policies/sexual-violence-policy-on/
• York University’s Policies on Gender/LGBTQ*/Positive Space - http://rights.info.yorku.ca/lgbtq/

LAND ACKNOWLEDGEMENT
• We acknowledge our presence on the traditional territory of many Indigenous Nations. The area known as Tkaronto has been care taken by the Anishinabek Nation, the Haudenosaunee Confederacy, the Huron-Wendat, and the Métis. It is now home to many Indigenous Peoples. We acknowledge the current treaty holders, the Mississaugas of the New Credit First Nation. This territory is subject of the Dish With One Spoon Wampum Belt Covenant, an agreement to peaceably share and care for the Great Lakes region.
• The Indigenous Framework for York University: A Guide to Action can be found here: http://indigenous.info.yorku.ca/
• Meaning of a land acknowledgement: http://healthydebate.ca/opinions/indigenous-land-acknowledgements

Many courses utilize Moodle, York University’s course website system. If your course is using Moodle, click here to access it.

Moodle @ York University