

# Christ's Church Academy

2020-2021

Eugene Clifford

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“For God has not given us a spirit of fear, but of power and of love and of sound mind.” 2<sup>nd</sup> Timothy, V 1:7

# Courses

- Honors Pre-Calculus
- Honors Statistics
- Honors Calculus

# Biography

- Married to my wife Marianne for 35 years. Marianne is also a high school teacher.
- Two children: Michelle and Wil are both graduates of UCF. Michelle is an environmental engineer in NJ and Wil is a science teacher with a BS in biology here in Jacksonville
- BS Mechanical Engineering- Cornell University
- MBA- NY Institute of Technology
- University of Central Florida/ Florida Southern College (2015) Completed 15 hours post graduate study in Education, Math Grades 6-12
- Twenty plus years in Industry beginning with Chrysler Corp., Detroit, MI and most recently with Unison Industries (a Division of GE Aircraft Engines) a manufacturer of turbine ignition systems
- 8th year at CCA and 19<sup>th</sup> teaching high school math and science

# Grades

- 45% Written Assessments  
Tests, projects/presentations
- 30% Homework (in lieu of Quizzes)  
Monday, Tuesday and Thursday (due the following day, except Calculus)
- 25% Workplace (Daily formative)  
Classwork and daily warm-ups
- No Extra Credit- Nearly 100 grades/class in my gradebook by year's end

# Make-up Work

- Homework- follow school's student handbook guidelines.
- Excused absence: homework must be made up and is graded without penalty if it is turned in late, one day/day absent
- Late homework is reduced to  $\frac{3}{4}$  after one day,  $\frac{1}{2}$  after 2 days and NOT accepted after that.
- Daily warm-ups: Daily warm-ups missed due to absences for any reason must be made up. Unlike the warm-ups done in class, credit will only be received for correct responses. The make-up assignment is "to demonstrate correct execution."

# Software and Distance Learning

- Each student must have access to these three platforms:
- *RenWeb- Primary platform for my classes. Includes Lesson Plans, Assignments and Due Dates, Grades, and Communication (communication may be replaced by MS Teams)*
- Microsoft Teams (New)- Includes PowerPoint and Word. Will incorporate student Outlook email addresses. Will provide platform for LIVE lessons remotely, and customized Smart Notebook/PowerPoint presentations (in process, not in use as of 9/7)
- Goformative.com- Secondary to RenWeb. Primarily used for assignments/assessments for distance learning.

# Honors Pre-Calculus

- **COURSE DESCRIPTION**

- This is an advanced course in mathematics designed to prepare a student for a college-level calculus course. This course will also develop problem solving skills with an emphasis on analytical thinking and reasoning. Students will be expected to construct mathematical proofs and derive theorems. Functions and their graphs will be analyzed including polynomial, logarithmic, exponential, and trigonometric functions. Vectors, sequences, and series will also be investigated.
- Using Biblical truths from Math Connections with a Biblical Worldview, such as but not limited to the examples below, the students will engage in linking specific principles and Creation.
- “Math and God: God created all things and because he did math exists.”
- “Math and Mankind: The ability to use math for problem solving is a remarkable gift to mankind from God.”
- “Math and Purpose: Math enables us to bring order to disorder, to invent and shape things into new things. When we do this in a way that honors the Lord, we glorify Him and bring benefit to ourselves and others.”
- “Math and Moral Order: Math demonstrates that the law of non-contradiction; two answers that are mutually exclusive cannot both be true at the same time in the same sense.”

# Honors Pre-Calculus

- Functions and Their Graphs
- Linear and Quadratic Functions
- Rational Functions
- Exponential and Logarithmic Functions
- Trigonometric Functions
- Analytic Trigonometry
- Applications of Trigonometric Functions
- Vectors
- Analytic Geometry
- Sequences and Series
- Use of a TI-84 (or higher) graphing calculator

# Honors Calculus

- **COURSE DESCRIPTION**

- This course examines the concepts of limits, continuity and derivatives of functions of one variable. The course explores differentiation rules for algebraic, trigonometric, exponential, and logarithmic functions and applications of Differential Calculus, such as related rate problems and curve sketching. Definite and indefinite integrals will be introduced and will include the Fundamental Theorem of Calculus. Methods and applications of Integral Calculus will be examined and used to find the area between two curves and the volume of a solid. Learning the skills to graph functions with and without the use of a graphing calculator will also be investigated.
- Using Biblical truths from Math Connections with a Biblical Worldview, such as but not limited to the examples below, the students will engage in linking specific principles and Creation.
- “Math and God: God created all things and because he did math exists.”
- “Math and Mankind: The ability to use math for problem solving is a remarkable gift to mankind from God.”
- “Math and Purpose: Math enables us to bring order to disorder, to invent and shape things into new things. When we do this in a way that honors the Lord, we glorify Him and bring benefit to ourselves and others.”

# Calculus

- Limits and Their Properties
- Differentiation
- Applications of Differentiation
- Integration
- Applications of Integration
- Use of a TI-84 (or higher) graphing calculator

# Honors Statistics

- **COURSE DESCRIPTION**

- The focus will be on understanding and using statistical methods in research and applications. Topics include basics of probability, estimation and hypothesis testing, measures of central tendency, linear correlation and regression, and an analysis of variances.
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# Honors Statistics

- Data Classification
- Data Collection and Experimental Design
- Descriptive Statistics
- Probability and Probability Distributions
- Normal Probability Distributions
- Confidence Intervals
- Hypothesis Testing With One Sample
- Hypothesis Testing With Two Samples
- Use of a TI-84 (or higher) graphing calculator

# Closing

- Available every afternoon following 7<sup>th</sup> period (3:15PM) for individual help/ tutoring
- Thank you in advance for the opportunity to have your young adults in my class
- Please keep us in your prayers
- Contact me via email at [eclifford@ccajax.org](mailto:eclifford@ccajax.org) with any questions or concerns