ELECOMP CAPSTONE DESIGN PROGRAM
FALL 2019 ENROLLMENT: ELE480

Name: Paul Crisafulli **ID Number:** 100539187

University Email Address: prcrisafulli@my.uri.edu

Overall GPA: 2.88 **Engineering GPA:** 2.75

Major/s: Electrical Engineering

Minor/s: Nuclear Engineering

Grade in 212: C+ **Semester Taken:** Spring 2018

Grade in 313: C **Semester Taken:** Fall 2018

Grade in 338: C **Semester Taken:** Fall 2018

Cumulative numerical average of above 3 courses: 2.12

Will you have car for 2019-2020 academic year? (y/n) Yes

Will you have a laptop for the 2019-2020 academic year? (y/n) Yes

Confirm no classes taken on Fridays after 5pm for BOTH semesters. (y/n) Yes

Will you have any class from 1.00pm to 1.50pm on Fridays? (y/n) No

If you are an ELE Major, do you have any key skills in CPE/CS areas? If you are a CPE Major, do you have any key skills in the ELE area?

As an electrical engineering student, I have taken only a few classes which require programming. However, in my work and personal life I have done a significant amount of work with programming. I generally consider my programming skills to be above average for an electrical engineering student and enjoy computer based problems.

Previous Internships & Work Experience: time periods, location, skills gained:

In high school I worked for a custom store display electronics and pyrotechnic control systems company doing design and prototyping work. In this position I learned a lot about control theory as well as PCB layout and design. During my summers in college, I have interned for Electric Boat where I have learned a great deal about the formalities of engineering work for large companies and how contract work is different than in house product design. Throughout my various positions I have learned technical electrical skills, how to be a hardworking team member, and how to meet deadlines.

Do you have an internship in the present Spring 2019 semester? If so, give details:

No.

Will you have an internship during the summer this year? If so, give details:

During the 2019 summer I will be back interning at Electric Boat in Groton, CT. During my internship I will be assisting with engineering. While the extent of my required duties are not fully known, I know the internship will be a positive learning experience and I will have more skills in the Fall as a result of this opportunity.

Will you have an internship during 2019-2020 academic year? If so, give details:

No.

Summary of KEY Skills in your Major.

- Digital Logic
- FPGA's and VHDL
- Linear systems and signal processing

Passion areas in your major and minor concentrations? Justify:

In electrical engineering I am most passionate about digital logic and control systems. I really enjoy digital logic implementations for state machines, and as such digital control systems are a big interest of mine. The process of using FPGA's to implement prototype digital controls is something I find intriguing.

Key projects in or outside of your coursework (course assignments, hobby projects, etc.). Give detail and justify your selection.

One project I had while working for a pyrotechnics control systems company was to design a launch control system for fireworks with no lift charge. The concept was to have a digitally controlled burst charge igniter that would first start its burst countdown and then launch into the air via an air cannon. This presented a number of challenges in order to prevent the charges from exploding on the ground. Ultimately each individual igniter used a microprocessor to communicate with the control module via serial communication. A number of redundant self tests were performed by the igniter and control module to ensure the charge would only ignite in the air. After a number of revisions, the final version has been commercially used successfully for over 4 years.

Which projects would be your top 3 choices; justify in detail and correlate with your Passion Areas, and Key Skills above. Select from the projects being executed this current year. Go to this link for the project descriptions of all 22 projects.

Links: 2018-2019 Current Proposals | Symposium Program

A hard copy is also being distributed to all students, for easy reference. The video presentation of each team is also available at the website.

Project One:

The project that stands out to me as being a really great fit is the Project Superfinish. This project appeals to me because it utilizes many of my strengths as well as my areas of interest. The project would allow me to utilize what I know as well as expand my knowledge of control systems. Overall this project seems similar to the areas of electrical engineering that I find most interesting.

Project Two:

I also found the Motion Control project to be interesting. The usage of an FPGA to interface with the preexisting controller is something that I feel is a sensible solution, and overall I enjoy working with FPGA's. The reason this project would be a second choice for me is that it is so much more software intensive as opposed to hands on electrical design which will allow me to improve my software skills. The project is also to be based in Verilog, which while I'm sure I could learn, I do not currently know.

Project Three:

The Cellular Pump Control project is also very interesting. As a project, it is definitely very software intensive, but also has PCB layout which is something I do have experience with. My background with coding and PCB design would make this project something I could do well. I also find the idea of creating a cellular control system very intriguing.

Will you be interested to take the PCB Design Course: Yes

Insert your Resume, starting on the next page, together with a photo of yourself, so that I can put a face to a name! You are welcome to provide further explanations on any of the above topics in your resume.

(save the full doc as a pdf, and label it as: ELECOMP-F19-"your name")

Submit only as ONE attachment to: sunak@ele.uri.edu, john_murphy0910@my.uri.edu

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Save the Date: Tuesday September 3rd, 2019: Advising Day. Capstone Interviews for ALL Capstone Designers. Registration slots in late August.

See details of the PCB Design Course, which can be used as a 4th Professional Elective by Petition. It will be offered in the Fall 2019 semester, on Thursdays, from 5.15pm to 9pm. Will you be interested to take this course? Last Fall semester, the enrollment in this course was 17! Seniors who take this course will be given preference in capstone projects that require PCB Design.)

Paul Crisafulli

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Objective	Obtain an internship in the electrical engineering industry.
Skills/certifications	• Knowledge of pyrotechnic launch systems • Live event sound production • Custom electronic circuitry design, prototyping and assembly.

Education

Wayland High School
Class of 2014

Awards
- Principal Service Award
- Service to the Community Award

Leadership
- Founder and Technical Director of Wayland High School A/V Club

Extracurricular Activities
- A/V Club (grades 10 & 11)
- FIRST Robotics (grades 9, 10 & 11)
- Math Team (grades 9, 10 & 11)

Experience

General Dynamics Electric Boat
June 2017 through August 2018
Intern

- Reviewed and marked electrical and fiber optic schematics and CADs
- Assisted with lab testing for a research & development project
- Used Team Center (CAD software) to review measurements and dimensions
- Reviewed and confirmed electrical calculations
- Drove meetings
- Assisted with arrangement meetings

Tropic Isle Aquarium
September 2013– July 2014
Sales Associate

MagicFire
August 2012 – August 2014
Electronics assembly and prototype technician

Volunteer Service　　**Waycam**
Producer of Waycam local television programs

Experience　　References available upon request