

**“Preparing Professionals for Changing Educational Contexts”**  
**Department of Curriculum and Instruction**  
**College of Education, University of Nevada, Las Vegas**

**Course Syllabus**  
***CIG 595B (2 credits)***  
***RPDP AP Calculus Summer Institute 2012***  
***Summer Semester 2012***  
***June 25–28, 2012***

**Instructor:**

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**COURSE DESCRIPTION:**

**CIG 595B: *RPDP AP Calculus Summer Institute 2012***

This four-day institute is an in-depth examination of the *College Board Advanced Placement Calculus AB and BC* curricula from both content and pedagogical perspectives. Students in the course explore the theory and practice of calculus concepts and procedures, develop and participate in methods of teaching topics, and create and discuss assessment of student knowledge. Emphasis will be placed on use of technology in analysis of real-world situations. Two credits.

**GENERAL COURSE OBJECTIVES:**

***Knowledge***

*The education professional will:*

- Describe the structure of the AP Calculus course and its corresponding assessment.
- Identify appropriate classroom materials for the AP Calculus classroom.
- Explain concepts, skills, and procedures from the AP Calculus curriculum.
- Describe techniques and content-specific strategies that can be used in the AP Calculus classroom.

***Performance Skills***

*The education professional will:*

- Create an instructional plan to prepare students for success in AP Calculus course work.
- Design assessments to measure student achievement in AP Calculus.
- Review data related to student performance the AP Calculus Exam.

***Dispositions***

*The education professional will be able to:*

- Reflect on one’s practices to improve instruction in AP Calculus.

- Pursue knowledge of topics relevant to AP Calculus by reading professional journals and publications, and using media such as AP Central and electronic discussion groups.

### ***Outcomes***

*The education professional will be able to:*

- Understand appropriate and effective strategies to teach skills and concepts in AP Calculus.
- Recognize traditional areas of weakness in student achievement in AP Calculus.

### **Specific Course Objectives:**

- Create a student-centered rather than teacher-centered classroom.
- Engage in a hands-on, minds-on approach to learning.
- Promote cooperative learning through some group or partner activities.
- Integrate technology, where appropriate.
- Build a quality AP program through identification of students with appropriate aptitude, ability, and interest.

### **REQUIRED TEXTS/READINGS:**

- AP Calculus AB and BC Course Descriptions.
- Pre-institute readings as determined by the instructor.

### **COURSE REQUIREMENTS:**

Participant's teaching assignment/license will determine course eligibility.

### **EVALUATION:**

Full attendance in all sessions, out-of-session homework assignments, and active participation in the courses for the entire week is mandatory.

### **MODES OF INSTRUCTION:**

A combination of interactive lecture, cooperative learning groups, whole-group discussion, and hands-on labs will be used to assist the teachers in developing an understanding a concept, skill, procedure, or assessment method. Technology will be used when appropriate.

### **ASSIGNMENTS/PERFORMANCE ASSESSMENTS:**

Homework will be assigned daily, for the first three days of the four-day institute. Instructor may require pre-institute readings and/or require participants to bring lessons and activities to share with the class.

### **GRADING:**

Attendance, Homework & Participation: 100% of total grade

### **COURSE SCHEDULE:**

The daily schedule of the four-day institute is as follows:

- |                       |               |
|-----------------------|---------------|
| 8:00 a.m.–11:45 a.m   | Class Session |
| 11:45 a.m.–12:15 p.m. | Lunch Break   |

12:15 p.m.–4:00 p.m      Class Session

**UNLV and the College of Education Policies:**

*Learning Enhancement Services*

Learning Enhancement Services (LES) houses Disability Services, Tutoring Services, and Learning Strategies. If you have a documented disability that may require assistance, you will need to contact LES for coordination in your academic accommodations. LES is located in the Reynolds Student Services Complex, Suite 137. The phone number is 895-0866 or TDD 702-895-0652. You may also visit our website at <http://www.unlv.edu/studentlife/les>.

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