

Peru State College
MATH 306 Modern Algebra
Syllabus – Spring – 2012

Instructor: E. Keith Sinkhorn, Ph.D.
Office: Hoyt 203/204
Office Hours: MW 2:00-4:00am, F 1:00-2:00pm
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Required Textbook:

Abstract Algebra: A First Course 2nd Edition by Saracino
Waveland Press (2008)
ISBN-10: 1-57766-536-8
ISBN-13: 978-1-57766-536-6

Required Software: None.

Course Description & Objectives

This course is a study of the various algebraic systems arising in modern mathematical computations. Emphasis is placed on the axiomatic approach to algebra and the use of modern technology to work with algebraic concepts. Topics covered will include sets, mappings and operations, relations, groups, rings, domains, development of the real number system and development of the complex number system.

Prerequisites: Math 230

Upon completion of this course you should be able to:

1. Prove propositions of algebraic concepts,
2. Apply the axiomatic foundation of binary operations to multiple sets,
3. Verify that the properties of a group, subgroup, etc. are true for a given set and operation.

At the beginning of the course, we will discuss how these objectives fit into the College's and School's mission and goals.

Expectations & Instructional Approach

Classes will include primarily lecture with some time for group discussion and use of computer software.

Attendance and participation are vital to the learning experience. Consequently, I expect you to be at each class having read the material and ready to participate in the day's discussions and exercises. Please be in class on time. In order to foster a climate conducive to learning, please join me in treating your classmates with respect. I encourage students to ask questions, seek my help when they need it, and help their classmates understand the material.

Assessment and Grading

Assessment is based on homework assignments and three exams. Weight for each item follows:

Homework: 40%
Exams: 60% (20% each)

Homework:

In this course, homework is a broad category designed to cover many different aspects of your learning experience. Traditional homework assignments will be used extensively in the course, and other learning experiences may be required.

Exams:

Three exams will be given in the course. The third exam will be given in the regularly scheduled final exam time. The third exam is not a cumulative final exam.

Each student will be allowed the front and back of one 8.5" x 11" sheet of paper for notes on the exams.

Grading Scale

A	≥90 and ≤100
B+	≥87 and <90
B	≥80 and <87
C+	≥77 and <80
C	≥70 and <77
D+	≥67 and <70
D	≥60 and <67
F	<60

As instructor, I reserve the right to adjust the lower limit of each grade range (90, 80, 70, 60, etc.) downward at my discretion. For example, a final score equal to or greater than 90 will guarantee the student a grade of A. However, a final score of equal to or greater than 88 may also earn a grade of A.

College's Incomplete Coursework Policy

To designate a student's work in a course as incomplete at the end of a term, the instructor records the incomplete grade (I). Students may receive this grade only when serious illness, hardship, death in the immediate family, or military service during the semester in which they are registered prevents them from completing course requirements. In addition, to receive an incomplete, a student must have completed substantially all of the course's major requirements.

Unless extenuating circumstances dictate otherwise, students must initiate requests for an incomplete by filling out an Incomplete Grade Completion Contract, which requires the signature of the student, instructor, and Dean. The Incomplete Grade Completion contract cites the reason(s) for the incomplete and details the specific obligations the student must meet to change the incomplete to a letter grade. The date by which the student agrees to complete required work must appear in the contract. The Dean, the instructor, and the student receive signed copies of the Incomplete Grade Completion Contract.

Even if the student does not attend Peru State College, all incomplete course work must be finished by the end of the subsequent semester. Unless the appropriate Dean approves an extension and if the student does not fulfill contract obligations in the allotted time, the incomplete grade automatically becomes an F.

College's Academic Integrity Policy

The College expects all students to conduct themselves in a manner that supports an honest assessment of student learning outcomes and the assignment of grades that appropriately reflect student performance. It is ultimately the student's responsibility to understand and comply with instructions regarding the completion of assignments, exams, and other academic activities. At a minimum, students should assume that at each assessment opportunity they are expected to do their own original academic work and/or clearly acknowledge in an appropriate fashion the intellectual work of others, when such contributions are allowed. Students helping others to circumvent honest assessments of learning outcomes, or who fail to report instances of academic dishonesty, are also subject to the sanctions defined in this policy.

Instances of academic dishonesty may be discovered in a variety of ways. Faculty members who assign written work ordinarily check citations for accuracy, run data base and online checks, and/or may simply recognize familiar passages that are not cited. They may observe students in the act of cheating or may become aware of instances of cheating from the statements of others. All persons who observe or otherwise know about instances of cheating are expected to report such instances to the proper instructor or Dean.

In order to promote academic integrity, the College subscribes to an electronic

service to review papers for the appropriate citations and originality. Key elements of submitted papers are stored electronically in a limited access database and thus become a permanent part of the material to which future submissions are compared. Submission of an application and continued enrollment signifies your permission for this use of your written work.

NSCS Board of Trustees Policy 4220 states that each College “. . . will establish a distance learning assessment policy that will include, at a minimum, a substantial culminating experience that is proctored.” Peru State College’s policy is that each course that is offered entirely online will feature a proctored final exam that substantially measures the extent the course’s stated learning objectives are achieved. Online course syllabi will clearly state that, regardless of grades earned previously, the proctored final exam must be passed in order to receive credit for the course. Courses which feature graded site-based activities (e.g., teaching demonstrations) and/or video-taped presentations that occur near the end of the term, and that are designed to substantially assess the achievement of learning objectives, can be considered in compliance with this policy. Project-based capstone and graduate courses utilizing real-time discussions held by web-cam, phone or in person with the faculty member as part of the assessment process can also be considered in compliance with this policy.

Should an occurrence of academic misconduct occur, the faculty member may assign a failing grade for the assignment or a failing grade for the course. Each incident of academic misconduct should be reported to the Dean and the Vice President for Academic Affairs (VPAA). The VPAA may suspend students for two semesters found to be responsible for multiple instances of academic dishonesty. The reason for the suspension will be noted on the student’s transcript.

A faculty member need present only basic evidence of academic dishonesty. There is no requirement for proof of intent. Students are responsible for understanding these tenets of academic honesty and integrity. Students may appeal penalties for academic dishonesty using the process established for grades appeals.

Title IX Compliance Notice

Peru State College is an equal opportunity institution. PSC does not discriminate against any student, employee or applicant on the basis of race, color, national origin, sex, disability, religion, or age in employment and education opportunities, including but not limited to admission decisions. The College has designated an individual to coordinate the College’s nondiscrimination efforts to comply with regulations implementing Title VI, VII, IX, and Section 504. Inquiries regarding non-discrimination policies and practices may be directed to Eulanda Cade,

Director of Human Resources, Title VI, VII, IX Compliance Coordinator, Peru State College, PO Box 10, Peru, NE 68421-0010, (402) 872-2230.

Students requesting reasonable accommodation and tutoring services should contact the Center for Achievement and Transition Services (CATS).

Tentative Course Schedule

We will cover material from sections 0-13 throughout this course. Time permitting, material from the sections on rings (16,17) and/or fields (20-22) may be included.

Important Dates

16 February	Exam 1
5-9 March	Mid-Term Break (no classes)
29 March	Exam 2
Exam Week	Exam 3