

# JOSHUA MAYOURIAN

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(516)-567-4840 ♦ mayour@cooper.edu

## EDUCATION

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### Cooper Union for the Advancement of Science and Art

*Projected May 2014*

M.E., B.E. in Chemical Engineering; Minor in Biomedical Engineering

Overall GPA: 3.84/4.00; Major GPA: 4.00/4.00

### Icahn School of Medicine at Mount Sinai

*Projected May 2020*

M.D./Ph.D. in Design, Technology, and Entrepreneurship Candidate

## TEACHING EXPERIENCE

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### Graduate Bioelectricity Course Teacher Assistant

January 2013 - June 2013

*Cooper Union for the Advancement of Science and Art*

*New York, NY*

- Created homework assignments and solutions, and graded both homework assignments and exams
- Assisted students out of class with any questions they had regarding the course material

### Tutor

January 2009 - June 2010

*Self-Employed*

*Roslyn, NY*

- Instructed high school and middle school students one-on-one in Math, Physics, Chemistry, Earth Science, and Spanish

## PROJECT WORK/RESEARCH

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### Electrophysiology Researcher

June 2013 - Present

*Icahn School of Medicine at Mount Sinai (ISMSS)*

*New York, NY*

- Mathematically modeled the electrical interactions of human mesenchymal stem cells (hMSCs) and cardiomyocytes (CMs)
- Learned how to patch clamp in a whole-cell configuration for excitable and non-excitable cells
- Poster presentation (ISMSS, 2013); Master's thesis (in progress)

### Tissue Engineering Researcher and Bioreactor Designer

June 2012 - October 2012

*Icahn School of Medicine at Mount Sinai*

*New York, NY*

- Developed a biomathematical model of paracrine signaling between MSCs and CMs using biotransport phenomena
- Designed a novel bioreactor for culturing multiple engineered cardiac tissue together (technology disclosure in progress)
- Poster presentation (ISMSS, 2012); Podium presentation (BMES National Meeting in Atlanta, 2012)

### Orthopedic Clinical Researcher

June 2011 - September 2011

*Elmhurst Hospital*

*Elmhurst, NY*

- Learned to read X-rays to classify intertrochanteric fractures (AO classifications) after a percutaneous compression plating

### Biomedical Engineering Researcher

September 2010 - December 2010

*Cooper Union for the Advancement of Science and Art*

*New York, NY*

- Designed an exercise machine that stimulates obese users by outputting user's peddling speed to a racing video game
- Podium presentation (Cooper Union, 2010)

## HONORS

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Accepted Early Assurance into the Icahn School of Medicine at Mount Sinai M.D./Ph.D. Program

Daniel Okrent Cooper Fund Scholar, The Cooper Union 2013

Responsible for Greatness Award, The Cooper Union 2013

Goldwater Scholarship Honorable Mention, 2013

Deans List, The Cooper Union, Fall 2010, Spring 2011, Fall 2011, Spring 2012, Fall 2012, Spring 2013, Fall 2014

Full-tuition Scholarship, The Cooper Union, 2010-2014

## SKILLS

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### Laboratory Equipment

- Patch Clamp, GC, Mass Spec., Absorption Spec., IR Spec., Fluorescence Spec., HPLC, UV-Vis Spectroscopy, ELISA

### Computer Programs

- MATLAB, CellML, COMSOL, Pro/II Processing Engineering Software, AutoCAD, Solidworks, Mastercam, Python, QBasic64, LaTeX, Microsoft Office

### Languages

- Fluent in Hebrew and English and conversant in Spanish and Persian

## MEMBERSHIPS

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The Cooper Union Pre-Medicine Mentorship Club, Founder

*September 2013 - Present*

Tau Beta Pi, Secretary, Member, Engineering Honors Society

*September 2012 - Present*

The Cooper Union Basketball Team, Starting Point Guard, Captain

*September 2010 - Present*