TEXAS A&M UNIVERSITY
COMMERCE
College of Science and Engineering

BSC 417 Geospatial Mapping
Course syllabus spring 2024
Credits: 3 sch
Instructor: Johanna Delgado Acevedo, Ph.D.
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Book: Law, M., Collins, A. 2018. Getting to know ArcGIS Desktop. 5th edition. ESRI.
ISBN: 9781589485105 **(NOT REQUIRED)**

I. Course Description

Geospatial Mapping. Three semester hours. (3 lecture, 0 lab) The course will provide basic knowledge of the fundamentals of Geographic Information Systems (GIS), including GIS theory and applications. The course will take a hands-on and problem-solving approach to learning GIS and will cover basic GIS including map characteristics and projections, spatial data models, relational databases, and spatial analysis with a focus on natural resource research and management and environmental science. Prerequisite: BSC 1407 or BSC 1413.

II. Student Learning Objectives

To understand spatial concepts and relationships.
To develop the ability to create a spatial map and a geographical information system.
To develop the ability to gather data or information from a map.
To develop communication skills and clarity to present ideas.

III. Learning strategies

Reading assignments
Analysis of scientific literature
Individual work, analysis of free reading
Written synthesis of information

IV. Assumptions, Expectations, Philosophy

University students are a select group of students soon to be professionals.
Instructors can have high expectations of student performance.
Demanding courses benefit students more than easy courses.
Assignments are due on time unless you have made a prior arrangement with me (only granted for unusual or extenuating circumstances and in case of health issues proper medical excuse is required.
Reading and assimilating information is a critical part of your current and continuing

education. This will help you become a better writer, a more rounded individual, and expose you to subjects outside of your immediate knowledge.

V. Tentative course outline

Week 1. Syllabus, introduction and chapter 3
(Jan 10-13)
Week 2. Chapter 4 and 6 (Chapter 3 due)
(Jan 15-19)
Week 3. Chapter 7 and 8 (Chapter 4 and 6 due)
(Jan 22-26)
Week 4. Chapter 9 (Chapter 7 and 8 due)
(Jan 29-Feb 2)
Week 5. Chapter 10 (Chapter 9 due)
(Feb 5-10)
Week 6. Chapter 11 (Chapter 10 due)
(Feb 12-17)
Week 7. Chapter 12 and 13 (Chapter 11 due)
(Feb 19-24)
Week 8. Chapter 14 and 15 (Chapter 12 and 13 due)
(Feb 26-Mar 2)
Week 9. Chapter 16 (Chapter 14 and 15 due)
(Mar 4-9)
Spring break (Mar 11-16)
Week 10. Chapter 17 (Chapter 16 due)
(Mar 18-23)
Week 11. Chapter 18 (Chapter 17 due)
(Mar 25-30)
Week 12. Chapter 19 (Chapter 18 due)
(Apr 1-6)
Week 14. Chapter 20 (Chapter 19 due)
(Apr 8-13)
Week 15. Finish up (Chapter 20 and Research project due)
(Apr 16-29)

VI. Course Requirement and Evaluation Method

Assignments and research paper are required.
I encourage student contribution to the overall progress of the group. I encourage interactive participation.
It is necessary that students have a professional and ethic behavior through the entire course.

This textbook is soft bound (paperback) and can be obtained from several sources, including the publisher ESRI Press. The University bookstore will carry it, albeit at a more expensive price. Find the best deal you can. **Note**: New text books come with a

software disc containing the exercise data to complete the exercises in the book, and a copy of the software (free 6 month use) for use on your home computer. Used books will likely **NOT** carry an active disc, so 'buyer beware'. For used book buyers, I have copies of the exercise data you can download to your required thumb drive. The ArcGIS software is loaded on the class computers which we will be using for this course. Should you want to download the program to your personal computer, keep in mind that the last 5 semesters there has been a lot of difficulty by students trying to do so; some were successful, many were not. Further, ArcGIS will NOT run on Mac's, unless your Mac has a windows operating system. Finally, I have been unable to load it on my personal machine at home, and thus I am of little help to you in that regard. All that is needed to complete this class exists in the computer lab.

Memory Stick, Thumb drive, etc. You *will* need an external storage device such as thumb drive to save your exercise data on, preferably one with substantial memory capacity. You *will* need to bring (*must* bring) this drive to every class period. This thumb drive will also be used to store your map projects on to turn in to your instructor for grading purposes.

Grade basis:
Chapter exercises (17-340 points)
Research project (1-50 points)
Total 390 points

Penalty enforcement (I reserve the right to adjust your grade for violation of the minimum expectations).
Make-up quizzes will only be given if arrangements are made with the instructor before missing the scheduled quiz. A documented excuse will be required. Otherwise, missing quizzes will be counted as zeroes in the overall grade computation.

Grading Scale:
90.0 – 100% = A
80.0 - 89.9% = B
70.0 - 79.9% = C
60.0 – 69.9% = D
<60.0% = F

Chapter exercises (17)
Book chapter exercises will be due at the stated time on the syllabus. After you have completed each book chapter, you will take a screen shot of the final map you produced for that chapter section, and paste it into a WORD document and submit it to the provided dropbox.

Research project (1)
You will develop a research project based on spatial data. You need to present a problem, some examples are environmental toxicology, population density, vegetation

classification, population abundance, land use change, land cover change, climate change. Then describe the methodology you used to gather the data (layers, classifications, etc.). Describe your results and finally discuss your findings.

VII. Course and University and Policies

University Specific Procedures:

ADA Statement-Students with Disabilities:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services Texas A&M-Commerce
Gee Library
Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.

Campus Concealed Carry - Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to ((http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.