Sul Ross State University
Crime Mapping
Spring 2025
CJ 4369 Syllabus

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Class hours: Tuesday & Thursday, 12:30-1:45 PM
Classroom: ACR 203
Office hours: Monday, Wednesday, and Thursday between 1:00 PM and 3 PM

REQUIRED TEXT(S)

Caplan, J. M.and Moreto, W.D. (2012). GIS for Public Safety: An Annotated Guide to ArcGIS Tools and Procedures. Newark, NJ: Rutgers Center on Public Security.
http://www.rutgerscps.org/uploads/2/7/3/7/27370595/gismappingforpublicsafety_v10_caplanmoreto_ebook.pdf

Recommended Text Book:

Gorr, W.L., Kurland, K.S., Dodson, Z.M. (2018). GIS Tutorial for Crime Analysis, second edition. ESRI Press ISBN: 978158948167

Additional readings (e.g., articles, reports) will be posted on Blackboard. Regarding scientific journal articles, BYRIAN WILDENTHAL MEMORIAL LIBRARY OF SUL ROSS STATE UNIVERSITY has an extensive database infrastructure. You can get detailed information and advice from libraries website https://library.sulross.edu/#
Once you logged in to your Sul Ross Account on Blackboard you should be automatically connected to the library webpage as well. Thus, you can browse the online databases of the University and reach the articles on the reading list.
The syllabus is subject to updates and changes always look to the course announcements and reminders for updates. The faculty member reserves the right to amend this syllabus as needed.

COURSE DESCRIPTION

This workshop-style course intended to introduce a practical introduction to the basic functionality of the geographic information system (GIS) and its applicability on crime analysis and mapping. The course will provide an opportunity for students to gain and improve the theoretical, analytical, and technical skills necessary for analyzing crime in a geographical context. The students will learn to analyze public safety-related data through mapping. Subspecialties include (1) creation of geographic digital data, (2) analysis of public safety data, and (3) production of digital maps to build further expertise in GIS.
Geographic information systems (GIS) are computerized systems designed for the storage, retrieval, and analysis of geographically referenced data. GIS uses advanced analytical tools to explore spatial relationships, patterns, and processes of cultural, biological, demographic, economic, geographic, and physical phenomena.
This course covers underlying geographic concepts (world coordinate system and projections, vector map topology, tiled and layered maps, etc.), map design and outputs, geodatabases, importing spatial and attribute data, digitizing, geocoding, spatial data processing, and advanced spatial analysis. Additional emphasis will be on crime mapping and analysis. The technical focus of the course includes computer lab tutorials and case studies using the leading desktop GIS software, ArcGIS from ESRI.

Application areas covered in this course include city and regional planning, community planning, economic development, education, election, and environmental studies, housing and property evaluation, transit and transportation issues, land use, historic studies, crime analysis and policing, emergency management, public works utilities, census population and demographic studies, health, and business applications, including marketing, advertising, and site selection.
By the end of the course, students will have sufficient background to identify spatial characteristics of diverse application areas, enabling them to integrate spatial thinking and GIS analysis into their academic research and careers.

COURSE LEARNING OBJECTIVES

This course is designed to provide knowledge about various topics related to crime analyses in a geographical context. Upon successful completion of this course, you will be able to:

LO1- Understand and explain basic principles, topics GIS concepts, techniques, and real-world applications
LO2- Understand the concept and technical language of GIS software
LO3- Define and discuss different GIS data concepts
LO4- Understand and compare different approaches related to crime analyses
LO5- Develop the theoretical and practical skills necessary for studying crime in a geographic context;
LO6- Understand and compare the concept and historical development of crime mapping
LO7- Conduct spatial crime analysis using GIS software
LO8- Explore different data sources for crime analysis and mapping.
LO9- Understand and explain the application and importance of crime mapping in criminal justice agencies

GENERAL CLASSROOM POLICIES:

Students are encouraged to attend the class, ask questions and express opinions, however, talking among students and disruptive behavior will not be tolerated. You may bring beverages to class with you, but not food. Reading outside materials such as newspapers or other course work is not permitted during class time. Students should be prepared to engage in discussion over the assigned readings, and for possible pop quizzes. Electronic devices are never allowed to use in class in a way to distract the instructor and other students. Keep your mobile phone in silent mode, otherwise, switch it off. Violation of this crucial principle will be penalized. There will be one general rule in class which applies to all situations. This is also called “golden rule”. TREAT OTHERS AS YOU WOULD LIKE TO BE TREATED.

COURSE STRUCTURE:

Several diverse learning activities will be used to ensure that the student objectives have been met including lectures, PowerPoint presentations, instructor-led skills training, and student practice sessions. Hands-on skills training will "walk" students through a series of tasks for GIS mapping and analysis. A "watch" and "follow" methodology will be employed. After watching the instructor demonstrates a technique, students will follow along in an effort to complete structured lessons. Lectures or structured discussions will focus on the daily class topic. Lessons will focus on using ArcGIS software to create digital maps, process spatial data, and produce your own artifacts.

GRADING:

There will be at least nine assignments during the semester (a total of 30%). The main purpose of these assignments is to enhance the analytical and technical skills of the students on GIS. Students should submit to the instructor by the beginning of class on the day in which they are due. When a student does not submit an assignment on time, this assignment will be graded a zero. Students will have major exams throughout the semester, with questions drawn from the readings and the supplemental materials posted on the blackboard. These 2 exams will be worth 25% each. There will be no makeup exams. Remaining 20% will be based on semester project and in-Class presentation. The semester project will be a scenario about crime mapping and will measure your applied understanding of the major skills and concepts presented in class. Finally, the students should make an in-class presentation and present their crime mapping scenario.

Lab Assignments	**30%**
Midterm Exam	**25%**
Final Exam	**25%**
Semester Project	**10%**
In-Class Presentation	**10%**
Total	**100%**

IN-CLASS PRESENTATION

The students are required to prepare and present an in-class presentation. They will prepare a power-point presentation and submit it to Blackboard before doing their presentation in class.

CHEATING AND PLAGIARISM:

Students are expected to do their own work on all tests and papers. Cheating on tests and plagiarism on assignments will result in a grade of "F" on that part of the course, a possible grade of "F" for the entire course, and possible recommendation for suspension from the university.

Plagiarism consists of presenting the work of another as one's own (i.e., without proper acknowledgment of the source) and submitting examinations or other work in whole or in part as one's own when such work has been prepared by another person or copied from another person (see the Student Handbook).

ATTENDANCE:

The Department of Homeland Security and Criminal Justice feels very strongly that class attendance is a direct predictor of student classroom success. Therefore, the faculty of the CJ department as a group will enforce the following student attendance policy. This policy does not supersede the SRSU policy on student attendance; it simply reinforces those stated goals. Criminal justice faculty will take class attendance. In accordance with current SRSU policy, when a student misses a total of 9 hours of class, the presumption is that the student will be dropped from that class with an "F". Students who violate the SRSU attendance policy may also find that they are ineligible for any extra credit or any discretionary grading curve applied to any or all exams for that course/semester. It should also be noted that it is the student's responsibility to inform the instructor prior to any University event that would cause an absence. Failure of the student to inform the instructor will result in that absence being recorded as unexcused. Attendance is important! Attendance demonstrates maturity, responsibility and a serious attitude toward education. Additionally, instructors seldom teach only from the book. Missing a class (even an excused absence) will put you at a disadvantage for all of the materials covered when you were absent such as films, presentations, and guest lectures which cannot be made up. Attendance will be taken daily and absences cannot be made up. Students should be in class on time and should be prepared to stay for the entire class period. Students who are late will not be counted as attending if attendance has already been taken.

STUDENT SUPPORT SERVICES AND BLACKBOARD HELP DESK

Sul Ross State University has established a variety of programs to help students meet the challenges of college life. Support to students includes advising, counseling, mentoring, tutoring, supplemental instruction, and writing assistance. For a complete list of academic support services, visit the Student Support Services https://www.sulross.edu/section/311/student-support-services. For more information, students are encouraged to contact SSS at (432) 837-9118 or visit Ferguison Hall Room 105. For Blackboard help visit https://www.sulross.edu/bb or call 432-837-8523 (M-F 09:00 am-06:00 pm). You can get The Distance Education Handbook at https://tvpb.sulross.edu/start/index.html

AMERICANS WITH DISABILITIES ACT AS AMENDED (ADAAA)

Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act of 1973. It is the student's responsibility to initiate a request for accessibility services. Students seeking accessibility services must contact Mary Schwartze, M. Ed., L.P.C., in Counseling and Accessibility Services, Ferguson Hall, Room 112. The mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas 79832. Telephone: 432-837-8691. E-mail: mschwartze@sulross.edu .

ACADEMIC CALENDAR

W	DATES	TOPICS	READINGS
1	January 15-19	Introduction of Syllabus and course requirements **Introduction of GIS and its use for crime analysis**	- Course syllabus (blackboard) Readings on Blackboard
2	January 20-26	**Theoretical Explanations of Crime Analysis** **History of crime mapping**	Readings on Blackboard
3	Jan.27-Feb.2	Intro to Mapping and ArcGIS	Caplan Chapter 1 - Additional Readings on Blackboard Assignment-1
4	February 3-9	**Communicating with maps**	Caplan Chapter 2 - Additional Readings on Blackboard Assignment-2
5	February 10-16	**Map Design and Using Crime Maps**	Caplan Chapter 3 - Additional Readings on Blackboard Assignment-2
6	February 17-23	**Spatial Data and Map Projections**	Caplan Chapter 4 - Additional Readings on Blackboard Assignment-2
7	Feb. 24-Mar.2	**Geocoding and Working with Coordinates**	Caplan Chapter 5 - Additional Readings on Blackboard Assignment-5
8	March 3-9	**Spatial and Tabular Joins**	Caplan Chapter 6 - Additional Readings on Blackboard Assignment-6
9	March 10-16	**Spatial Data and Map Projections** ***MIDTERM EXAM***	Caplan Chapter 4 - Additional Readings on Blackboard Assignment-2

10	**March 17-23**	**SPRING BREAK**	
11	March 24-30	**Working with attribute tables**	Caplan Chapter 7 - Additional Readings on Blackboard Assignment-7
12	Mar. 31-April 6	**Working with shapelines**	Caplan Chapter 8 - Additional Readings on Blackboard Assignment-8
13	April 7-13	**ArcToolbox and Geoprocessing**	Caplan Chapter 9 - Additional Readings on Blackboard Assignment-9
14	April 14-20	**Raster Data Analysis and Mapping**	Caplan Chapter 10 - Additional Readings on Blackboard
15	April 21- 30	**Identifying Hot Spots and predictive policing**	Caplan Chapter 11-12 - Additional Readings on Blackboard
16	**May 2,5-7**	**FINAL EXAM** ***IN CLASS PRESENTATIONS OF SEMESTER PROJECTS***	

END OF COURSE EVALUATIONS:

Student evaluations of faculty are administered online at the end of each term/session for all courses with five or more students. Students will receive an email containing a link to a survey for each course in which they are enrolled. All responses are anonymous.