

**Sul Ross State University**  
**Course Syllabus**  
**MATH 3306-W01: Graph Theory**  
**Summer 2024**

**Instructor:** Dr. Angela M. Brown

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**Office Hours:** 10 am-12 pm MTWR. These will be virtual meetings unless requested of me ahead of time.

**Time and Place of Class Meetings:** Online

**Required Textbooks:** Open Resource Materials

**Other Equipment Needed:** ruled paper, pencil, colored pencils potentially

**Mathematics Program Learning Objectives:** The graduating student should be able to

- The student will be able to demonstrate content knowledge of basic mathematical principles.
- The student will be proficient in logic, able to negate statements, provide counterexamples to false statements, and determine the validity of arguments.
- The student will be able to communicate mathematical content clearly and with valid reasoning.

**Marketable Skills-Mathematics BS:**

- Students Demonstrate Logical and Analytical Skills.
- Students Demonstrate Problem-Solving Using Analytic and Algebraic Methods.
- Students Use Technology in Problem-Solving and Presentation.
- Students Use Communication and Pedagogical Skills.

**Grading Scale:** 90-100 A, 80-89 B, 70-79 C, 60-69 D, 59-Below F

**Grading Policy:** The grade weighting will be as follows:

Homework/Presentations 50%

Projects: 50%

**Homework:** Homework will be assigned on Blackboard. We will take turns presenting homework problems from the sections. With these presentations, we will have discussions about the problem and you will be allowed to

rewrite up your problem if any errors were found. These rewrites, as well as a certain number of problems the class will do as a whole, will be what is graded for homework. The presentation of the problem will also be graded.

**Projects:** There will be two projects for the class. One will be to find a graph theory article and the present this material to the class. I would suggest finding your articles early as I would like ot post them where everyone has the chance to read them before the presentation. The since project will be a presentation on some historical piece of graph theory. This can be a big problem solved with graph theory or more general on a piece of grpah theory itself.

**General Policies:** You are expected to bring all necessary materials and take notes and participate. You are expected to turn off and not access any electronic, non-task-oriented device such as cell/smart phones/pads and i-pods unless your textbook is on such a device. Again, a cell phone cannot be used as a calculator. Devices for recording the lecture are permitted; either audio or video. Any personal business must be conducted during office hours or by appointment. I will only discuss grades and attendance issues in my office or in a Zoom meeting during office hours.

**Attendance Policy:** Students are expected to attend every class. Since this is an online class, this would mean showing regular attendance by logging in and completing assignments by the due date given. We will pick specific time sot meet for the presentations of problems and projects.

You are expected to check your Sul Ross e-mail account. Absences due to school functions should be discussed with me ahead of time.

It is the policy of the university to drop a student with a grade of “F” if 9 hours or more of class are missed. For this course that would be 6 or more class sessions missed.

**Americans With Disabilities Act:** SRSU Disability Services. Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student’s responsibility to initiate a request each semester for each class. Alpine students seeking accessibility/accommodations services must contact Mary Schwartze Grisham, M.Ed., LPC, SRSU’s Accessibility Services Coordinator at 432-837-8203 (please leave a message and we’ll get back to you as soon as we can during working hours), or email mschwartz@sulross.edu Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, SUI Ross State University, Alpine. Texas, 79832.

**Counseling:** Sul Ross has partnered with TimelyCare where all SR students will have access to nine free counseling sessions. You can learn more about this 24/7/356 support by visiting Timelycare/SRSU. The SR Counseling and Accessibility Services office will continue to offer in-person counseling in Ferguson Hall room 112 (Alpine campus), and telehealth Zoom sessions for remote students and RGC students.

**Library Services:** The Bryan Wildenthal Memorial Library in Alpine offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library’s website, library.sulross.edu/. Off-campus access requires logging in with your LobolD and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or by phone (432-837-8123).

No matter where you are based, public libraries and many academic and special libraries welcome the general

public into their spaces for study. SRSU TexShare Cardholders can access additional services and resources at various libraries across Texas. Learn more about the TexShare program by visiting [library.sulross.edu/find-and-borrow/texshare/](http://library.sulross.edu/find-and-borrow/texshare/) or ask a librarian by emailing [srsulibrary@sulross.edu](mailto:srsulibrary@sulross.edu).

Mike Fernandez, SRSU Librarian, is based in Eagle Pass (Building D-129) to offer specialized library services to students, faculty, and staff. Utilize free services such as InterLibrary Loan (ILL) and ScanIt to get materials delivered to you at home or via email.

**Distance Education Statement:** Students enrolled in distance education courses have equal access to the university's academic support services, such as Smarthinking, library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login information to verify students' identities and to protect students' information. The procedures for filing a student complaint are included in the student handbook. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website.

**Academic Integrity:** Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. A scholar is expected to be punctual, prepared, and focused; meaningful and pertinent participation is appreciated. Examples of academic dishonesty include but are not limited to: Turning in work as original that was used in whole or part for another course and/or professor; turning in another person's work as one's own; copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden.

**Classroom Climate of Respect:** Importantly, this class will foster free expression, critical investigation, and the open discussion of ideas. This means that all of us must help create and sustain an atmosphere of tolerance, civility, and respect for the viewpoints of others. Similarly, we must all learn how to probe, oppose and disagree without resorting to tactics of intimidation, harassment, or personal attack. No one is entitled to harass, belittle, or discriminate against another on the basis of race, religion, ethnicity, age, gender, national origin, or sexual preference. Still, we will not be silenced by the difficulty of fruitfully discussing politically sensitive issues.

**Supportive Statement:** I am to create a learning environment for my students that supports various perspectives and experiences. I understand that the recent pandemic, economic disparity, and health concerns, or even unexpected life events may impact the conditions necessary for you to succeed. My commitment is to be there for you and help you meet the learning objectives of this course. I do this to demonstrate my commitment to you and to the mission of Sul Ross State University to create a supportive environment and care for the whole student as part of the Sul Ross Familia. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you.

### **Important Dates:**

- May 29 First Day of Classes
- May 31 Last Day for Late Registration and Schedule Changes
- June 3 Census Day (last day to drop a class without making an academic record)
- June 20 Last Day to Withdrawal from University or Drop Classes with a Grade of "W" (by 4 pm)
- July 3 Final Exams

Tentative Schedule-Subject to Change

Week 1	May 29-31	Introduction and Syllabus, Khonisberg Bridge Problem
Week 2	June 3-7	Intro to Graphs (Ch 1 and 2)
Week 3	June 10-14	Path and Cycles (Ch 3 )
Week 4	June 17-21	Trees (Ch 4)
Week 5	June 24-28	Planar Graphs (Ch 5)
Week 6	July 1-3	Graph Coloring (Ch 6)
Week 7	July 8-12	Digraphs (Ch 7)
Week 8	July 15-19	Application Problems (Ch 8)
Week 9	July 22-26	Matroids (Ch 9)
Week 10	July 29-August 2	Presentations
Week 11	August 5-9	Presentations
Week 12	August 12-14	Presentations