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Spring 1-2016

### ETEC 299.01: Electronics Capstone

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Missoula College UM  
Department of Applied Computing and Engineering Technology  
Course Syllabus

**ETEC 299 Electronics Capstone**

Credits: 3

Prerequisite: ETEC 245 Digital Electronics

Term: Spring 2016

**Meetings**

Monday and Wednesday, 1:10PM to 2:00PM in HB 05

**Faculty Contact**

Steve Shen, Instructor – [steve.shen@umontana.edu](mailto:steve.shen@umontana.edu)

Phone: 406-243-7914

Office Hours: Monday 12:00PM to 1:00PM, Tuesday 1:00PM to 2:00PM,  
Wednesday 12:00PM to 1:00PM, Thursday 1:00PM to 2:00PM,  
Friday 1:00PM to 2:00PM

Office: Griz House 8

**Course Description**

**EETEC299 Electronics Capstone 2 cr.** Offered spring. Prereq., ETEC 245. Completion of project prototypes. Includes comprehensive final project from conception to market.

**Course Overview**

Final capstone project at program-level provides the students with a significant design experience and integration of knowledge and skills gained in previous coursework, as well as a means to practice problem solving and team work, project management, technical writing and project presentation skills.

**Course Objectives**

1. Apply important concepts of project management to the actual capstone project proposed for this course.
2. Analyze the requirements for the capstone project using the systematic approach.
3. Integrate the knowledge acquired in the program to provide effective technological solutions for given problems.
4. Demonstrate the ability to use team oriented problem solving techniques on a large-scope project to arrive at an optimal solution.
5. Demonstrate the ability to document solutions to a problem by applying critical reading, analytical thinking and resolution skills.
6. Demonstrate the ability to present and defend a proposal in spoken and written formats.

**Evaluation Procedures**

Grades will be assessed as follows

Assessment Area:

Attendance	10%
Project Demonstration	50%
Project Documentation	30%
Project Presentation	10%

Grading Scale:

90-100%	A
80-89%	B
70-79%	C
60-69%	D

Below 60%    F

## General Requirements for the Course

1. The Capstone Project has to be at the program level of the Electronics Technology Program, technically and academically.
2. The Capstone Project has to be completed independently and individually with team discussions highly recommended.
3. All the assigned lab experiments and projects are to be done with physical components, unless otherwise indicated by the instructor.
4. Multisim simulations are highly recommended, but are optional.
5. Please demonstrate every lab experiment and project to the instructor as soon as you complete them.
6. Project report should include, but is not limited to, the following:
  - Title of the project
  - Description of the project, including, but not limited to, the purpose, background, objectives, etc.
  - Goals – specifications of the project
  - Equipment, materials, components required with pricing
  - Procedures
  - Time frame
  - Outcome and data
  - Resources
  - Concluding remarks
7. Late work maybe be accepted at most one Unit after the due date and can receive a maximum of 80% of the full credit. No work will be accepted more than one Unit after the due date.
8. No work will be accepted after the final Unit of the semester, Friday May 6, 2016.
9. All the lab experiments and projects assigned are to be completed individually. Team discussions are highly encouraged.

### Academic Integrity:

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at:

[http://life.umt.edu/vpsa/student\\_conduct.php](http://life.umt.edu/vpsa/student_conduct.php)

Using the Web to research materials and concepts is an integral part of learning in the twenty-first century. Studying with other students is a productive method of learning. A certain amount of collaborating on concepts with other students and using resources found on the Internet in an assignment is recommended. Copy and paste is not acceptable. It is expected that each student will input his/her assignment into the computer, and each student must be able to explain any assignment turned in. Collaboration on exams is strictly forbidden.

### Dropping and Adding Courses or Changing Sections, Grading or Credit Status

University Policy for dropping courses or requesting grading/credit status changes can be found in the catalog:

<http://www.umt.edu/withdrawal/Withdrawal%20Policies.aspx>

Students should become familiar with all academic policies.

**For Complete Academic Policies Please View the Um Catalog at:**

<http://www.umt.edu/catalog/academics/academic-policy-procedure.php>

**Disability Accommodations:**

Eligible students with disabilities will receive appropriate accommodations in this course when requested in a timely way. Please contact me after class or in my office. Please be prepared to provide a letter from your DSS Coordinator. For more information, visit the Disability Services website at <http://www.umt.edu/dss> . Or call 406.243.2243 (voice/text).

**Changes to Syllabi:**

NOTE: Instructor reserve the right to modify syllabi and assignments as needed based on faculty, student, and/or environmental circumstances. If changes are made to the syllabus, amended copies will be dated and made available to the class.

**Cell Phone and other Electronic Communication Devices Policy:**

All electronic communication devices must be tuned off and stowed away prior to the start of class.

**Attendance Policy:**

Regular classroom attendance is expected.

**Exam, Project, and Assignment Policy:**

All exams are to be taken on the assigned date and time. Projects and assignments are due at the start of class on the assigned date and time. Late assignments will be accepted at the instructor's discretion. Rescheduling of an exam will be approved at the discretion of the instructor and only in extraordinary situations.

**Learning Management System:**

It is the responsibility of the student to access and familiarize herself/himself with the Learning Management System (LMS) for the course (Moodle). Access & training is available through UOnline <http://umonline.umt.edu>