

RCET 1372 – Calculus for Electronics Syllabus

4 Cr

Monday – Friday, 11:00 am – 11:50 am

T&T Room 333

Asst. Professor: Timothy Leishman, timothyleishman@isu.edu

Office: T&T Room 323

Office Hours: M-F 3:00pm - 4:00pm. An alternative meeting time may be scheduled with the instructor.

Course Description RCET Program Required Course

Correlations of algebraic, geometric, and trigonometric topics as well as logarithms and their applications. Algebraic and calculus concepts involving differentiation, integration, and their applications to electronic circuits. Satisfies Objective 3 of the General Education Requirements.

PREREQ: RCET 1154, Supports: RCET 2251

Books: RCET 1372 course content will be provide by the instructor via Moodle.

- Recommended book *Technical Calculus*, 5th Edition, Dale Ewen
- Recommended book *Calculus for Electronics*, 4th Edition, Richmond & Hecht

Other supplies: A TI-30 calculator or equivalent. Programmable or solve function calculators are strictly prohibited on quizzes or tests.

Attendance: Department attendance policy will be enforced, refer to student handbook for more information.

Goal: Successful students will demonstrate an ability to solve Calculus 1 equivalent and Physics-based mathematical problems. Additionally, successful students will apply calculus methods, processes, and operations, as well as physical applications, particularly those necessary for the understanding of electrical phenomena and circuit analysis in support of RCET 2251 & RCET 2253.

Student Learning Outcomes Addressed:

1. *Derivatives & Derivatives Applied*, Weeks 1-4
2. *Integrals & Integrals Applied*, Weeks 5-6
3. *Logarithms*, Week 7
4. *Circles*, Week 8
5. *Parabolas*, Week 9
6. *Max-Mins, Differentials, Higher Derivatives*, Week 10
7. *Differentials Applied*, Week 11
8. *Limits*, Week 12
9. *Trigonometric Functions*, Weeks 13-14
10. *Semester Review*, Week 15
11. *Final Test*, Week 16

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Grading

Tests	50%
Homework/Class Participation	30%
Final	<u>20%</u>
Total	100%

Course Structure

Homework will be assigned and submitted electronically via Moodle. Late homework will not be accepted without 24-hour prior approval from the instructor. Students may be randomly selected to demonstrate their understanding and process of solving course problems during class. Tests will be announced and scheduled in Moodle. The course schedule and or specific homework assignments may be modified by the instructor to enhance student learning objectives or to accommodate for program activities.

Material from prerequisite courses will be investigated throughout this course. Students are required to demonstrate adequate knowledge, and the ability to apply prerequisite information to the topics covered in the class. It is the student's responsibility to be prepared with the information covered in prerequisite courses. Each unit test may contain random information from prerequisite courses to verify the student's fundamental electronics knowledge.

Disabilities Services

The RCET program is committed to providing an accessible learning environment for students with documented disabilities. If there are aspects of the instruction or design of this course that result in disability-related barriers to your participation, please contact Disability Services to engage in a confidential conversation about the process for requesting accommodations. Students are encouraged to register with Disability Services as soon as they begin this course or in the timeliest manner possible as accommodations are not provided retroactively. More information can be found online at isu.edu/disabilityservices, or by contacting Disabilities Services at:

Disability Services - Main Office
Rendezvous Complex, Room 125
921 South 8th Avenue, Stop 8121
Pocatello, ID 83209-8121

Phone: 208-282-3599
Fax: 208-282-4617
VP for ASL: 208-417-0620
Email: disabilityservices@health.isu.edu