Professor: George Ashline

Office: Jeanmarie 261, Phone: 654-2434

Class Meets: Tuesdays from 8:10 to 9:40 AM in Saint Edmund's 109

Office Hours: M,W,F 2-3:00 PM, T 12:30-2:00 PM. Other times available by appointment.

eCollege, Tegrity, and Home Page: I will post lesson plans, course updates, readings and other materials, and e-mail announcements on eCollege at http://www.smcvtonline.org/. You can also access Tegrity recordings of each of our classes from eCollege or via http://tegrity.smcvt.edu. Most of these will be in the "Doc Sharing" portion of the site, which you should visit regularly during the semester. You can access links to a variety of mathematics education sites and information about this course and other courses I teach at http://academics.smcvt.edu/gashline/.

Audience: students interested in mathematics education, either at the secondary, middle, or elementary level

Course Goals:
According to the Vermont Department of Education licensure requirements for secondary mathematics teachers, students should have "knowledge of key concepts, methods, and skills in mathematics with particular emphasis on:

a. properties of numbers and numeration, estimation, measurement, computation, descriptive geometry, applications in solving practical problems, and the use of calculators and computers appropriate for teaching elementary mathematics

b. algebra, geometry, probability and statistics, calculus, how the various branches of mathematics relate to each other and to other disciplines, the process of reasoning and analysis, mathematical proofs, axioms and theorems, computer science, logic and the foundations of mathematics appropriate for teaching secondary mathematics, as well as knowledge of a scientific area."

In light of these requirements, goals for the course include:
* To enhance knowledge needed to teach mathematics at the secondary or other levels
* To assist students to effectively present mathematical concepts to an audience/class at various levels
* To encourage the use of technology, library, Internet, and other resources in teaching mathematics
* To engage students in significant, hands-on, experiential service-learning at Winooski High School (WHS)

Course Breakdown:

* This semester, we will examine mathematical concepts at various levels and discuss effective teaching methods. Effective teaching requires a thorough knowledge of mathematics and pedagogy, including an appropriate use of technology. Some potential lesson topics include calculus, trigonometry, geometry, algebra, arithmetic, probability and statistics, etc. Lesson content can be found in available texts and/or library and Internet resources. In your lessons, you can use various teaching approaches (small group/discovery, mini-lecture or lecture, technology and/or no technology, examples then theorem or vice versa, etc.).

Some other seminar details:
* By the previous weekend, each presenter submits via e-mail a *brief lesson outline, intended grade level, lesson expectations, and mathematics standard(s) addressed* to post in eCollege "Doc Sharing." This will allow others *beforehand* to view lesson details, consider topics, and bring appropriate materials to class.
* In the first part of the semester, you will give one shorter 15 minute lesson/presentation. Toward the end of the semester, you will prepare a 30-35 minute longer lesson/presentation (and resulting write-up).
* You are to provide each presenter with lesson feedback about what worked well and what may be improved. These comments are part of the presentation assessment and should be as detailed and helpful as possible.
* Each week when not presenting, you are to complete a roughly 100 minute, two-period field experiential visit to WHS at the same time and with the same teacher. You should write up and submit via e-mail a journal entry after each visit describing what you learned, how you helped, and any challenges faced during the visit.
* In class each week, as time permits, we will discuss reading assignments, WHS visits, and other relevant topics.

Semester Outline (tentative):

A.	Jan 17, 24, Feb 28	Introductory classes, Discussion class
B.	Jan 20, 3:45 PM	Special orientation session with WHS math teacher(s)
C.	Jan 31, Feb 7, Feb 14, Feb 21	Mini-lesson presentations (15 mins); Discussion
D.	Feb 23, 4:30 PM	Colloquium on Mathematics Education/Assessment
E.	Mar 6, Mar 20, Mar 27, Apr 3, Apr 10, Apr 17, Apr 24, May 1	Major lesson presentations (30-35 mins); Discussion

Grading: Your grade will be based on your in-class lessons/presentations (including eCollege lesson details), your WHS field experience/journal/reflections, and your participation in class discussion. The grade breakdown will be:

Mini-lesson presentation:	20 %
Full lesson and presentation:	40 %
WHS field experience/journal/reflections:	30 %
Participation/attendance:	10 %

Learning Disabilities: Any student having a documented learning disability that may affect the learning of mathematics is invited to consult privately with me during the first week of the semester so that appropriate arrangements can be made.

Academic Integrity: You are reminded of the academic integrity policy of St. Michael's College. Simply stated, academic integrity requires that the work you complete for this class is your own. Some examples of offenses against academic integrity include plagiarism, unauthorized assistance, interference, and interference using information technology. Details about academic integrity offenses and the possible sanctions resulting from them have been distributed at the beginning of the academic year and also can be found in the Assistant Dean's office.

Class Attendance: The following is taken from the Saint Michael's College Online Catalogue:
"Students should understand that the main reason for attending college is to be guided in their learning activities by their professors. This guidance takes place primarily in the classroom and the laboratory.
The following policies have been established:
1. Members of the teaching faculty and students are expected to meet all scheduled classes unless prevented from doing so by illness or other emergencies.
2. The instructor of a course will set the attendance policy for the course.
3. The instructor may report excessive absences to the Assistant Dean of the College, who may warn the student.

Advice from Previous Students:
- Do the readings. Discuss lessons w/ him if you have any questions. Read all directions on syllabus of lesson plans
- Start presentations early, allow for proper preparation
   - 2-3 hours on short, 6-8 hours on long; use Professor's office hours he can help you w/ resources and knowledge
   - Do readings every week, Learn from others' presentation, Take time on presentations, don't include too much
- Do the readings. Plan your lesson in advance. Don't put off. Participate. have fun!
- take advantage of office hours, he is always willing to help. Use as many resources as you can during your lessons.
- Do readings and contribute to class discussion. It is difficult (especially if you've never taken an education course) to come up with lesson plans. Speak to Prof. Ashline if you need help, he is very eager to be of assistance and always provides useful thoughts. Relax when giving presentations, it's okay to make mistakes, everyone does.
- Prepare lessons way in advance to when you have to present. I know from experience that life becomes super stressful when you are not prepared for a lesson. You will feel more confident and ready to present when everything is ready!
- Work hard on all presentations/lessons and to keep up on the reading of the articles. Make sure to stay in touch with Professor Ashline because he is a great source for questions and advice.
- Be confident in your knowledge on a subject. If you doubt yourself, you students will doubt you too. Thoroughly explain a topic, like teaching real students who have never seen the subject.
- Be prepared; save your lessons; write detailed comments for others
- Make sure you are well prepared. Rehearsal is a good habit to get into if one is to be successful in this course.