

Adam Konkol
Curriculum Vitae

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Education

Candidate for Bachelor of Arts, *University of Pennsylvania* 2017-2021
Vagelos Molecular Life Scholar in Biochemistry, Biophysics, and Physics. Contact for GPA.

Candidate for Master of Science, *University of Pennsylvania* 2017-2021
Physics.

**Work
Experience**

Researcher, *Katifori Lab, University of Pennsylvania* Oct 2018-Present
• Studying mouse brain surface vasculature using graphical and statistical methods

Researcher, *Wagner Lab, University of Pennsylvania* Oct 2017-Present
• Worked on PRC2 epigenetic maintenance, floral regulation by transcription factor *LFY*
• Developed computational methods to characterize disordered proteins

Intern, *Cosmetic Essence Innovations* May-June 2017
• Reorganized chemical supply, formulated/tested properties of new products

Intern, *Borough of Union Beach* Summer 2016
• Categorized inventory, managed paperwork, planned local auction of surplus materials

Camp counselor, *Forestburg Scout Reservation* 2013-2017
• Organized programs relating to environmental and plant sciences

Teaching

Organic chemistry workshop leader, *University of Pennsylvania* 2019-2020

Teaching assistant, *Physics Department, University of Pennsylvania* Fall 2018-Present
• Fall 2018: two sections of Phys150 lab
• Spring 2019: one section Phys101 lab, one section Phys102 lab
• Fall 2019: two sections of intro physics lab (anticipated)

Tutor, *Tutoring Center, University of Pennsylvania* Fall 2018
• Privately tutored students in Phys150 and Math114

Achievements

Eagle Scout, Boy Scouts of America 2006-2017

Roy and Diana Vagelos Challenge Award, University of Pennsylvania 2019-2021

Dean's List, University of Pennsylvania 2017-2018

Attendee, Princeton CPBF Summer School Summer 2019

Section awards, *Accelerated Bioremediation of Environmental 2,6-Dichlorobenzonitrile Using Bacillus thuringiensis* 2015-2016
• First place environmental category at JSSF, honorable mention at DVSF

Honorable mention twice, Moody's Mega Math Challenge 2015-2017
• Modeled rising sea levels (2017) and popularity of car sharing services (2016)

Activities

Penn Polish Club, Communications Director
Science Olympiad at the University of Pennsylvania
Penn Undergraduate Chemistry Society

Skills

Lab Skills:

- Culture of *A. thaliana*, *C. elegans*, mammal cell lines
- Cloning, Gibson Assembly, plasmid prep
- Southern/Western blotting
- Bacterial transformation, electroporesis
- Protoplast isolation, transfection
- Affinity purification, HPLC/FPLC
- SDS-PAGE, EMSA
- qPCR, RT-PCR
- Genomics, bioinformatics analysis
- Bioinformatics analysis with Biopython
- Scientific literature/results presentation

General Skills:

- Machine learning with scikit-learn, keras
- Skilled in Python, Mathematica, L^AT_EX
- Familiar with Bash, gnuplot, MATLAB, GRO-MACS
- 3D modeling, video production using Blender, Davinci Resolve
- Languages: English, Polish, Spanish
- General building construction and demolition

Courses

Fall 2017: 5 c.u.

- Math114: Calculus II (Multivariable) (1)
- Phys150: Principles I with Lab: Mechanics (1.5)
- Chem114: Honors Chemistry I: Experimental Perspectives (1)
- Chem022: Structural Biology & Genomics (0.5)
- Hsoc212: Science, Technology, and War (1)

Spring 2018: 6 c.u.

- Math240: Calculus III (Linear algebra and differential equations) (1)
- Math203: Proving Things: Algebra (1)
- Phys151: Principles II with Lab: Electromagnetism (1.5)
- Chem116: Honors Chemistry II (1)
- Chem022: Structural Biology & Genomics (0.5)
- Writ074: Writing Seminar in Science and Politics (1)

Summer 2018: 1 c.u.

- Math241: Calculus IV (Partial Differential Equations). Self-taught summer 2018 (1)

Fall 2018: 6 c.u.

- Phys280: Physical Models of Biological Systems (1)
- Phys230: Principles III: Thermodynamics, Relativity, and Waves (1)
- Chem221: Physical Chemistry I (1)
- Chem241: Organic Chemistry I (1)
- Hist011: Deciphering America (1)
- Phil002: Introduction to Ethics (1)

Spring 2019: 5 c.u.

- Phys351: Analytical Mechanics (1)
- Phys360: Statistics, Data Mining, Machine Learning (1)

- Chem242: Organic Chemistry II (1)
- Chem251: Biological Chemistry (1)
- Math314: Advanced Linear Algebra (1)

Fall 2019: 7 c.u.

- Phys361: Electromagnetism I (1)
- Phys401: Thermodynamics (1)
- Phys411: Quantum Mechanics I (1)
- Phys137: Community Physics Initiative (1)
- Chem451: Biological Chemistry I (1)
- Math370: Algebra (1)
- Math410: Complex Analysis (1)