

**MA 485-1**  
**Senior Seminar**  
**Syllabus-Spring 2009**

**Instructor:** Dr. Katherine Adams  
**Office:** SC 120; extension 4224; e-mail [adamsk@moval.edu](mailto:adamsk@moval.edu)  
**Office hours:** \*MWF 8:30-9:30, MW 3:00-4:00, TR 8:30-10:30, other hours by appointment.

**Catalogue Description:** Required course for graduating senior mathematics majors. The course is designed to tie together the various topics throughout the major program of study.

**Rationale:** This course provides an opportunity to discuss special topics and to review areas spanning the entire mathematics curriculum. It is a portion of our major program assessment along with an in house examination and the Major Fields Test in Mathematics (ETS). The seminar structure is intended to provide the opportunity for more informal inquiry and exploration for students near the completion of their program of study. The course should be taken during the student's last semester or during the last semester prior to student teaching (Mathematics Education).

**Goals:**

- Review, through assigned problems sets, the mathematics courses taken.
- Introductory study in a special topic.
- A historical survey of mathematics.
- Work on problems promoting a discovery approach.
- Provide input on the nature of the educational experience of the mathematics major at Missouri Valley College.

**Competencies:**

- Demonstrate an overall knowledge in various disciplines within mathematics. ( Math SSC 1.10, 1.11, 2.1-2.6, 3.1-3.6, 4.1-4.4, 5.1-5.7, 6.1-6.2, 7.1-7.5, 8.1-8.3 )  
Performance Indicators: Review problem sets from each course, in-house examination, and the Major Fields Test.
- Articulate and execute problem-solving strategies. ( Math SSC 1.01-1.06, 1.08, 1.09 )  
Performance Indicators: Brief analysis of several problems and presentation of progress toward solution of a substantial problem.
- Demonstrate an historical perspective in mathematics. ( Math SSC 1.07, 1.12 )  
Performance Indicators: Inclusion of significant historical and biographical information relative to the topic of an expository paper.
- The ability to study mathematics with a high degree of independence. ( Math SSC 1.01-1.06, 1.08, 1.09 )  
Performance Indicators: Under the supervision of the instructor and possible a second member of the mathematics faculty, prepare an expository paper on a significant mathematical topic.

### **Course Requirements:**

- Attendance at and participation in all scheduled sessions is expected.
- Completion of assigned review exercise sets.
- Completion of ETS Major Fields Test in Mathematics.
- Completion (with a score of 60% or better) of Senior Assessment Examination in Mathematics.
- Completion of expository paper. The paper should present a significant mathematical topic in some detail. It should incorporate relevant biographical and historical information or be accompanied by a biographical paper about a major contributor to the topic.
- Completion of a portfolio containing:
  - Current resume/vitae.
  - Completed assigned review exercise sets.
  - Final draft of expository paper.
- Oral presentation of results of your research, including question and answer section.

### **Grading:**

10%	Attendance
40%	ETS Major Fields Test MVC Senior Assessment Examination in Mathematics
50%	Compilation of Portfolio Expository paper (which will be graded on) <ul style="list-style-type: none"><li>Clarity of presentation</li><li>Depth of understanding reflected in the paper and oral presentation</li><li>Documentation and authoritative resources</li><li>Historical perspective</li></ul>

### **\*Tentative Schedule:**

One review assignment set needs to be completed and submitted each week.  
A topic statement for the expository paper must be submitted by the 4<sup>th</sup> week of classes.  
A rough draft of the expository paper must be submitted by the end of the 10<sup>th</sup> week of classes.  
Final draft (electronic and hard copy) of the expository paper will be due the 14<sup>th</sup> week of classes.  
Oral presentation of results of your research will be the 15<sup>th</sup> week of classes.  
ETS Major Fields Test date will be announced.  
MVC Senior Assessment Examination in Mathematics will be taken during Finals Week.

\* Subject to change at the discretion of the instructor.

### **MVC ADA Statement**

Special Needs: If you have special needs as addressed by the Americans with Disabilities Act, please contact: **Jamie Gold, ADA coordinator, room 206 Baity Hall, phone 831-4170**, and your instructor. After proper documentation, reasonable efforts will be made to accommodate your special needs.

### **Academic Dishonesty Policy**

In order to maintain its credibility as an institution of higher education, Missouri Valley College maintains standards of academic honesty. Therefore, students who are caught cheating or plagiarizing materials in the course will not receive credit for the assignment or test in question, which will likely lead to failure of the course. A detailed description of the Student Code of Conduct statement can be found in the Missouri Valley College Handbook and Missouri Valley College Catalog.

### **MVC Student Code of Conduct**

It shall be the responsibility of every student enrolled at Missouri Valley College to support the academic integrity of the institution. This applies to personal honesty in all aspects of collegiate work, all student records and all contacts with faculty and staff. Academic dishonesty will not be tolerated.

It shall also be the responsibility of every student enrolled at Missouri Valley College to be respectful of the right of other students, staff and instructors to ensure a safe, peaceful atmosphere conducive to the educational goals of an institution of higher learning. **Rude or disruptive behavior will not be tolerated.**

**Electronic devices (such as cell phones, iPods, etc.) need to be turned off or muted during class.**

Student actions that do not adhere to the MVC Student Code of Conduct will be addressed according to college policies regarding academic dishonesty and disruptive behavior. **A student who exhibits dishonest, disruptive, or disrespectful behavior risk suspension or expulsion from the institution.**