

2010 APSI Syllabus for AP Calculus AB
Summer Institute
July 26 – 30, 2010

Institute Overview

I am very pleased that you have chosen to participate in the AP Calculus AB Summer Workshop. As a teacher, I recognize the value of the summer months and appreciate your willingness to devote part of your time and effort to professional growth

The AB Calculus syllabus has changed significantly over the last few school years. Upon completion of this workshop, our goal is that each of you be well prepared to teach an AP Calculus course using the current AB syllabus and to take a leadership role in affecting curriculum changes necessary to support such a course at your home school. In order to accomplish this, we will spend a good deal of time discussing calculus topics and solving “AP style” problems. We will also cover a number of other issues that are relevant to implementing an AP course and curriculum. In addition, you will be given supporting materials that are critical in preparing your students to take the AP exam. I want the workshop to be a very worthwhile part of your professional development

We will look at a lot of calculus topics. I also hope to have lots of exciting updates and new insights into the Advanced Placement curriculum.

Consultant Background

David East



Presently I teach AP Calculus AB at the Indiana Academy for Science, Mathematics and Humanities on the campus of Ball State University in Muncie, Indiana. I have been serving as a Reader of the AP Calculus AB exam for the College Board since 1997, so I believe I will be able to share with you some insights on the philosophy of the scoring of the exam. Since 1998 I have also been an endorsed College Board Workshop Consultant conducting AP Calculus one-day workshops for approximately one thousand teachers around the Midwest. I look forward to meeting you and discussing all of these topics during what will be a busy but useful workshop week

Institute Preparation

You will be provided with over 200 pages of notebook material at the workshop. Please bring your graphing calculator and it is always a good idea to bring your textbook. There will be several opportunities for you to share your best teaching ideas and materials; so, I encourage you to bring your lessons and ideas so that we can learn from each other.

Institute Schedule

Monday

Morning: Teacher's Mindset; 5 Steps to a 5

Multiple Choice Test (Workshop Handbook)

Afternoon: 2003 Multiple Choice continued

Free Response Frequency (Binder page 63)

Assign: participant presentations* (PP)

HOMEWORK: Free Response problems #33-38

Tuesday

Morning: Discussion: Free Response problems #33-38

- 1) PP* 2ac'2008 (rate of change, IVT)
- 2) PP 6'2008 (tan line, rel extr, infl pt, lim)

Discussion: Sharing Best Practices

Afternoon: Free Response problems #39-44

- 3) PP 4'2004 (imp diff, tan line, extr)
- 4) PP 2b'2008 (avg val, trap rule)

HOMEWORK: Do Free Response problems #15-20

Wednesday

Morning: Discussion: Free Response problems #15-20

- 5) PP 3ab'2008 (rel rates, extr)
- 6) PP 3abc'2007 (chain rule, MVT, 2nd FTC)

Afternoon: Free Response problems #21-26 [note: for 25b see p.55]

- 7) PP 1'2008 (area, vol)
- 8) PP 2d'2008 (Int as accum)

HOMEWORK: Do Free Response problems #45-50

Thursday

Morning: Discussion: Free Response problems #45-50

- 9) PP 3c'2008 (Int as accum)
- 10) PP 4'2008 (pos,vel,accel; FTC, IVT)

Discussion: Sharing Best Practices

Afternoon: AP Final Review Sheet (Binder page 74)

- 11) PP 3d'2007 (Deriv of inv)
- 12) PP 5'2008 (diff eq, slope fields)

HOMEWORK: Do Free Response problems #57-62

Read Dan Kennedy's articles (Binder page 101)

Friday Morning: Discussion: Free Response problems #57-62

Scoring the AP Exam

*PP = participants presentation

Graduate Credit Option

Participants may also earn three graduate education hours for any of the AP Summer Institutes from Washburn University for a reduced tuition and the successful completion of an academic assignment.

Additional Information

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