Course Description
Welcome to the exciting world of Digital Earth, a visionary concept defined as “a multi-resolution, three dimensional representation of the planet, into which we can embed vast quantities of georeferenced data” by Al Gore (1998).

Digital Earth introduces students to the new suite of geospatial technologies and how they are being used to capture, store, process and display the vast amount of geospatial information about our planet and how this information helps us to better understand natural and cultural characteristics of the world, address world problems, and make sound decisions. Students will learn how satellites take complete photographs of the entire planet, Geographic Information Systems (GIS) display geospatial data, Global Positioning Systems (GPS) track the location of environmental and cultural phenomena, Geovisualization tools map our 3-D planet, and how these technologies are applied to solve problems in diverse fields and phenomena in the physical and social sciences in exciting ways. The knowledge and skills learned in Digital Earth will advance you toward a geotechnology-oriented career.

The course is fully online and you take it asynchronously. All the learning activities are available through Blackboard. Each week you need to accomplish two assignments: watch online lectures/movies with related quizzes together with lab exercises. All lectures/movies should be displayed with popular media players i.e. Quick Time or Adobe Flash player or Real Player. Hands-on lab exercises teach you the use of different online geospatial tools and this may occasionally involve downloading some free software onto your computers. The assignment for each week is due by Sunday at midnight and the new assignment for the coming week will be available at the same time. You can take the course anywhere as long as you have a reliable internet connection and can complete the weekly assignments at the scheduled times (see page 4 of this syllabus’s lecture schedule).

Digital Earth (3 hrs, 3 cr.) has no pre-requisites.
Course Materials
- No required textbook
- All the course materials will be available on Blackboard

Course Objectives and Learning Outcomes
Upon finishing the course, students will:
- Understand the basic concepts and uses of geospatial technologies to create a Digital Earth.
- Be excited about the new wave of geospatial technologies that can advance you toward a geotechnology-oriented career.
- Have acquired the basic skills used in remote sensing, GIS, GPS, and geovisualization tools.
- Know how to use geospatial knowledge to solve physical and social environmental science problems

Grading
<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Lab Exercises</td>
<td>45%</td>
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<tr>
<td>Quizzes</td>
<td>35%</td>
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<tr>
<td>Final Project</td>
<td>20%</td>
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Lab Exercises: Weekly hands-on lab exercises are included to enhance hand-on learning.

Quizzes: Each lecture/movie will be followed by quizzes to facilitate learning.

Final Project: The final exam includes a final project to create a website on a geospatial technology application using the viki tool through BB. The website should be blended text, images, or a move clip.

Grading Policy
Grading will following Hunter College policy as outlined in the online undergraduate catalog that can be found at http://catalog.hunter.cuny.edu/.

I do not give incompletes (IN) except under the most extraordinary, and documented, circumstances. You must contact me within 48 hours of the final exam and request IN as a grade. At that time you will schedule a date to meet with me at the college and complete a Contract to Resolve Incomplete Grades. Otherwise, I will average the grades I have for you and record you the grade you have earned.

If you miss an exam, you must (1) contact me within 48 hours of the missed exam, (2) present acceptable documentary evidence for your absence, and (3) be available for the make-up exam (Note: there will be one make-up exam day at the end of the semester held outside of class for those eligible). A make-up exam covers the same material as the regular exam but will not be the same exam given as scheduled. (i.e. DON'T MISS AN EXAM).

Resources
- All class material will be posted on Blackboard.

Essential Policy Information:
- Late work/missed tests/Incompletes: The last day to receive the required course work is May 14, 2014 unless I receive acceptable documentary evidence for your tardiness.
- Email Policy:
Please use GTECH101 Digital Earth in the subject line when you email me. I do not answer email with insufficient subject lines.

Please sign your full name to any message. I do not answer unsigned email messages.

Student’s email will be responded to within 24 hours. Please note there will be a delay for messages sent over the weekend or during non-business hours.

**Hunter College Statement on Academic Integrity**
Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures. Plagiarism, dishonesty, or cheating in any portion of the work required for this course will be punished to the full extent allowed according to Hunter College regulations.

**ADA Policy**
In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772-4857 or (212) 650-3230.

**Syllabus Change Policy**
- Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.
- Any changes will be updated through Bb.
## Tentative Lecture and Classroom Meeting Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>Jan. 27-Feb.2</td>
<td>Introductory Digital Earth</td>
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<tr>
<td>Week 2</td>
<td>Feb.3-9</td>
<td>Geospatial Technology and Geospatial Data</td>
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<td>Week 3</td>
<td>Feb. 10-16</td>
<td>Geospatial Technology: GIS</td>
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<td>Week 4</td>
<td>Feb. 17-23</td>
<td>Geospatial Technology: GIS</td>
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<tr>
<td>Week 5</td>
<td>Feb. 24-Mar.2</td>
<td>Geospatial Technology: Remote Sensing</td>
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<td>Week 6</td>
<td>Mar. 3-9</td>
<td>Geospatial Data Visualization: Google Earth</td>
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<tr>
<td>Week 7</td>
<td>Mar. 10-16</td>
<td>Geospatial Data Visualization: Google Earth</td>
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<td>Week 8</td>
<td>Mar. 17-23</td>
<td>Google Earth Engine</td>
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<td>Week 9</td>
<td>Mar. 24-30</td>
<td>Global Positioning System</td>
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<td>Week 10</td>
<td>Mar.31-Apr.6</td>
<td>Application: Population Density</td>
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<td>Week 11</td>
<td>Apr. 7-13</td>
<td>Application: Climate Change</td>
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<td>Apr. 14-22</td>
<td>Spring Break</td>
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<td>Week 12</td>
<td>Apr. 23-27</td>
<td>Application: Mapping DEM</td>
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<td>Week 13</td>
<td>Apr. 28-May4</td>
<td>Application: Natural Disaster</td>
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<tr>
<td>Week 14</td>
<td>May 5-11</td>
<td>Working on Final Project</td>
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<tr>
<td>Week 15</td>
<td>May 23</td>
<td>Final Exam /Final Project due</td>
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