

Edward Quilligan

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Education

California Polytechnic State University, San Luis Obispo

Bachelor of Science in **General Engineering Concentrating on Biomedical** – March 2014

Relevant Experience

Senior/Thesis Project – Cal Poly

- Awarded the “Best Senior Project” by the Biomedical Engineering Industry Advisory Board
- Designed a working multi-use lancet device that incorporates the lancet and test strip into a small pen size device that has possibility to use Bluetooth in the device and store test results into iphone
- Developed multiple prototypes using Solidworks and rapid prototyping to determine the best design

Completely Artificial Aortic Heart Valve – Cal Poly

- The Goal of the project was to develop a solution to calcified aortic valve that was new/noteworthy
- Discovered ePTFE coated with Heparin for the leaflets of the heart valve would be a good solution because of its biocompatibility in previous works and its ability to interact with the blood and prevent thrombosis
- Developed a model of the heart valve based on standard aortic valve dimensions and constructed a way for the valve to replace previous calcified heart valve by incorporating z-stents into the design
- Presented idea to various biomedical companies

Technical Group Projects – Cal Poly

- Designed and produced a writing aid for prevention of repetitive strain injury
- Designed and conducted experiments using an ECG to examine the effect of music on a subject’s heart rate for potential treatment of post-traumatic stress disorder
- Generated a model to predict complex bone resorption and formation using MATLAB
- Created a working air-powered motor by machining parts on a lathe and mill. More complex parts were modeled in ProEngineering and then cut using a CNC machine

Skills

- **Computer:** SolidWorks, MATLAB, LabView, AutoCAD, PSpice, Abaqus, COMSOL, ImageJ, Microsoft Excel, Word, PowerPoint, C++, Visual Basic, ProEngineering, JMP, Minitab
- **Equipment:** Electrocardiogram via PowerLab, Microtome, Laminar Flow Hood, Fluorescent Microscope, Lathe, Mill, Rapid Prototyping Machines

Leadership / Involvement

- **Social Chair** of Delta Chi
- **Open House Chairman**, Delta Chi
 - Netted over \$7,000 through organizing and managing of food sales
- **Eagle Scout** rank in Boy Scouts of America

Work History

Filing Clerk

Law Offices of David P. Crandal – Laguna Hills, CA 92653

(9/05 – 12/206)

- Classify, store, retrieve, and update law files

Store Clerk

Pacific Coast Audio Video – Laguna Beach, CA 92625

(6/10 – 10/10)

- Entering data, performing word processing, sorting mail, retrieving/delivering parts and operating copying or fax machines