

Introduction to GIS Using Google Earth Pro

Instructor

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<https://www.depauw.edu/academics/departments-programs/envgeo/>

Class

1:00-4:00 pm MTWR in Julian 201
(+ **an additional 27.5 hrs/week outside of class:**
Source: Guidelines for WT and May Term Courses)

Office Hours

By appointment.

Text

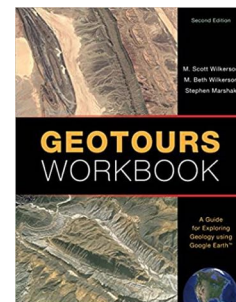
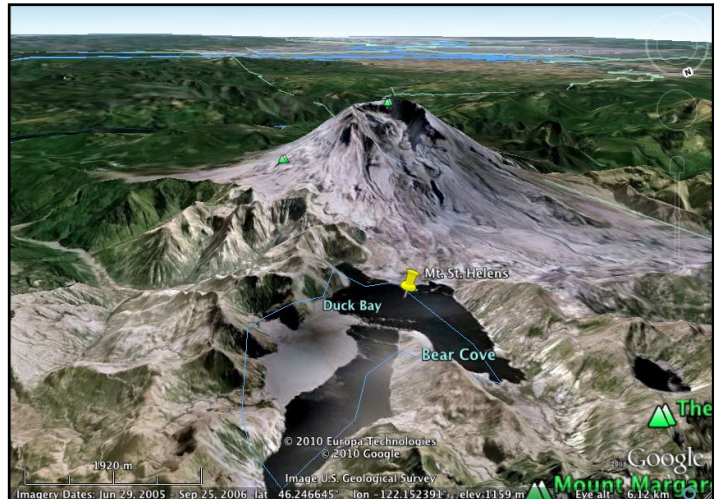
Geotours Workbook,
Wilkerson, Wilkerson, & Marshak
(2017, 2nd ed., W.W. Norton, ISBN 978-1324000969)

Recommended Materials

online Google Earth resources, a USB drive, &
a scroll-wheel, 3-button mouse.

Fees

n/a



COURSE DESCRIPTION & GOALS

Google Earth Pro is a Mac/PC-based Geographic Information System (GIS) that provides a means of taking users on interactive virtual field trips anywhere in the world, where features on the Earth's surface (physical and/or cultural) can be explored in a spatial context. The interactive, three-dimensional interface of this free software allows users to visualize features from any direction, distance, and angle, thus allowing them to more easily perceive their form and meaning.

Participants in this Extended Studies course will use Google Earth Pro to create a GIS project on a topic of their choice (subject to instructor approval) that visualizes and describes their subject matter in a spatially meaningful context. In developing this in-depth project, participants will simultaneously learn how to use Google Earth Pro while developing a deeper understanding about the topic on which they have chosen to work. In particular, students will learn how to drape geo-referenced maps whose transparency can be adjusted over the 3-D terrain, link photographs and/or videos within spatially referenced placemarks, create self-running low-altitude flight paths along prescribed corridors, and use time-sequence imagery to view temporal changes of landforms and/or cultural features. Participants will present their Google Earth project to the class as an ESRI ArcGIS Storymap (which also will be presented at GIS Day 2024 and made available online).

The overall goal of this Extended Studies course is to use Google Earth Pro as a platform to draw new connections between data and/or information associated with their topic that might not have been obvious without visualizing the material in a geographic context. Students not only will develop a deeper understanding of the topic of their choice, but they also will develop valuable technical skills in working with text/images/videos and will improve their ability to communicate with the written and spoken word.

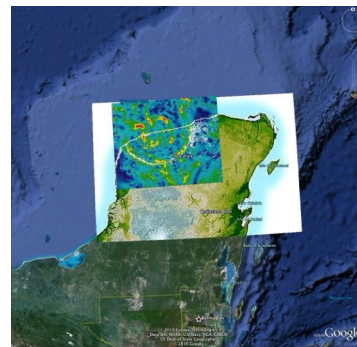
Upon completion of this course, **students will be able to...**

- demonstrate competency with varied forms of data analysis including organizing, interpreting, and drawing conclusions from quantitative and qualitative information.
- collect and use basic observational, quantitative, or technological data to create evidence-based conclusions.
- reason and communicate spatially using maps, cross sections, and/or scientific illustrations.
- utilize varied modes of communication and to improve their abilities to effectively communicate across these different modes.

COURSE ORGANIZATION

The design of this on-campus Extended Studies course provides a mixture of lectures over technical material (e.g., Google Earth, ArcGIS Storymap, Inkscape/Adobe products, etc.) interspersed with workshop/research time to work on individual projects on the topic of each student's choosing (*subject to the instructor's approval*). The primary product from this course will be a Google Earth KMZ project that will be presented to the class as an ArcGIS Storymap (which also will be presented at GIS Day 2024 and made available online).

Make your GIS project a portfolio/resume highlight!



The Geotours Workbook textbook provides detailed instructions on using Google Earth and will be your primary reference for working on your individual Google Earth project (supplemented by recommended resources). **Please ask questions** about any material that you need clarified.

This syllabus is meant to provide an outline for the general flow of the course. At my discretion, I will add or omit topics and/or modify the timetable.

GRADES

The basis for final grades is described in the table below. Excessive (3 or more) unexcused absences will result in automatic failure in the course (if the number of excused absences becomes excessive and/or detracts from your participation in this course, I may require documentation, may ask the University to withdraw you from the course, or fail you in the course). Participation/engagement grades are based on class attendance and participation. Things like excessive absences/tardiness, consistent lack of preparation or participation in activities, electronic distraction, sleeping/lack of attention, frequently getting up in class, etc. can result in this grade being lowered.

Percent of Final Grade		Grading Scale*
Participation	20%	88% to 100.0% = A- to A (90%-100.0%)
Project Outline/Proposal	10%	78% to 87.9% = B- to B+ (80%-89.9%)
Project KMZ/PDF	50%	68% to 77.9% = C- to C+ (70%-79.9%)
Storymap Presentation	20%	58% to 67.9% = D- to D+ (60%-69.9%)
		00% to 57.9% = F (00%-59.9%)

Subjective Grading

(This description provides general guidelines, but the instructor may use other criteria as well)

90-100 (A)-excellent

all the qualities of a "B" project plus it should be exceptionally thought-provoking, original, and lucid in content, grammar, and manner of presentation

80-89 (B)-very good

Organization-clearly organized; Content-good detail with some insight, no inaccuracies in content; Grammar/Punctuation/Spelling-consistent use of grammar, punctuation, & spelling; References-complete & consistent; Elements-all Google Earth features included in appropriate contexts

70-79 (C)-ok

Organization-apparent, but not completely thought through; Content-few inaccuracies, some detail, but a tendency to ramble, shows some research, but does not develop/explain the ideas/concepts; Grammar/Punctuation/Spelling-minor mechanical errors; References-complete & consistent; Elements-minor Google Earth features missing, few inaccuracies

60-69 (D)-fair

Organization-inconsistent and confusing organization; Content-several inaccuracies, lack of research and detail; Grammar/Punctuation/Spelling-numerous mechanical errors; References-minor (1-2) unreferenced material and/or inconsistent reference format; Elements-minor Google Earth features missing, several inaccuracies

<60 (F)-unacceptable

Organization-poor; Content-numerous inaccuracies, underdeveloped explanations, lack of depth; Grammar/Punctuation/Spelling-major mechanical errors; References-major (>2) unreferenced material; Elements-major Google Earth features missing, numerous inaccuracies

TENTATIVE ORDER OF TOPICS

Day	Topics <i>Last day to withdraw with a W - Jan 12.</i>	Reading/Due Dates
Wed, Jan 03	Syllabus Plagiarism GIS Project Guidelines & Examples Downloading/Installing Google Earth Pro DropBox Accounts	Syllabus on Moodle Plagiarism Resources on Moodle Project Guidelines on Moodle <u>Geotour Wbk: 3-4</u> <u>Geotour Wbk: 114</u> <i>Topic/Data Research</i>
Thur, Jan 04	Google Earth Interface Creating & Editing Placemarks	<u>Geotour Wbk: 5-13</u> <u>Geotour Wbk: 115-120</u> <i>Practice + Topic/Data Research</i>
Mon, Jan 08	Formatting Placemarks Placemark Images/URLs/Videos Paths & Polygons	<u>Geotour Wbk: 121-123</u> <u>Geotour Wbk: 124-128</u> <u>Geotour Wbk: 129-138</u> <i>Practice + Proposal/Outline</i>
Tues, Jan 09	Image Overlays/Photo Overlays Tours & Historical Imagery	<u>Geotour Wbk: 139-148</u> <u>Geotour Wbk: 149-160</u> <i>Practice + Proposal/Outline</i> Topic Approval - before noon
Wed, Jan 10	Importing GPS Data into Google Earth Misc Leftovers Selected Web Resources	<u>Geotour Wbk: 161-163</u> <u>Geotour Wbk: 164-169</u> <u>Geotour Wbk: 170</u> <i>Practice + Project</i>
Thurs, Jan 11	Workshop	<i>Project</i> Proposal/Outline - before noon
Mon, Jan 15	MLK Day	
Tues, Jan 16	ArcGIS Storymap Workshop	<i>Practice + Project</i>
Wed, Jan 17		
Thurs, Jan 18	Workshop	<i>Project + Storymap</i>
Mon, Jan 22	Workshop	<i>Project + Storymap</i>
Tues, Jan 23	Workshop	<i>Project + Storymap</i>
Wed, Jan 24	Workshop	Project KMZ + PDF - before noon <i>Storymap</i>
Thurs, Jan 25 (meet morning & afternoon)	GIS Project Presentations	Storymap - before 9:00 am
Note: These topics and/or times are subject to change.		

Policy Page

ADA STATEMENT

It is the policy and practice of DePauw University to provide reasonable accommodations for students with properly documented disabilities. Written notification from Student Accessibility Services is required. If you are eligible to receive an accommodation and would like to request it for this course, please contact Student Accessibility Services. Allow one week advance notice to ensure enough time for reasonable accommodations to be made. Otherwise, it is not guaranteed that the accommodation can be provided on a timely basis. Accommodations are not retroactive. Students who have questions about Student Accessibility Services or who have, or think they may have, a disability (psychiatric, attentional, learning, vision, hearing, physical, medical, etc.) are invited to contact Student Accessibility Services for a confidential discussion. Student Accessibility Services can be reached by phone at 765-658-6267 or studentaccessibility@depauw.edu.

ATTENDANCE

Regular and on-time attendance is expected and monitored (see the Student Handbook <https://www.depauw.edu/handbooks/academic/>). As stated in the Student Handbook, excessive absences can be grounds for being dismissed from the course. In addition, it has been my experience that learning comprehension improves dramatically when students are present to listen to lectures, to ask questions, and to discuss the material in the classroom setting. In addition, some activities (e.g., field work) require attendance to receive credit. Should you know that you will be absent (e.g., health issue regarding yourself or immediate family, athletic obligation, etc), please contact me in advance (or ASAP afterwards) to make arrangements about assignments.

ACADEMIC INTEGRITY

Any attempt to gain an unfair advantage over other students in the class will be handled in accordance with established University procedures as described in the Academic Handbook section <http://www.depauw.edu/handbooks/academic/> on Academic Integrity.

DePauw Academic Resources on Academic Integrity
<http://www.depauw.edu/academics/academic-resources/academic-integrity/>

Writing Center Information on Plagiarism:

Plagiarism. Using the words or ideas of another writer, including AI-generated text, without attribution, so that they seem as if they are your own. Plagiarism ranges from copying work not written by the person taking credit for it, to rewriting such work with only minor word changes (mosaic plagiarism),

to summarizing work (including that done by AI) without acknowledging the source. See the Writing Center Guide to Avoiding Plagiarism for further information on plagiarism: <http://www.depauw.edu/academics/academic-resources/academic-resource-center/w-center/w-center-handouts/>

CELL PHONE/COMPUTER/SMART DEVICE USE

Before class begins, turn off your cell phone (or set it to vibrate) and put it away in your book bag (not in the desk/table). Do not check or send voicemail or text messages during class, and do not leave class to check or send messages unless 1) you have an emergency (inform your instructor prior to class starting of special circumstances involving a personal emergency situation that would require you to use your phone when class is in session) or 2) are on an instructor-designated break. In other words, do not use your cell phone in class for any reason at any time unless you have consulted with the course instructor.

If you have a cell phone/smartwatch on your person or on your desk/table during an exam without the instructor's permission, you will receive a 0 on the exam, and you will automatically be considered in violation of DePauw's academic integrity policy on cheating due to unauthorized use of a cell phone/smartwatch. You may not take your cell phone/smartwatch with you on bathroom breaks during exams.

Please read the following: <http://www.insidehighered.com/blogs/just-visiting/open-letter-incoming-freshmen>

Laptops, tablets, smartwatches, and other electronic devices are not allowed to be used in the classroom except for activities directly related to our course as specified by your instructor (e.g., do not check or send emails, chats, or texts, do not use your web browser except for course-sanctioned activities, do not use to view slides or take notes, etc.). Quit all programs not specifically designated by your instructor (not only reducing temptation, but also helping your computer run more efficiently).

Violating the cell phone/computer/smart device use policy is one way students may be considered not engaged/participating in course activities (see the Grades discussion on participation above).

COVID-19 PROTOCOLS

The Fall 2023 DePauw University Covid-19 policy (<https://www.depauw.edu/campus-life/wellness/coronavirus/current-covid-19-guidelines-fall-2023/>) will be followed in this course. Please carefully read and follow these guidelines.

Masking with KF94, KN95 or N95 masks is **required** for ANYONE who: is experiencing symptoms that could be consistent with COVID-19; tested positive in the last 5 days; or was exposed to COVID-19 in the last 10 days.

Assess your personal health daily. It is of the utmost importance that if you have symptoms of COVID-19, you should put on a mask, and contact the DePauw Health Wellness Center.

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CLASSROOM BEHAVIOR

- **Early is on time, and on time is late.** (especially on days with activities).
- **Respect everyone.** (yourself, your peers, and your instructor).
- **Listen and contribute.** Lecture and discussion portions of our class can quickly morph to lecture only if you are not an active and contributing participant in class.
- **Work to the best of your ability.** True learning is hard work and is constructed and nurtured by you (not simply transferred from the instructor). A strong work ethic will not only serve you well in this course, but in life in general. Do not settle for less than your best effort.
- **Be aware of consequences (positive & negative).** If you make good decisions (e.g., reading the course materials, taking notes, asking questions, working hard, etc.), you will likely experience good consequences such as enhanced understanding of geoscience processes, improved grades, and general success in life. Conversely, poor decisions (e.g., waiting to cram right before an exam or assignment, pulling an “all-nighter” and coming to class exhausted, relying on energy drinks or other substances, distracting yourself or others with cell phones or laptops, etc.) typically have negative consequences that cause your understanding of course content to suffer.
- **Consider the classroom your workplace.** Once you step inside the classroom, commit yourself to learning as much as you can during that time. Do not routinely get up during class to take care of personal needs (e.g., bathroom breaks, social networking, etc.). Please address these needs during the break between classes. If an emergency occurs, please feel free to leave the classroom to address it.

AUDIO/VISUAL POLICY

- No video, audio, or still picture recordings are allowed during class without the instructor's permission.
- No video recordings, still picture, or other means of duplication (e.g., xeroxing) of homework assignments, labs, exams, etc. are allowed without the instructor's permission.
- You are not permitted to record any of our class meetings. Student Accessibility Service accommodations pertaining to recordings of lectures for taking notes are addressed by the instructor providing handouts of lecture slides/materials on Moodle.
- Materials (or derivative materials) from this course may not be shared, replicated, or published, in whole or in part, or used for any other purpose, without my written approval.