CAST CPET-563 Embedded Systems Design II **Dr. Kaputa**
Spring 2018 **T/TH GOL 1360**
Course Syllabus **4:40 – 6:40**

Instructor

Dr. Kaputa
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Course Description

This project based course is the culmination of the curriculum capstone experience for the Computer Engineering Technology program. This course will be focused around a project that includes:

• product ideation	• best documentation practices
• project/resource management techniques	• industry level coding practices
• system level specification	• hardware and software co-design methodologies
• modeling	• design reuse and intellectual property creation
• partition and design	• design verification and validation
• team collaboration and communication	• design sign-off

Students, upon successful completion of the course, will have an industry-like embedded system product design experience, starting by developing the vision for a product, including the voice of the customer, and progress through the phases to develop a complete product prototype with professional documentation. In addition the students will: track and present their progress; participate in design and code reviews; demonstrate their product and highlight product differentiation. At the end of the course students will give a formal presentation, product demonstration, deliver professional documentation, go over lessons learned and suggest future improvements.

Course Prerequisites

- Embedded Systems Design I (CAST-CPET-561)
- Working knowledge of ModelSim
- Previous VHDL course work and basic understanding of VHDL syntax and application
- Previous C/C++ coding experience

Grading Policy

Labs, Homework, Quizzes:	45%
Midterm:	15%
Final Project Demo:	30%
Final Project Presentation:	10%

Note: A grade of incomplete (I) is only awarded under extenuating circumstances. Not finishing the assigned work is not a reason for receiving a grade of incomplete.

Final Grading Scale

Grade	Numerical Range	
A	> 93.00	
A-	90.0	92.9
B+	87.0	89.9
B	83.0	86.9
B-	80.0	82.9
C+	77.0	79.9
C	73.0	76.9
C-	70.0	72.9
D	60.0	69.9
F	< 59	
ECT-*ET* Plus/Minus Grades		

Class Participation and Attendance

Although no percentage of the final grade is determined by class participation and attendance, attendance will be taken. Attendance and participation are factors that will be taken into consideration when deciding grades that are on the cusp of the letter grade cutoffs.

Laboratory Rules

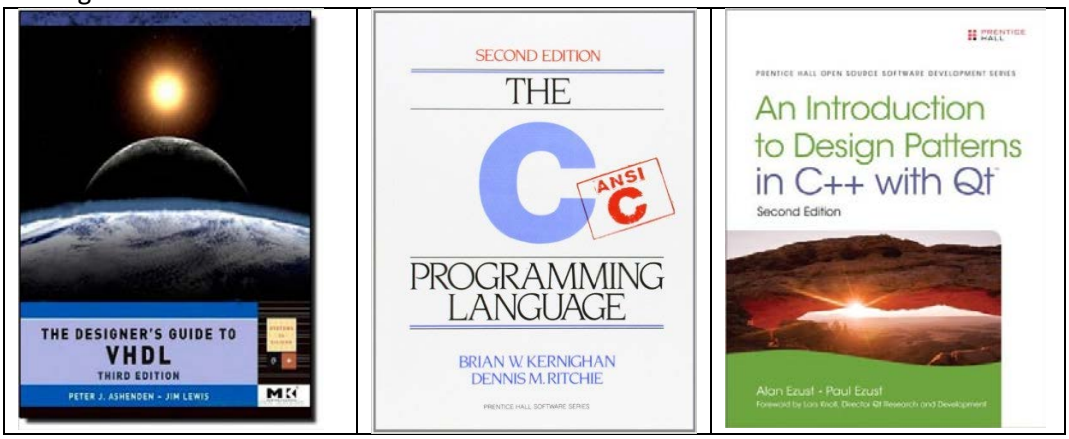
Labs may be checked-off during your laboratory time, or during open laboratory time when the instructor is available. Only the instructor for this course may sign off your lab work. You are expected to keep a laboratory notebook throughout the semester. This notebook is for your own utilization to track the operation, timing, and anomalies of your system. By keeping accurate records, and writing down all questions and problems you will be able to solve problems that occur more effectively. *All work for this course (with the exception of the team project) is to be performed on an individual basis. Please see the Plagiarism policy on the final page.*

All late labs will receive a zero! Please contact me before the lab is due if there are extenuating circumstances.

Supplies

Textbook	No Formal Textbook Required.
Laboratory Kit	Snickerdoodle development kit for ESD II (Pick up From Ken Garland)
Laboratory Notebook	Recommended for Documentation
VHDL Reference	Recommended
"C" Reference	Recommended
QT/C++ Reference	Recommended

Some great references are shown below and are available on Amazon.



Important Note

Unlike some of our lower division classes we will not necessarily tell you everything you need to know. Some of it will come from readings and homework. It is our intent in this course to challenge you and take you out of your comfort zone. You are expected to research information that is not directly provided to you; just as you would in industry when given a project that includes an application that you may not be familiar with.

Academic Accommodations

"RIT is committed to providing reasonable accommodations to students with disabilities. If you would like to request accommodations such as special seating or testing modifications due to a disability, please contact the Disability Services Office. It is located in the Student Alumni Union, Room1150; the Web site is www.rit.edu/dso. After you receive accommodation approval, it is imperative that you see me during office hours so that we can work out whatever arrangement is necessary."

Academic Dishonesty

Plagiarism in any form will not be tolerated. All work (with the exception of the team project) is to be performed individually. At a minimum, plagiarism will result in a grade of 0% for that assignment as well as documentation of such being entered into the students' permanent records. If you are unclear as to what is considered plagiarism, please refer to the handbook "***Writing with Sources***" by Gordon Harvey. This is on reserve in the library.

Rochester Institute of Technology does not condone any form of academic dishonesty.

Depending on the severity of the misconduct, a student judged to be guilty may receive a failing grade for the individual piece of work, or for the entire course. If the student believes the action is incorrect or severe, the student may appeal to the Academic Conduct Committee. Refer to the student handbook for complete information.

Discrimination and Harassment Policy

RIT is committed to providing a safe learning environment, free of harassment and discrimination as articulated in our university policies located on our governance website. RIT's policies require faculty to share information about incidents of gender based discrimination and harassment with RIT's Title IX coordinator or deputy coordinators, regardless whether the incidents are stated to them in person or shared by students as part of their coursework. If you have a concern related to gender-based discrimination and/or harassment and prefer to have a confidential discussion, assistance is available from one of RIT's confidential resources on campus (listed below).

1. The Center for Women & Gender: Campus Center Room 1760; 585-475-7464; CARES **(available 24 hours/7 days a week)** Call or text 585-295-3533.

2. RIT Student Health Center – August Health Center/1st floor; 585-475-2255.

3. RIT Counseling Center - August Health Center /2nd floor - 2100; 585-475-2261.

4. The Ombuds Office – Student Auxiliary Union/Room 1114; 585-475-7200 or 585-475-2876.

5. The Center for Religious Life – Schmitt Interfaith Center/Rm1400; 585-475-2137.

6. NTID Counseling & Academic Advising Services – 2nd Floor Lynden B. Johnson; 585-475-6468 (v), 585-286-4070 (vp).