

GTECH 101 - Digital Earth
Fall 2014
Wednesdays 10:00 AM – 12:50 PM

Instructors: S Ahearn, J Albrecht, C Farmer, C Kessler, W Ni-Meister, M Pavlovskaya

Course coordinator: Jochen Albrecht

Class room: HN 1022

Office: Hunter N1030

Office hours: Mo 12:30 - 2:00

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and Th 4:00 – 5:30

Goal/Rationale:

Goals: The primary goal of this course is to educate you toward becoming a spatial citizen. Spatial thinking and work with spatial data have become more important than ever. In the course of this class, you will become familiar with basic concepts and tools for spatial thinking and analysis and understand their relevance to solving social and environmental problems. These concepts will be illustrated by introducing you to current applied research projects of six faculty members of the Department of Geography. As such, the course serves as a spring board for a range of subsequent courses in geospatial technologies.

Outcomes: By the end of this course, you will:

- Recognize “spatial” as a new cognitive dimension that permeates our modern lives.
- Have acquired the basic skills used in remote sensing, GIS, GPS, and geovisualization tools.
- Know how to use geospatial knowledge to solve physical, social, and environmental science problems.
- Be excited about the new wave of geospatial technologies that can advance you toward a geotechnology-based or related career.

Required Textbooks: None – we will provide you with ample reading material on [BlackBoard](#).

Recommended:

- QGIS 2014. A Gentle Introduction to GIS. Free (like the software) and available online at http://docs.qgis.org/testing/en/docs/gentle_gis_introduction/
- Sullivan D and D Unwin 2010. Geographic Information Analysis, 2°. Wiley. ISBN 978-0470288573
- Wise S 2013. GIS Fundamentals, 2°. Boca Raton, LA: CRC Press. ISBN 9781439886953.

Pre-requisite: none.

Policies:

Attendance is crucial. Adherence to protocols and the course timetable is very important. We will be on time. So you will also be on time. It’s just common courtesy. Lateness in arriving at class will not be tolerated. You are expected to behave respectfully towards the instructors and the other students by not imposing a dominating or threatening presence in conversations and discussions, and by allowing others to speak and be heard, especially if they are shy and their voice weaker than yours.

Electronic recording devices are allowed during class. All other personal electronics should be turned off before coming into the classroom. This includes cell and smart phones.

Web-enhancement in the context of this course means that everything pertaining to this course will be communicated through [BlackBoard](#). You are required to check the BlackBoard course site on a daily basis. All changes to the syllabus will be announced on the course home page. All lecture and lab materials are accessible through [BlackBoard](#), and this is also the place where you upload your assignments. Your exams and lab assignments will be graded based on what you have uploaded to BlackBoard and this is where you will find your grades and may access course statistics that help you assess your standing at any given time.

All *email messages* about this course should include [GTECH 101](#) in the subject line, and be signed with your full name. You are addressing us professionally and we will not answer messages coming from “fun” addresses such as “sweetheart4u” or “slamdunk23”.....

Academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) is simply not acceptable. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures. Helping other students on use of the software is encouraged.

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 the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.

Special accommodations for persons with disabilities are provided upon request. Please see the instructor if you feel the need for them. 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

Lab policies are described in detail in <http://www.geo.hunter.cuny.edu/techsupport/rules.html>.

Assignments are due one week after they are given in class. It is in your best interest to keep up with the work and meet deadlines for assignments. Incomplete grades and time extensions are not an option for this course. There are no extra-credit assignments. Unless otherwise instructed, you will submit assignments in electronic form.

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. All changes will/would be announced on [BlackBoard](#), which you are expected to check on a daily basis.

Criteria for evaluation:

Evaluation of academic performance is based on your lab exercises, your cartographic studio project, your participation in online quizzes, and two exams according to the following breakdown:

Quizzes	14%
Lab exercises	36%
Midterm exam	15%
Final exam	15%
Cartographic studio project	20%

Numeric scores will be used throughout the semester. The course letter grade will be determined only at the end of the semester, although guidance as to letter grade standing will be given along the way.

All labs exercises are introduced during the regular Wednesday lecture periods. You are then expected to expand on what you were introduced to using software that you can access online at home. Each of these homework assignments is designed for a 3-hour period beyond the introduction that you will get in class.

You will conduct an individual two-week cartographic studio project that makes use of spatial representations and communicates the results of a geographical question. There are no requirements with respect to what software you use. In a similar vein, the application area (field) is to be chosen by you, and you are responsible for gathering the necessary data. Basically, you can choose whatever topic you want, provided it has to do with the course topic, assemble your own data and visualize a geographic phenomenon. It is your responsibility to find a suitable project, which will have to be accepted by the instructor. A few ready-made projects are available but experience shows that motivation increases when you take pride in your own project.

We will not accommodate students who are late in their work or do not show up for the final exam. Unless you produce a medical certificate or letter from the [Office of AccessABILITY](#), we will not give the final grade of IN (incomplete).

Course Calendar:

This class typically meets on Wednesdays (except when it is a CUNY holiday). Special dates are:

- 09/18, last date to drop the course
- 11/24, last date to drop without a W
- 12/21, final project report or essay due

Schedule (*this is a preliminary schedule and topics are subject to change*):

Week #	Date	Topic	
1	09/03	Laying ground: what is geospatial?	
2	09/10	Location-based Services, Global positioning systems and geotechnologies	
3	09/17	Story Maps with ArcGIS Online-based lab exercise	Lab
	09/24	no classes at Hunter	
4	10/01	Volunteered geographic information with lab-based homework assignment	Lab
5	10/08	Geography of social media with lab-based homework assignment	Lab
6	10/15	Earth from above	
7	10/22	Remote sensing of the environment with lab-based homework assignment	
8	10/29	Midterm	Lab
9	11/05	LiDAR	
10	11/12	Tigers with lab-based homework assignment	Lab
11	11/19	Creating Common Ground	
12	11/26	GeoViz with lab-based homework assignment	Lab
13	12/03	Social implications of geospatial technologies	
14	12/10	Final round-up with all faculty	
15	12/17	Final exam – 10:00 AM to 12:50 PM	
	12/21	Final submission day for cartographic studio	

It is the student's responsibility to regularly check the course website to become aware of changes to the schedule or other announcements.