MAT 762 – Algebraic Topology

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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, 12:30 - 1:50, 306 Carnegie
- Office Hours: Tu 5 PM - 6 PM and Th 10 AM - 11:30 AM
- 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](https://myslice.syr.edu) by the end of the second week of classes.

Course Webpage: [https://smwehrli.expressions.syr.edu/teaching/mat-762-fall-2013/](https://smwehrli.expressions.syr.edu/teaching/mat-762-fall-2013/)