

# Math 732

Spring 2022

Instructor: Hugh Nelson Howards

Phone: x5352

Office Hours: T 12:00-1:00, W 11:00-11:50, R 9:15-10:00.

Office: Manchester 133

website: <http://users.wfu.edu/howards/>

email: [howards@wfu.edu](mailto:howards@wfu.edu)

---

**Office hours:** I have scheduled a variety of hours for students to come talk to me (listed above). I strongly encourage you to come to them. You are welcome to come for any reason, I want this class to be as personal as possible. I also welcome appointments outside of office hours- feel free to set up an appointment in class, by phone, or by e-mail.

**On line resources:** A link to the most current version of this syllabus and links to the online texts we will use are available on my webpage at <http://users.wfu.edu/howards/classes.html> and on Canvas.

**Texts:** Jennifer Schultens, *Introduction to 3-manifolds*

Alan Hatcher, *Algebraic Topology* - <http://www.math.cornell.edu/~hatcher/AT/ATpage.html>

Alan Hatcher, *3-manifolds* - <http://www.math.cornell.edu/~hatcher/3M/3Mdownloads.html>

Justin Roberts, *Knot Knotes* - <https://mathweb.ucsd.edu/~justin/Roberts-Knotes-Jan2015.pdf>

**Course Content:** We will concentrate mostly on 3-manifolds as well as selected topics from Knot Theory and Algebraic Topology.

**Grading:** The course will be ambitious. The class will have two midterms and one final as well as a student presentation in class.

Class Participation	5%
Exam One, 2/17,	25%
Exam Two, 3/24,	25%
Presentation	15%
Final exam Due by 5/6 at 9:00 am	30%

**Exams:** All exams will be take home.

## 1. OTHER NOTES

- You deserve to be addressed in the manner you prefer. To guarantee that I address you properly, you are welcome to tell me your pronoun(s) and/or preferred name at any time, either in person or via email.
- You deserve to be in a class environment where you are heard and your contributions are valued. In this class, we will embrace diversity of age, background, beliefs, ethnicity, gender, gender identity, gender expression, national origin, neurotype, race, religious affiliation, sexual orientation, and other visible and non-visible categories.

I aim to make our class inclusive; I do not tolerate discrimination. All members of this class are expected to contribute to a respectful, welcoming, and inclusive environment for every other member of the class. Please contact me with any questions, concerns, or suggestions regarding the class environment.

- You deserve a community free from bias and discrimination. To report any incident of these at Wake Forest, please go to <https://reportbias.wfu.edu>.

Title IX of the Education Amendments of 1972 (Title IX) prohibits sex discrimination in any education program or activity receiving federal financial assistance. If you experience or know of a Title IX violation you have many options for support and/or reporting; see <http://titleix.wfu.edu/>.

- Wake Forest University provides reasonable accommodations to students with disabilities. If you are in need of an accommodation, then please contact me privately as early in the term as possible. Retroactive accommodations will not be provided. Students requiring accommodations must also consult the Center for Learning, Access, and Student Success (118 Reynolda Hall, 336-758-5929, <http://class.wfu.edu>).
- Please contact me ASAP if you will need to miss class due to a university-sponsored activity, such as athletics.
- You deserve a learning environment in which all of your physiological and safety needs are met. If you are experiencing situations in which these needs are not met, e.g. you do not have adequate housing or sufficient food security, the Chaplain's Office has an emergency fund which can provide support: <https://chaplain.wfu.edu/care-support/chaplains-emergency-fund/>. In situations in which you need immediate assistance there is emergency funding available through the Department of Mathematics and Statistics. If you are in need of emergency help you are encouraged to reach out to a faculty member in the Department of Mathematics and Statistics who will work with the chair of the department to address your needs.
- The department has a limited amount of funding for class materials. If you cannot afford class materials, you are encouraged to contact the chair of the department privately as early in the term as possible. Due to the limited amount of funds, students must exhaust all other sources of funding before applying to the department for assistance.
- At Wake Forest, we expect you to behave as honorable citizens of the class, the university, and the world as a whole. When you complete an assignment with your name on it, you are representing that everything you are turning in is your own work. That means that you do not copy from other students,

textbooks, or websites. The honor code is a token of our respect for you as members of the academic community. When one person cheats, it diminishes the experiences of everyone else in the program, both faculty members and students. Please, respect yourselves, each other, and your professors, and turn in only your own personal work. If at any time we become aware of cheating or plagiarism in this course, we will submit the information to the honor council. The format of any future assignments may also be affected, for the entire class.