

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 provided 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 proficiency in solving problems equivalent to Calculus I, as well as applied physics-based and electronics-related problems. This foundational knowledge is critical for success in RCET 2251 and 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/Quizzes	10%
Class Participation	20%
Final	<u>20%</u>
Total	100%

Course Structure

Homework will be assigned and submitted electronically through Moodle. Late submissions will not be accepted unless approved by the instructor at least 24 hours in advance. Students may occasionally be selected at random to demonstrate their understanding and problem-solving process during class. Test dates will be announced and scheduled in Moodle. The course schedule and homework assignments are subject to modification by the instructor to better support student learning objectives or to accommodate program activities.

Material from prerequisite courses will be revisited and integrated throughout this course. Students are expected to demonstrate a solid understanding of this foundational knowledge and effectively apply it to the topics covered in class. It is the student's responsibility to review and stay prepared with the content from prerequisite courses. Unit tests may include questions that assess fundamental electronics knowledge from these prerequisites to ensure mastery of essential concepts.

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