

Pre-Calculus 2021-2022 Fall — Fred Kral — The Marin School

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Get info: <https://teach.kralsite.com> and <https://classroom.google.com>

Course Description

Together with Geometry and Algebra 2/Trigonometry, the Pre-Calculus elective prepares students for college-level work in calculus and other mathematics classes as well as classes in quantitative fields such as the social sciences, the natural sciences, and engineering. Central concepts are mathematical analysis, functions and their graphs, trigonometry, and linear algebra. Mathematical ideas are communicated using graphical, numerical, algebraic, and verbal approaches. Through mathematical modeling, concepts are applied to problems in physics, chemistry, biology, economics, and many other disciplines.

Text and supplemental materials

- Larson, Ron and Robert Hostetler, *Precalculus*, 5th Edition, Boston, MA: Houghton Mifflin, 2001. ISBN: 0-618-05285-2. Recommended. Can be borrowed.
- Web searching, wikipedia.org and reputable websites such as Ask Dr. Math (<http://mathforum.org/dr.math/>) and Paul's Online Math Notes (<http://tutorial.math.lamar.edu>). Strongly recommended.
- HP Prime CAS Graphing Calculator and charger. Required. Can be borrowed from the library.
- Laptop computer. Required. Can be borrowed from the library.
- 3 ring binder required in the classroom.
- Pockets to organize paper that is not hole punched (in the binder).
- Pencils (mechanical recommended).

Safety policy

Only use equipment when and as instructed.

Late work policy

The teacher enters grades once per week. Students get credit for late or partial work up to that weekly deadline.

Cell phone, computer, and device policy

Devices are not allowed in class, except by explicit permission to do class work. In the remote classroom, phones may be used to photograph your work. Personal and school computers shall be used only for class. The Marin School supports the responsible use of technology. See the Parent and Student Handbook.

Collaboration policy

I encourage study groups. You may work with others—not just students—unless instructed otherwise as long as all of you contribute. It is wise to put the name of each contributing student on an assignment to avoid issues with plagiarism. See the Parent and Student Handbook for a description of academic honesty, cheating, and plagiarism.

Expected School-wide Learning Results (ESLRs):

1. Self-reliant learners. 2. Self-directed individuals. 3. Critical and creative thinkers. 4. Effective communicators. 5. Responsible members of society. Each of the components of this course prepare students to obtain results 1-4.

Assessment

	Grades are determined by points, roughly 500 points per quarter. There are 8 weeks/quarter.	Major ESLRs (see list)
In-Class Work: <ul style="list-style-type: none"> • <i>Making it:</i> (-2 points/absence beyond the first five) (-1 points/tardy beyond the first five) • <i>Joining in:</i> Practice safety first, always; Follow Handbook rules; Phone-away, Packet, Pencil. • <i>Working with:</i> Contributing positive energy and interest level during in-class work including discussing, problem solving, spending time learning online, working on investigations and projects, using notes, reflecting, and practicing during class. Students are expected to talk about math every class and to share their work with other students visually and verbally. Assessed informally. Earned by students who joined in. 	25 points/week	2, 3, 4
Products: written work (solutions to exercises and problems, notes, and reflection), online results, and projects. Correctness and quantity of work. Assessed formally and informally.	50 points/unit (or about 25 points/week) plus 25-50 points/project depending on scope	1, 2, 3, 4
Quizzes and Tests: written and graphical solutions.	25-50 points/quiz depending on the scope (tiny checks can have as few as 3–5 points). 100 points/test	3, 4
Final Assessments: written and graphical solutions to problems and assignments.	20% of course grade	3, 4
Commitment to learning: Taking on what is challenging to you, getting help, communicating with the teacher, engaging with the material, and taking personally meaningful notes. Assessed informally.	100 points per semester, if it raises the grade	1, 2

Please connect and email! – Fred