MAT 762 – Algebraic Topology

**Instructor:** Stephan Wehrli, 304B Carnegie, smwehrli@syr.edu

The course will cover parts of Chapter 4 and 5 of the textbook, as well as additional topics depending on time and interest.

After a brief review of MAT 761, we will discuss the following material:

- Cohomology of a Chain Complex and Universal Coefficient Theorem
- Singular Cohomology and Cup Product
- Orientations and Homology
- Poincaré Duality and Intersection Product
- Applications of Cohomology
- Higher Homotopy Groups
- Additional Topics (e.g. Obstruction Theory, Fiber Bundles, Spectral Sequences, Characteristic Classes, De Rham Cohomology, Sheaf Theory, Knot Theory)

More information can be found below:

- **Classes:** Tu and Th, 3:30 - 4:50, 233 Physics Building
- **Office Hours:** TBA
- **Academic Integrity:** See Syracuse University's Academic Integrity Policy at [http://academicintegrity.syr.edu/](http://academicintegrity.syr.edu/)
- **Students with Disabilities:** If you believe you need an accommodation for a disability, please talk to me at the beginning of the semester or contact the Office of Disability Services (ODS) located in Suite 303 of 804 University Avenue, or call (315) 443-4498
- **Religious Observances Notification:** Students who will be observing religious holidays during the semester are required to fill out their notification form on [MySlice](http://myslice.syr.edu) by the end of the second week of classes.

**Course Webpage:** [https://smwehrli.expressions.syr.edu/teaching/mat-762-fall-2014/](https://smwehrli.expressions.syr.edu/teaching/mat-762-fall-2014/)