Rachel Baumgarten

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Education

Rochester Institute of Technology

Bachelor of Science in Biomedical Engineering, Exp: May 2018

GPA: 3.4/4.0
Dean's List: Fall 2013, Spring 2014, Spring 2015
Honors Program: Since Spring 2014

Courses: *class for Fall of 2016

Biomedical Device Engineering*
Quantitative Physiological Signal Analysis Lab*
Biomedical Signals Analysis
Systems Physiology I & II*
Numerical Analysis of Complex Biosystems*
Biocompatibility and Immunology
Engineering Statistics and DOE*
Fluid Mechanics
Introduction to Biomaterials
Introduction to Biomechanics
CAD and LabView for BME
Computer Science for Transfers*
Computer Science I
Discrete Math for Computing*
Advanced Spanish I*
Spanish for Health Care
Intermediate Spanish II
Introduction to Semi-Conductor Devices

Relevant Work Experience

Girls Who Code Teacher

June 2016–Present

Teaching coding to 11th and 12th grade girls. Languages taught include Scratch, Python(Pygame), C++/Arduino, HTML/CSS and JavaScript. Responsibilities include classroom management, teaching new material, project aid, troubleshooting and hosting after-class hours.

BME Department RIT Teacher's Assistant

January 2015-May 2015

Assisted professor during lecture in the Introduction to Programming for Biomedical Engineers course. Hosted TA hours to assist students with homework assignments and graded MATLAB and LabView code assignments and quizzes

Nuclea Biotechnologies Intern

August 2015–January 2016

Worked on large-scale self-assigned database project, worked with microtome and tissue samples, stained H&E slides, organized slides and tissue blocks, grew cells in cell culture (from freezing line to opening line to creating pellet and pellet block), learned tissue micro-array, immunohistochemistry and ELIZA skills.

BSIA Lab at RIT Research Intern

June 2014 - August 2014

eveloped a program that could detect atrial fibrillation and communicate its presence via music. Self-taught Max/MSP using Max/MSP and MATLAB code to accomplish the task. Completed an IRB process and tested program on participants and presented work at the Undergraduate Research Symposium at RIT

Labs & Projects

WIC Hackathon
Designed a solution to a challenge to teach coding to kids and to help women's issues.
http://www.codefucious.org

Biomechanics and Biomaterials Lab
Analyzed arms and leg mechanics as well as PEG, gelatin, hydrogels and metal properties as they relate to Young's modulus and cell adhesion.

Cell & Molecular Biology Lab
Grew samples of P388 and CHO cells. Used T-25 flasks, 6-well and 96-well plates. Performed a live chick dissection followed by organ cultures. Also performed a HIC column.

Skills

Professional: • Strong organizational and problem solving skills • excellent written and verbal communication skills • quick learner • efficient time-manager • team and independent worker • well developed leadership skills • strong Spanish

Lab: • sterile technique • gel electrophoresis • microtome • H&E stain-line • micropipetting • ELIZA • live mammalian and cell culture (p388, CHO, MCF-7) • organ culture

Software

Python	●●●●●	MATLAB	●●●●○	Max/MSP	●●●●○
Google Drive	●●●●●	Microsoft Office	●●●●●	Photoshop	●●●○○
Lightroom	●●●●●	InDesign	●●○○○	Google Apps	●○○○○
HTML/CSS	●●○○○	C++/Arduino	●●○○○	SolidWorks	●●○○○