

**MATH 726, Homological Algebra, 3 credits, Spring 2012**

MWF 10:00-10:50 AM, Minard Hall 135

INSTRUCTOR: Sean Sather-Wagstaff

E-MAIL: Sean.Sather-Wagstaff@ndsu.edu

OFFICE HOURS: MWF 9:00–9:50, or by appointment

PREREQUISITE: MATH 720

USEFUL WEBPAGES:

Course webpage: <http://www.ndsu.edu/pubweb/~ssatherw/sp12/726/>

Instructor webpage: <http://www.ndsu.edu/pubweb/~ssatherw/>

Anonymous evaluation form: <http://www.ndsu.edu/pubweb/~ssatherw/ssw-eval.html>

Math department webpage: <http://math.ndsu.nodak.edu/>

NDSU webpage: <http://www.ndsu.edu>

NDSU blackboard site: <https://bb.ndsu.nodak.edu/>

NDSU webpage on academic honesty: <http://www.ndsu.edu/academichonesty/>

TEXT: Course notes will be available on the course website. You may also consider purchasing “An Introduction to Homological Algebra” by J. Rotman

COURSE DESCRIPTION: An overview of the techniques of homological algebra. Topics covered will include categories and functors, exact sequences, (co)chain complexes, Mayer-Vietoris sequences, Tor and Ext. Applications to other fields will be stressed.

COURSE GRADES: Student grades are based on homework assignments, attendance, and participation. Weights are summarized in the following table along with grade ranges.

		A	85–100%
Homework	90%	B	75–84.9%
Attendance and Participation	10%	C	60–74.9%
		D	50–59.9%
		F	0–49.9%

I will update your grades throughout the semester at the NDSU Blackboard site.

HOMEWORK: I will assign homework on a weekly basis. Exercises will be assigned in class on Fridays and solutions will be due at the beginning of class on the next Friday. Assignments will also be listed on the course webpage. Each section of homework will be worth the same amount. Late homework will only be accepted under extreme circumstances. If you have a conflict with any of the homework due dates, make alternative arrangements with me beforehand.

Students are encouraged to work on assignments in small groups, but each member of the class is required to turn in a neatly written, organized set of solutions. Students will receive no credit for solutions with no work or justification. I reserve the right to deduct points for messy papers. You may even consider using  $\text{\LaTeX}$  to typeset your solutions.

ATTENDANCE: While attendance is not explicitly required, it is worth 10% of your grade. I will take attendance each class period. Officially excused absences will not be counted against you, but you must document such situations with me personally.

COURSE NOTES: I will be typing course notes during the semester. I will periodically update the notes on the course webpage. I will give extra credit to people who find typos in the notes; credit will be given to the first person who tells me about a given typo.

TENTATIVE SCHEDULE:

Martin Luther King Day holiday	Mon 16 Jan
President's Day holiday	Mon 20 Feb
Spring Break	Mon 12 Mar to Fri 16 Mar
No class meeting (KU AMS)	Fri 30 Mar
Last day to Drop Classes (W)	Thu 05 Apr
Holiday/Recess	Fri 06 Apr and Mon 09 Apr
Classes end	Fri 04 May
Final Exam (possible class meeting)	Tue 08 May, 1:00–3:00 PM

ANNOUNCEMENTS: Periodically, I will send course announcements to your ndsu.edu email account. It is your responsibility to check this email account regularly.

INSTRUCTOR FEEDBACK: At the course webpage, there will be a link to an anonymous evaluation form where students can submit comments or suggestions for me at any time during the semester.

ADA STATEMENT: The Americans with Disabilities Act requires that reasonable accommodations be provided for students with physical or cognitive disabilities in order to ensure their equal access to course content. If you have a documented disability and require accommodations, please let your instructor know as soon as possible. For more information, please contact Student Disability Services at 231-7671 or go to <http://www.ndsu.edu/counseling/disability.shtml>.

ACADEMIC HONESTY: The academic community is operated on the basis of honesty, integrity, and fair play. NDSU Policy 335: Code of Academic Responsibility and Conduct applies to cases in which cheating, plagiarism, or other academic misconduct have occurred in an instructional context. Students found guilty of academic misconduct are subject to penalties, up to and possibly including suspension and/or expulsion. Student academic misconduct records are maintained by the Office of Registration and Records. Informational resources about academic honesty for students and instructional staff members can be found at <http://www.ndsu.edu/academichonesty>.

VETERANS: Veterans and student soldiers with special circumstances or who are activated are encouraged to notify the instructor in advance.