MAT 641 Spring 2018 Topology
http://jan.ucc.nau.edu/ns46/641/641.html

Description: Topological spaces, metric spaces, homeomorphism, compactness, connectedness, separation axioms, product and quotient spaces, local properties, elementary algebraic, and geometric topology. Prerequisites: MAT 411C and 531, or instructor's consent

Textbook: There is no required textbooks. Below is a list of recommendations if you prefer to have a book. The lectures will be self contained but mostly based on the first two books.

- Munkres: Topology. This is the standard book for a graduate topology course.
- Sieradski: An Introduction to Topology and Homotopy. It's a nice book, starts slowly with metric spaces. It has very good illustrations.
- Lynn Arthur Steen, J. Arthur Seebach, Jr.: Counterexamples in topology. It's a very nice small book. Not a textbook but a collection of examples and a summary of definitions and theory. I highly recommend it. It's available from Dover for $11.95.
- Willard: General topology. It's available from Dover for $22.95.
- Dugundji: Topology. It's an older classic. It's very good but sometimes not the easiest.
- Kelley: General Topology. An even older book. Very good on function spaces. Has some very nice proofs.
- Other books: Kuratowski, Engelking, Hu, Császár, Bourbaki, Cain

Grading:

- Weights: 35% homework, quizzes; 65% midterms and final.
- Tests: There will be in-class midterms and a comprehensive final. The exact dates will be announced at least a week before the tests in class and on the course web page. Use of electronic devices or notes are not allowed on the tests. It is important to take notes, and review them after class.
- Quiz: A quiz may be given at any time without announcement.
- Homework: Homework will be assigned and collected regularly. Check the course web page for due dates. Assignments are due at the beginning of the class. No late homework is accepted but you can turn in homework early. Class attendance is very important. Write out your solutions neatly. Figures help me to understand your arguments I encourage you to write your solutions in TEX (LyX). In this case just add an extra hand drawn figure. Include detailed explanations in your solutions but be concise. Do not turn in scratch work. The presentation is an important part of your solution. Every statement in your solutions needs a proof even if the question asks you to find or calculate something. Judging the validity of an argument is an important skill. Just as important as coming up with the argument. If there is a gap in your proof, do not try to hide it. I will likely notice it anyway. If you tell me where the gap is then I know that you are at least aware of the problem. You are allowed to talk about the homework problems but you have to write your solutions on your own completely from scratch. Check your scores regularly on the grade-sheet posted on the web.

Make up tests will be given only in case of verified medical or other emergency which must be documented. You must make a reasonable effort to notify me as soon as you can, preferably before the missed test is given. The best way to contact me is by email.

All the information on this syllabus are subject to change and any class announcements regarding the syllabus are considered official amendments to it. This syllabus and other information is available on the course web page.