

# CURRICULUM VITAE

W. Zane Billings

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## Contact Information:

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## Education:

Current PhD, Epidemiology and Biostatistics, University of Georgia.

2020 B.S., Biology and Mathematics, Western Carolina University.

## Publications:

- McKay B, Ebell M, Billings WZ, Dale AP, Shen Y, Handel A. Associations between relative viral load at diagnosis and influenza A symptoms and recovery. *Open Forum Infectious Diseases*. 2020; 7(11).

## Teaching experience:

### Lab assistant

Spring 2019 - Spring 2021

I was the lab assistant for MATH 340: Introduction to Scientific Computing at WCU.

- Taught L<sup>A</sup>T<sub>E</sub>X, Excel, Mathematica, MATLAB, and R to students from diverse majors, including mathematics, computer science, engineering, biology, and chemistry.
- Developed hands-on activities for students to complete in and out of class to either facilitate understanding of course topics, or explore applications.
- Assisted students in debugging code during hands-on class time.

### Course tutor

Spring 2017 - Spring 2019

- Tutored several courses at WCU's student tutoring center, including introductory biology, organic chemistry, genetics, evolutionary biology, immunology, and microscopy.
- Worked one-on-one with students to reinforce course content, including working with non-traditional students.
- Adapted course information to the individual learning styles of a diverse client body.
- Led group tutoring and review sessions where I was responsible for assisting several students at once with course material.

## Awards:

- GREAT Fellowship, University of Georgia, 2020 – present.
- Meritorious Winner, COMAP Mathematical Contest in Modeling, 2019.

## Coursework:

- Biology: Advanced Microscopy, Cell Biology, Evolutionary Biology, General Ecology, Molecular Immunology, Protein System Bioinformatics, Biostatistics.
- Math: Linear Algebra, Linear Optimization, Mathematical Modeling, Ordinary Differential Equations, Probability Theory, Scientific Computing, Numerical Analysis, Mathematical Statistics.

**Skills:**

- Responsible Conduct in Research (RCR) certified (CITI Program).
- CRLA certified Level 1 Tutor.
- Programming languages: R, Python, MATLAB.
- Programming tools: Git and Github, Bash terminal.
- Software: Mathematica (Wolfram language), Tableau, NetLogo.
- Presentation:  $\text{\LaTeX}$ , Markdown (and R-Markdown), HTML, and CSS.

**Other:**

OEIS (On-line Encyclopedia of Integer Sequences) Contributions

All of these sequences can be viewed at <https://oeis.org>.

- Author of sequence A319302.
- Author of sequence A309092.
- Wrote Python code and generated a b-file for sequence A110529.