

Calculus for Life Sciences

Mario Bretfeld (EEOB)

Somayeh Mashayekhi

Lake Ritter

Glenn Young

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Meghan Burke & Ken Keating



MATH 1179 Calculus for Life Sciences

This course will serve students in the following programs*

- Biology B.S. and
- Environmental Science B.S.

*These programs have MATH 1190 as a terminal math requirement. Students will have the option to take MATH 1179 or MATH 1190.



MATH 1179 Calculus for Life Sciences

Catalog Description:

MATH 1179: Calculus for Life Sciences

4 Class Hours 0 Laboratory Hours 4 Credit Hours

Prerequisite: MATH 1113, or By Placement*

This course introduces the central concepts of single variable calculus including limits, derivatives, and integrals of algebraic and transcendental functions with particular motivations from and application to the Biological Sciences. Special emphasis will be given to using the tools of calculus to build and analyze mathematical models, especially those arising in the life sciences.

Notes: Students completing this course may not also receive credit for MATH 1190. This course does not satisfy the prerequisite requirements for MATH 2202.

*The placement criteria match that of MATH 1190



MATH 1179 Calculus for Life Sciences

Expected Learning Outcomes:

Upon completing this course, students will be able to:

1. Evaluate problems in life sciences and demonstrate how derivatives or integrals can help find solutions.
2. Explain the fundamentals of and evaluate limits, derivatives, and integrals using tabular, graphical, and algebraic techniques and examples.
3. Use the calculus tools of limits, derivatives, and integrals to build and analyze mathematical models, including differential equations, of problems that arise in the life sciences.



MATH 1189 Bridge to Calculus II

What if a student changes majors or decides she wants to take more mathematics?

MATH 1189 Bridge to Calculus II

MATH 1189: Bridge to Calculus II

1 Class Hours 0 Laboratory Hours 1 Credit Hours

Prerequisite: MATH 1179

This 1-hour course is for students who have completed Calculus for Life Sciences and will prepare them to be successful in Calculus II. A brief review of Calculus I is provided with special emphasis on select topics that are not covered in MATH 1179. These include Continuity, Limits involving infinity, Calculus of Inverse Trigonometric functions, The Mean Value Theorem, and L'Hôpital's rule.

