

KAYLA KENDRICKS

Michigan State University | Biosystems and Agricultural Engineering
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EDUCATION

Doctor of Philosophy in Biosystems Engineering
Michigan State University, East Lansing, MI
Advisor: Dr. Jade Mitchell

Expected December 2028

Master of Science in Biosystems Engineering
Michigan State University, East Lansing, MI
Advisor: Dr. Jade Mitchell. GPA: 4.0

Expected June 2026

Bachelor of Science in Chemical Engineering
University of Pittsburgh, Pittsburgh, PA
Minors: Africana Studies - African American Track, Chemistry. GPA: 3.732

April 2024

RESEARCH EXPERIENCE

Michigan State University, Dr. J. Mitchell
Graduate Research Assistant, East Lansing, MI

August 2024 – Present

- Investigated *Bacillus* persistence on various surfaces to find a suitable surrogate for *Bacillus anthracis*. Analyzed *Bacillus* persistence using a beta regression model and applied equivalence testing to compare the persistence of each *Bacillus* species. Both beta regression and equivalence testing used R programming language.
- Examined the inactivation of *Enterococcus faecium* and *Salmonella* to confirm or reject *E. faecium* as a surrogate for *Salmonella* in numerous low-moisture foods. Observed the persistence for both microorganisms when undergoing thermal inactivation using beta regression models and applied equivalence testing to compare the persistence of *Salmonella* to *E. faecium*. All analyses utilized R programming language.
- Established a new dose-response model for *C. botulinum* within quantitative microbial risk assessment (QMRA).

University of Pittsburgh, Dr. J. McKone
Undergraduate Research, Pittsburgh, PA

September 2022 – May 2022

- Constructed electrochemical cells with alkaline and acidic conditions on template-stripped platinum. Analyzed sets of cyclic voltammetry and data to measure electrochemically active surface area (ECSA) and establish the root-cause of contamination during hydrogen evolution on platinum with the use of a potentiostat and Python/MATLAB.

Summer Research Internship (SRI)
University of Pittsburgh, Pittsburgh, PA

May 2021 – July 2021

- Explored the properties, uses, and modifications of sodium alginate. Independently designed an outreach activity with my research findings.

INDUSTRIAL EXPERIENCE

PPG Industry Internship
Intern, Allison Park, PA

May 2023 – August 2023

- Brainstormed ideas and materials to aid in the search for better out-of-oven hardness for certain automotive clear coatings. Implemented a critical method for dry film thickness. Independently formulated clear coatings and facilitated testing on clear coatings such as hardness measurements, humidity resistance, and solvent resistance. Utilized JMP Software and Microsoft Office to establish the measurements of each clear coatings.

PPG Industry Internship
Intern, Huron, OH

May 2022 – August 2022

- Independently organized and regulated manufacturing equipment (pumps, steam traps, pressure safety valves, etc.) used in the plant. Communicated ideas for implementation of ergonomic projects. Designed layouts for sections the plant using AUTOCAD.

TEACHING EXPERIENCE

University of Pittsburgh's Department of Chemistry
Undergraduate Teaching Assistant, Pittsburgh, PA

August 2021 – May 2022

- Collaborated with another student to lead weekly review sessions for groups of 30 students to aid in homework completion and exam preparation for General Chemistry I and II.

National Society of Black Engineers

June 2021 – July 2021

Summer Engineering Experience for Kids (SEEK) Mentor, Pittsburgh, PA

- Taught 65 elementary students how to code and manipulate multiple technologies such as drones and robots.

CERTIFICATIONS

ASABE: Engineering Ethics across Cultures	2025
QPR Suicide Prevention Gatekeeper Program	2025
Quantitative Microbial Risk Assessment Interdisciplinary Vehicle (QMRA IV) Training Program	2025
Safety and Chemical Engineering Certificate Program – Dust Explosions	2024
Safety and Chemical Engineering Certificate Program – Explosion Hazards	2024
Safety and Chemical Engineering Certificate Program – Fire Hazards	2024
Safety and Chemical Engineering Certificate Program – Hazards and Risk: Hazard Identification & Risk Analysis	2024
Safety and Chemical Engineering Certificate Program – Process Safety Ethics: A Brief Introduction	2024
Safety and Chemical Engineering Certificate Program – Toxicological Hazards	2024
Safety and Chemical Engineering Certificate Program – Chemical Reactivity Hazards	2023
Safety and Chemical Engineering Certificate Program – Hazard Recognition	2022
Safety and Chemical Engineering Certificate Program – Minimizing Identifying Process Safety Hazards	2022
Safety and Chemical Engineering Certificate Program – Understanding Hazards & Risk	2022
Safety and Chemical Engineering Certificate Program – Importance of Process Safety	2021
Safety and Chemical Engineering Certificate Program – Introduction to Managing Process Safety Hazards	2021
Safety and Chemical Engineering Certificate Program – Lab Safety	2021

AWARDS

Michigan State University Distinguished Fellowship <i>Recipient</i>	2024-Present
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PRESENTATIONS

- Kendricks, K. & Mitchell, J.** “Quantitative microbial risk assessment: *Clostridium botulinum* in raw honey.” Oral Presentation at Society of Risk Analysis (SRA) Washington, D.C. (December 7 – 11, 2025).
- Kendricks, K. & Mitchell, J.** “A framework for evaluating pathogen and surrogate equivalence and case study: *Bacillus* persistence on various fomites.” Poster Presentation at American Society of Agricultural and Biological Engineers (ASABE) Conference, Toronto, Canada. (July 13 – 16, 2025).
- Kendricks, K. & Mitchell, J.** “Sticky situations with *Clostridium botulinum*: Risk assessment on *Clostridium botulinum* in raw honey.” Oral Presentation at Council of Graduate Students Academic Conference, East Lansing, MI. (February 22, 2025).
- Kendricks, K. & Fullerton-Shirey, S.** “Introduction to sodium alginate and its uses to create polymer worms.” Poster Presentation at National Organization for the Professional Advancements of Chemists and Chemical Engineers (NOBCCChE) Conference, New Orleans, LA. (September 11 – 14, 2023).

MEMBERSHIPS

American Society of Agricultural & Biological Engineers (ASABE)	2025-Present
Association of Environmental Engineering & Science Professors (AEESP)	2025-Present
Society for Risk Analysis (SRA)	2025-Present
Graduate Women in Science (GWIS)	2024-Present
Alliance for Graduate Education & the Professoriate (AGEP)	2024-Present
Biosystems & Agricultural Engineering Graduate Student Advisory Group (BAE GSAG)	2024-Present
Black Graduate Student Association (BGSA)	2024-Present
National Organization for the Professional Advancements of Chemists and Chemical Engineers (NOBCCChE)	2022-Present
Phi Sigma Rho Sorority (PSR)	2022-2024
American Institute of Chemical Engineers (AIChE)	2021-2024
National Society of Black Engineers (NSBE)	2020-2024

PROFESSIONAL SERVICE

Big Brother Big Sister (BBBS) <i>Big</i>	2025-Present
Biosystems & Agricultural Engineering Graduate Student Advisory Group (BAE GSAG) <i>Community Norms Committee Representative</i>	2024-Present

Social Chair

Phi Sigma Rho Sorority (PSR)

2023-2024

National Organization for the Professional Advancements of Chemists and Chemical Engineers (NOBCCChE)

2022-2024

Vice President