



## SLCA SYLLABUS 2018-19

### PRE-CALCULUS

**Mission Statement:** SouthLake Christian Academy exists for the sake of God's glory and mission; proclaiming the gospel and discipling the whole person in all aspects of God's reality.

**Course Description:** Pre-Calculus, as its name suggests, is designed to prepare Seniors for college Calculus. Students will apply technology, modeling, and problem-solving skills to the study of polynomial, rational, exponential, logarithmic, and trigonometric functions. A comprehensive study of trigonometry is included in this course. Topics also include polar coordinates, parametric equations, analytical geometry, sequences, series, counting principles, probability, limits, and continuity. A graphing calculator is used for exploration, modeling, computations, and function analysis. Pre-Calculus is a challenging course in which students should be prepared to work hard and to develop their problem-solving and critical thinking skills. Throughout the course, a Christian worldview will be incorporated to assist students in recognizing and appreciating the sovereignty of God through mathematics. *Students will take midterm and final exams.*

#### Pre-requisites:

- Completion of Algebra II and
- Senior standing

#### Course Content:

- Unit 1: Prerequisites for Pre-Calculus
- Unit 2: Functions and their Graphs
- Unit 3: Polynomial and Rational Functions
- Unit 4: Exponential and Logarithmic Functions
- Unit 5: Trigonometry
- Unit 6: Analytic Trigonometry/Additional Topics in Trig
- Unit 7: Sequences, Series, Probability
- Unit 8: Analytic Geometry (Conics, Polar, etc.)
- Unit 9: Limits

#### Required Text:

- *Precalculus with Limits, 4<sup>th</sup> Edition*, Larson and Battaglia, Cengage Learning, 2018.

#### Evaluation:

- **Tests: Tests account for 70% of the semester grade.**  
Tests will be given every 2 – 3 weeks. Due to the amount of material covered in a chapter, a test may sometimes cover only part of a chapter or several chapters. Make-up tests need to be completed as soon as possible. Any student who takes more than a week to make up a test will lose a minimum of 10 points from that test.
- **Quizzes: Quizzes account for 20% of the semester grade.**  
Announced and/or pop quizzes will be given at least weekly. I will drop the lowest 2 quiz grades.

If you are absent, you must consult me on a method of making up a missed quiz.

- **Homework Policy – Homework and class work will make up 10% of the overall grade.** Homework will be assigned daily and checked for completion. No credit will be given for homework turned in late. All students begin the semester with a 100% homework grade. For each assignment not completed, 3 points will be subtracted. For example, if three homework assignments are not completed, then the overall homework grade would be 91%. No credit will be given for late assignments.
- **Notebooks:** All students are expected to keep a neat, orderly notebook. Notebooks should include the following: Calendar, Course syllabus, Daily class notes (it's why we call it a notebook) and warm-ups, Assignments, and Quizzes.
- **Projects:** A paper or project may be assigned at some time. It may be graded as a test or quiz grade, at teacher discretion.
- **Extra Credit:** No extra credit will be offered per school policy. However, students will be given a bonus question(s) on each test (not to exceed more than 5 pts, and 100% maximum test grade). Bonus points cannot be transferred to past or future tests.

**Test Make-up Policy:** If a student comes into school late and as a result has missed a test, the student will immediately report to the office to make-up that test. Students have **ONE** day for each day absent (excused) to makeup all tests and quizzes. If the test/quiz is not made up in this period, **10 pts will be deducted** from the final test/quiz grade **for each day past the makeup day**. Students should meet with their teacher(s) ASAP to request alternate arrangements as needed.

All tests/quizzes are made up during the assigned test makeup period or other study hall. Students may NOT miss a scheduled class to make up a test.

#### **Attendance:**

- **Absences:** It is your responsibility to inquire about all make-up assignments and tests as the result of an absence. The rigors of this course require you to miss a minimal number of classes. Do not schedule appointments during this class. A deadline will be given by the teacher and agreed upon by the student. Note: If you are absent due to a school activity, including sports, you must make arrangements prior to your absence.
- **Tardy to Class:** When you are tardy, it is your responsibility to obtain a pass from the office, otherwise you will not be admitted into class.

#### **Classroom Rules and Expectations:**

- Follow all rules and procedures in the SouthLake handbook.
- Come to class on time, prepared, with a positive attitude, and all materials for the day. Materials include your textbook, notebook, paper, PENCIL, completed assignment, and your TI 84+ graphing calculator.
- Ask any question; we are here to learn together!! But let's maintain our respect for one another; only one person should be talking at a time.
- You will learn proportionately to the effort you put in, and the outlook you bring; you bear the responsibility for your success!!

#### **Formula for Success:**

- **Take Notes-** you should be writing down more than just equations and formulas. For example, why a certain formula was appropriate or a written explanation of how and why a certain step was performed will be of much use later. Remember that your notes are your interpretation of the information presented. (This will also help in future math classes, even in college!)

- **Go** over your notes as soon as possible after class to fill in any missing information and to check to see whether you understand what you have written.
- **USE** your notes when doing homework or studying for quizzes and tests.
- **READ YOUR TEXTBOOK** to supplement the lesson, to reinforce what was learned, and to further your knowledge of the subject.
- **Own your education!!**

**Christian Perspective:** We serve King Jesus...

- **Colossians 3:17** And whatever you do, whether in word or deed, do it all in the name of the Lord Jesus, giving thanks to God the Father through Him
- **Colossians 3:23** Whatever you do, work at it with all your heart, as working for the Lord, not for men.
- **Philippians 2:14** Do everything without complaining or arguing, so that you may become blameless and pure, children of God without fault in a crooked and depraved generation, in which you shine like stars in the universe as you hold out the word of life...

**Required Supplies:**

- Notebook (3 ring binder with pocket)
- Paper & **Pencil**, of course
- A **Graphing Calculator is required** for the course. It is recommended that students purchase a TI-84+ calculator. Depending on the content, a calculator may or may not be permitted during a quiz or test.