June 2022

Dear AP Calculus AB Participant:

On behalf of St Johnsbury Academy, I am pleased to welcome you to our AP Calculus AB one week institute. **You have chosen one of the premier AP institutes in America**. Our agenda for the week (page 2) is ambitious yet flexible enough to accommodate the needs of the group.

We will be using TI- 84 graphing calculators; any version/model will do. If you have a TI-84, please bring it with you. If you do not currently own one of these, **do not purchase one for this institute**; email me and I will bring an extra one for you. If you are fluent in a different model/ brand, please bring that type of calculator as well.

If you have questions or concerns that you would like to discuss with me prior to the Institute, you may contact me at eliel_gonzalez@comcast.net .

I look forward to seeing you all soon this summer.

Sincerely,

Eliel Gonzalez
East Longmeadow High School
East Longmeadow, MA
eliel_gonzalez@comcast.net

3 Credit Course Requirements / University of Southern New Hampshire

(if applicable)

1. Attendance and full participation at entire institute.
2. Completion of all classwork including AP Free Response.

3 Credit Course Grading Criteria

Attendance:	40 points
Participation	20 points
Completion of all Classwork	40 points

AP CALCULUS AB - ONLINE
ST. JOHNSBURY AP SUMMER INSTITUTE Eliel Gonzalez, Instructor
JULY 2022 eliel_gonzalez@comcast.net

- Introductions and Welcome
- Mathematical Practices in AP Calc AB
- Course at Glance (**8** major units)
- Course Exam Description: Units at Glance, Unit Guides (topics, pacing, skills, big ideas) and Learning Objectives
- Pre-Calculus, Access, Placement, Graphing Calculators
- AB EXAM Overview: format, scoring, sample exams
- Motivation in AP Calc: Building A Successful AP Calculus Program – Expectations
- AP Calculus Textbooks/AP Central/Resources
- Assessing Student Learning in Calc AP Content, Planning, and Teaching/Learning and Instructional Strategies:
- "Particle" Problems/Motion (units 4 and 8)
- Related Rates and Implicit Differentiation (units 3 and 4)
- Resource Materials for Teaching AP Calculus
- Slope Field and Differential Equations Clinic (unit 7)
- Teaching Area and Volume (unit 8)
- Teaching the Fundamental Theorem of Calculus (unit 6)
- Riemann Sums (unit 6)
- Average Rate vs. Average Value (units 1 and 8)
- L'Hopital's Rule (unit 4)
- Continuity and Differentiability (units 1 and 2)
- MVT, IVT, EVT (units 1, 5)
- Relative Extrema, Absolute Extrema (unit 5)
- Global Review for AP Exam (Free Response/Mult Choice)
- AP Exam 2022/Free Response/Other Free Response
- AP Community: Online Formative Assessments/Personal Progress Checks/AP Classroom/Scoring FRQ/Instructional Planning Reports
- Other Topics