

Tamra Legron-Rodriguez Ph.D.

Tamra.Legron-Rodriguez@ucf.edu

University of Central Florida

Department of Chemistry

EDUCATION

Ph.D. Materials Chemistry, University of Central Florida (2013)

- Dissertation: "Remediation of polychlorinated biphenyl (PCB) contaminated building materials using non-metal and activated metal treatment systems"
- Chemistry Education Research: Service learning and guided inquiry in the general chemistry labs

B.S. Forensic Science, University of Central Florida (2008)

- Senior Research: Degradation of TATP with various metal systems
- Fiber Identification Research

ACADEMIC APPOINTMENT

University of Central Florida (2015 – present)

- Chemistry Department Associate Chair: Aug 2021 – present
- Associate Lecturer: Aug 2021 - present
- Lecturer: Aug 2015 – Aug 2021
- Forensic Science B.S. Program Coordinator: Aug 2015 – present. Responsibilities include program planning and assessments, undergraduate advising. Internship Coordinator: Assist students in applying for internships, point of contact for internship agencies during student experience.
- Undergraduate courses taught: Forensic Analysis of Controlled Substances lecture and laboratory, Trace Evidence lecture and laboratory, Forensic Laboratory Quality Assurance and Professional Practice (Quality online course designation), Forensic Science Capstone (Quality online course designation, HIP Integrative Learning Experience course designation)
- Graduate courses taught: Forensic Expert in the Courtroom

University of South Florida, (2014 – 2015)

- Visiting Instructor
- Undergraduate courses taught: General Chemistry I lecture and laboratory, Chemistry for Today (multi-section course coordinator), Uses of Chemical Literature

Rollins College (2013 – 2014)

- Visiting Assistant Professor of Chemistry
- Undergraduate courses taught: General Chemistry I and II laboratories, Organic Chemistry I and II laboratories, Crime Scene Chemistry

University of Central Florida (2008 – 2013)

- Graduate Teaching Assistant
- Service-Learning: Engaging STEM – Corner Lake Middle School and Jones High School
- Undergraduate courses taught: Organic Laboratory Techniques, General Chemistry Laboratory, General Chemistry Discussion/Recitation

AWARDS AND HONORS

College of Sciences (UCF) Inclusive Design Professional Development Award	December 2024
NACADA Global Community for Academic Advising Southeast Region Excellence in Advising - Faculty Advisor Award! (one regional winner)	December 2024
Excellence in Faculty Academic Advising (one university winner)	April 2024
Outstanding Instruction for Successful Course Design, Transformation, or Innovation	April 2024
Chemistry Department Service Award	Dec 2023
2022 UCF AIM High Recognition	Feb 2022, Feb 2023

Excellence in Undergraduate Teaching	Jan 2021
Chemistry Department Professional Development Award	Dec 2020
<i>Science Magazine</i> Prize for Inquiry-Based Instruction (co-winner)	Aug 2013
UCF College of Science Graduate Teaching Assistant of the Year, Honorable Mention	Spring 2012
UCF Writing Across the Curriculum Fellow	Spring 2012
UCF Faculty Center for Teaching and Learning Research Fellow	Fall 2011
UCF Chemistry Department Teaching Assistant of the Year	April 2011

GRANTS AWARDED

Digital Learning Course Redesign Initiative (UCF, internal) \$5,000 Role: Principal Investigator	2020
S-STEM Creating Holistic Advising and Mentoring to Advance Student Success in Physical Sciences (NSF) \$1,999,862 Role: Principal Investigator	2025-2031

PEER-REVIEWED PUBLICATIONS

Corresponding author, †Post-Doc, *Graduate student, ‡ Undergraduate student

BOOK CHAPTERS

(Accepted/In press) **Scanlon, EM**; Kathleen Lugo Charriez, K*; Legron-Rodriguez, T; Saitta, EKH; Chini, J. "Applying Universal Design for Learning in Postsecondary Chemistry Courses: Examples from Practice". In *Inclusive and Accessible Chemistry for Further and Higher Education: Developments and Opportunities for Students with Disabilities*. (Advances in Chemistry Education Series). Royal Society of Chemistry. Royal Society of Chemistry.

Legron-Rodriguez, T. Chapter 13: Generative Learning Strategies and Pre-lecture Assignments in a Flipped Chemistry Classroom. In *Teaching Chemistry with Forensic Science*. ACS Publication, 2019, 233-241.

Fidler, R; Legron, T; **Geiger, C**; Clausen, C; Sigman, M. Chapter 7: Degradation of TATP, TNT, and RDX. In *Environmental Application of Nanoscale and Microscale Mechanically Alloyed Bimetals*. ACS Publication, 2009, 117-134.

BOOK REVIEWER

Chemistry Fundamentals: A Collective Work. UCF Pressbooks. <https://pressbooks.online.ucf.edu/chemistryfundamentals/>

JOURNAL ARTICLES

1. Torres, Z‡; Senespleda, C‡; Muller, K‡; Lemma, A†; **Legron-Rodriguez, T**. A Qualitative Exploration of Belonging and Underlying Concerns in Large Enrollment General Chemistry Courses. *Journal of Chemical Education*. Published online 13 Sept 2025. <https://doi.org/10.1021/acs.jchemed.5c00408>
2. **Lemma, A†**; Legron-Rodriguez, T. No Such Things as Sodium and Chlorine Atoms: A Debate with Copilot. *Journal of Chemical Education*. Published online 25 Aug 2025. <https://pubs.acs.org/doi/10.1021/acs.jchemed.5c00602>
3. **Donnelly, J**; Marcano-Maldonado, P ‡; Legron-Rodriguez, T. Indicators of Team Function in a Large-Enrollment Team-Based Learning General Chemistry Course. *Journal of the Scholarship of Teaching and Learning*.
4. Bechard, C*; Castillo, A‡; Legron-Rodriguez, T; **Lapeyrouse, N**. A Comparative Study of Self-Confidence and Future Outlook among Forensic Science Students. *Journal of Forensic Science Education*. 2025, 7.
5. Sharman, L‡; Chee-Awai, A‡; **Legron-Rodriguez, T**. Exploring Student Perceptions of Engagement and Learning in a Flipped Forensic Chemistry Course. *Journal of Chemical Education*. 2025, 102, 2600-2608. <https://doi.org/10.1021/acs.jchemed.5c00129>
6. Lemma, A†; Torres, Z‡; Senespleda, C‡; Muller, K‡; **Legron-Rodriguez, T**. Sense of Belonging in Large Enrollment General Chemistry Course: Change Over a Semester, Gender and Ethnic Group Differences. *Chemistry Education Research and Practice*. 2025, 26, 748-760. <https://doi.org/10.1039/D5RP00031A>

7. Lemma, A†; Goberville, L‡; Marcano Maldonado, P‡; Donnelly, J; **Legron-Rodriguez, T.** Team-Based Learning in a Senior-Level Forensic Chemistry Course: Team Gains, Contribution to Individual Achievement, and Students' Feelings. *College Teaching*. Published online 17 Jan 2025. <https://doi.org/10.1080/87567555.2025.2450709>
8. Scanlon, E; Legron-Rodriguez, T; Schreffler, J*; Ibadlit, E‡; Vasquez, E; **Chini, J.** Postsecondary Chemistry Curricula and Universal Design for Learning: Planning for Variations in Learners' Abilities, Needs, and Interests. *Chemistry Education Research and Practice*. 2018, 19, 1216-1239.
9. Saitta, E; Legron-Rodriguez, T; **Bowdon, M.** An Inquiry into the Water Around Us. *Science*. 341 (2013) 971-972.
10. Albo, R; Legron, T; Gittings, M‡.; Elie, M; Holland Saitta, E; Sigman, M; **Geiger, C**; Clausen, C. Degradation of Triacetone Triperoxide using Mechanically Alloyed Mg/Pd. *Propellants, Explosives, Pyrotechnics*. 2009, 35 (2), 100-104.

PROCEEDINGS PAPERS

1. Cinque, A‡; Miller, J‡; Legron-Rodriguez, T; Paradiso, J; **Lapeyrouse, N.** Student Perceptions of Adaptive Learning Modules for General Chemistry. *Proceedings of HCI International Conference*. Washington DC, USA. June 29-July 4, 2024.
2. Albo, R; Legron, T; **Geiger, C**; Clausen, C. Development of a Remediation Technology for Energetic Compounds (TNT, RDX, Nitrocellulose, and TATP). *Proceedings of 7th International Battelle Conference: Remediation of Chlorinated and Recalcitrant Compounds*. Monterrey, CA. May 24-27, 2010.

CONFERENCE/WORKSHOP ORGANIZATION

SYMPOSIUMS

1. Legron-Rodriguez, T; Randles, C. Chemistry Education Research General Program Symposium. ACS SERMACS/SWRM, October 26-29, 2025.
2. Baudelet, M; Bridge, C; Hanson, E; Legron-Rodriguez, T. Forensic Science Symposium. ACS SERMACS/SWRM, October 26-29, 2025.
3. Legron-Rodriguez, T; Lapeyrouse, N. Inclusive Practices for Unrepresented groups in STEM, Biennial Conference on Chemical Education, July 28-August 1, 2024.
4. Legron-Rodriguez, T; Donnelly, J. Team-Based Learning: Implementation, Practice, and Evaluation, Biennial Conference on Chemical Education, July 28-August 1, 2024.
5. Legron-Rodriguez, T; Lapeyrouse, N. Inclusive practices for Unrepresented Groups in STEM, Biennial Conference on Chemical Education, July 31-August 4, 2022.

WORKSHOPS

1. Legron-Rodriguez, T; Donnelly, J. Team-Based Learning 101: Giving Structure to Group Work. UCF Summer Faculty Development Conference. Orlando, FL. May 6-8, 2024.
2. Legron-Rodriguez, T; Donnelly, J; Sugar A. Applying Universal Design for Learning to a Team-Based Learning Course. UCF Summer Faculty Development Conference. Orlando, FL. May 8-10, 2023.
3. Legron-Rodriguez, T; Donnelly, J. Leveraging the Intersectionality of Universal Design for Learning and Team-Based Learning. Team-Based Learning Collaborative Conference. Orlando, FL. March 1-14, 2023.
4. Lapeyrouse, N.; Legron-Rodriguez, T., Integrating Universal Design for Learning when developing an online course. Umeå University, Sweden, May 16, 2023.

CONFERENCE PRESENTATIONS (TALKS)

Presenter(s), †Post-Doc, *Graduate student, ‡ Undergraduate student

1. Chee-Awai, A‡; Sharman, L‡; Legron-Rodriguez, T. Engagement and motivation: Perspectives of disabled students in flipped organic chemistry and biochemistry courses. American Chemical Society Florida Annual Meeting and Exposition. Innisbrook, FL. Sept. 12-14, 2025.

2. Disney, C†; Dennis, D; Legron-Rodriguez, T. Evaluating the effectiveness of a sustainable, hands-on activity to teach experimental error. American Chemical Society Florida Annual Meeting and Exposition. Innisbrook, FL. Sept. 12-14, 2025.
3. Khogali, F†; Rios, G†; Legron-Rodriguez, T. Evaluating item writing flaws in undergraduate MCQs: A comparative analysis of publisher- and instructor-generated items. American Chemical Society Florida Annual Meeting and Exposition. Innisbrook, FL. Sept. 12-14, 2025.
4. Barnett, M†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Student's STEM identity: Exploring how undergraduate STEM majors perceive their majors. *Raymond N. Castle Student Research Conference*. Tampa, FL. April 26, 2025.
5. Barnett, M†; Lindquist, A†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Student's STEM identity: Exploring how undergraduate STEM majors perceive their majors. ACS Spring 2025 National Meeting & Expo, San Diego, CA. March 23-27, 2025.
6. Bechard, C*; Ellis, J†; Legron-Rodriguez, T; Lapeyrouse, N. External validation: Insight into the affirmation and reconsideration of commitment of organic chemistry students within the PISQ-5d identity statuses. ACS Spring 2025 National Meeting & Expo, San Diego, CA. March 23-27, 2025.
7. Ellis, J†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Exploring students' relationship to their STEM major. ACS Spring 2025 National Meeting & Expo, San Diego, CA. March 23-27, 2025.
8. Lindquist, A†; Barnett, M†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Understanding the factors that influence STEM students' relationship with their major and future profession. ACS Spring 2025 National Meeting & Expo, San Diego, CA. March 23-27, 2025.
9. Disney, CL†; Dennis, D; Legron-Rodriguez, T. Identifying perceived errors: Assessing student responses in a water analysis lab experiment. Southeast Regional Meeting of the American Chemical Society. Atlanta, GA. October 23-26, 2024.
10. Lemma, A†; Legron-Rodriguez, T. No such things as sodium and chlorine atoms in sodium chloride: Debating ontology and misleading expressions with Copilot. Southeast Regional Meeting of the American Chemical Society. Atlanta, GA. October 23-26, 2024.
11. Lapeyrouse, N; Legron-Rodriguez, T; Paradiso, J. Adding value to student learning without any of the extra cost: personalizing learning & instruction with Canvas Mastery Paths. UCF Digital Learning Day. September 27, 2024.
12. Barnett, M†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Undergraduate students' self-perception regarding their STEM professional futures. Biennial Conference on Chemical Education. Lexington, KY. July 28– August 1, 2024.
13. Bechard, C*; Castillo, A†; Ellis, J†; Legron-Rodriguez, T; Lapeyrouse, N. Application of the PISQ-5d survey: Comparing and contrasting written responses of PISQ-5d questions based on STEM Identity. Biennial Conference on Chemical Education. Lexington, KY. July 28– August 1, 2024.
14. Bechard, C*; Castillo, A†; Ellis, J†; Legron-Rodriguez, T; Lapeyrouse, N. STEM Identity: How students' see themselves as future STEM graduates. Biennial Conference on Chemical Education. Lexington, KY. July 28– August 1, 2024.
15. Castillo, A†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Analyzing potential factors that can impact students' professional identity in forensic science. Biennial Conference on Chemical Education. Lexington, KY. July 28– August 1, 2024.
16. Chee-Awai, A†; Sharman, L†; Legron-Rodriguez, T. Exploring students' perceived engagement in a flipped-classroom biochemistry course. Biennial Conference on Chemical Education. Lexington, KY. July 28– August 1, 2024.
17. Donnelly, J; Marcano Maldonado, P†; Goberville, L†; Legron-Rodriguez, T. Indicators of team function in a large enrollment Team-Based Learning general chemistry course. Biennial Conference on Chemical Education. Lexington, KY. July 28– August 1, 2024.
18. Ellis, J†; Bechard, C*; Castillo, A†; Legron-Rodriguez, T; Lapeyrouse, N. Exploring students' professional identity to their STEM major. Biennial Conference on Chemical Education. Lexington, KY. July 28– August 1, 2024.
19. Legron-Rodriguez, T; Goberville, L†; Marcano Maldonado, P†; Donnelly, J. Exploring team composition, function, and performance in an upper-level, Team-Based Learning forensic chemistry course. Biennial Conference on Chemical Education. Lexington, KY. July 28– August 1, 2024.

20. Lemma Gurmu, A†; Keila Muller†, Torres, Z†; Senespleda, C†; Legron-Rodriguez, T. Students' senses of belongingness and implications for improving classroom instruction, diversity, equity, and inclusion in general chemistry courses. Biennial Conference on Chemical Education. Lexington, KY. July 28– August 1, 2024.
21. Lindquist, A†; Barnett, M†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Investigating external factors that impact STEM student's relationship with their major and future profession. Biennial Conference on Chemical Education. Lexington, KY. July 28– August 1, 2024.
22. Sharman, L†; Chee-Awai, A†; Legron-Rodriguez, T. Investigating student perceptions of learning in the flipped biochemistry course. Biennial Conference on Chemical Education. Lexington, KY. July 28– August 1, 2024.
23. Torres, Z†; Senespleda, C†; Keila Muller†, Legron-Rodriguez, T. Student reflections of their sense of belonging in general chemistry courses. Biennial Conference on Chemical Education. Lexington, KY. July 28– August 1, 2024.
24. Miller, J†; Cinque, A†; Legron-Rodriguez, T; Paradiso, J; Lapeyrouse, N. "Student perceptions of adaptive learning modules for general chemistry" Proceedings of HCI International Conference. Washington DC, USA. June 29-July 4, 2024.
25. Miller, J†; Cinque, A†; Paradiso, J; Lapeyrouse, N; Legron-Rodriguez, T. Examining student perspectives of adaptive learning modules in general chemistry. American Chemical Society Florida Annual Meeting and Exposition. Innisbrook, FL. May 30-July 1, 2024.
26. Muller, K†; Senespleda, C†; Torres, Z†; Legron-Rodriguez, T. Exploring sense of belonging in general chemistry courses through student reflections. American Chemical Society Florida Annual Meeting and Exposition. Innisbrook, FL. May 30-July 1, 2024.
27. Senespleda, C†; Torres, Z†; Muller, K†; Legron-Rodriguez, T. Unraveling belonging uncertainty: Investigating student perspectives on STEM education. American Chemical Society Florida Annual Meeting and Exposition. Innisbrook, FL. May 30-July 1, 2024.
28. Barnett, M†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Undergraduate student's STEM identity: Students perception of their future profession. ACS Spring 2024 National Meeting & Expo, New Orleans, LA. March 17th-21st, 2024.
29. Bechard, C*; Castillo, A†; Legron-Rodriguez, T; Lapeyrouse, N. Examining end-of-semester student perspectives of adaptive learning modules. ACS Spring 2024 National Meeting & Expo, New Orleans, LA. March 17th-21st, 2024.
30. Donnelly, J; Marcano Maldonado, P†; Goberville, L†; Legron-Rodriguez, T. Indicators of team function in a large-enrollment Team-Based Learning general chemistry course. ACS Spring 2024 National Meeting & Expo, New Orleans, LA. March 17-21, 2024.
31. Ellis, J†; Castillo, A†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. STEM identity: How students' see themselves as future STEM graduates. ACS Spring 2024 National Meeting & Expo, New Orleans, LA. March 17-21, 2024.
32. Goberville, L†; Marcano Maldonado, P†; Donnelly, J; Legron-Rodriguez, T. Investigating team function and performance in a senior-level, Team-Based Learning course. ACS Spring 2024 National Meeting & Expo, New Orleans, LA. March 17-21, 2024.
33. Miller, J†; Cinque, A†; Lapeyrouse, N; Legron-Rodriguez, T. Examining end-of-semester student perspectives of adaptive learning modules. ACS Spring 2024 National Meeting & Expo, New Orleans, LA. March 17-21, 2024.
34. Senespleda, C†; Torres, Z†; Muller, K†; Legron-Rodriguez, T. Do students feel they belong? Measuring student sense of belonging in general chemistry. ACS Spring 2024 National Meeting & Expo, New Orleans, LA. March 17-21, 2024.
35. Torres, Z†; Senespleda, C†; Muller, K†; Legron-Rodriguez, T. Analyzing the overarching themes related to students' sense of belonging in the context of general chemistry. ACS Spring 2024 National Meeting & Expo, New Orleans, LA. March 17-21, 2024.
36. Legron-Rodriguez, T. The Use of instructional strategies in forensics education: Results from a national survey of post-secondary forensic science educators. 76th American Academy of Forensic Sciences Conference. Denver, CO. February 19-24, 2024.
37. Castillo, A†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Investigating potential factors that can impact students' professional identities in forensics. 76th American Academy of Forensic Sciences Conference. Denver, CO. February 19-24, 2024.

38. Miller, J†; Cinque, A†; Lapeyrouse, N; Legron-Rodriguez, T; Examining student perspectives of Canvas Mastery Path adaptive learning modules. Southeast Regional Meeting of the American Chemical Society. Durham, NC. October 25-28, 2023.
39. Cinque, A†; Miller, J†; Legron-Rodriguez, T; Lapeyrouse, N; Student feedback on their experience using Mastery Paths in general chemistry. Southeast Regional Meeting of the American Chemical Society. Durham, NC. October 25-28, 2023.
40. Cinque, A†; Miller, J†; Legron-Rodriguez, T; Lapeyrouse, N; Students' perception of adaptive learning modules for general chemistry. American Chemical Society Fall National Meeting. San Francisco, CA. August 13-17, 2023.
41. Muller, K†; Demeter, A†; Donnelly, J; Legron-Rodriguez, T; Investigating students' sense of belonging in general chemistry courses with varied instructional styles. 99th American Chemical Society Florida Annual Meeting and Exposition. Innisbrook, FL. June 1-3, 2023.
42. Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Investigating changes in undergraduate students' identity statuses using the PISQ-5D survey. National Meeting of the American Chemical Society. Virtual. March 26-30, 2023.
43. Castillo, A†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Exploring potential factors that can impact students' professional identity in STEM. National Meeting of the American Chemical Society. Virtual. March 26-30, 2023.
44. Lopez-Castilla, C†; Brackett, M†; Legron-Rodriguez, T; Lapeyrouse, N. Investigation of how individuals are represented in college general chemistry textbooks. National Meeting of the American Chemical Society. Indianapolis, IN. March 26-30, 2023.
45. Legron-Rodriguez, T; Randles, C. Using the science teachers' assessment literacy model as a framework for implementing specifications grading in a senior-level forensic laboratory quality assurance and professional practices course. 75th American Academy of Forensic Sciences Conference. Orlando, FL. February 13-18, 2023.
46. Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Student responses to a modified PISQ-5D survey: How undergraduate students in chemistry courses relate to being a future professional in their field. 98th American Chemical Society Florida Annual Meeting and Exposition. Innisbrook, FL. August 4-7, 2022.
47. Legron-Rodriguez, T; Donnelly, J. Team-based learning large and small: Implementation across class sizes. 27th Biennial Conference on Chemical Education. West Lafayette, IN. July 31- August 4, 2022.
48. Legron-Rodriguez, T; Randles, C. Implementation of specifications grading in an online forensic science quality assurance course. The 27th Biennial Conference on Chemical Education. West Lafayette, IN. July 31-August 4, 2022.
49. Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Investigating STEM student responses to the PISQ-5D survey: A mixed methods approach. 27th Biennial Conference on Chemical Education. West Lafayette, IN. July 31 – August 4, 2022.
50. Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. STEM Professional Identities: Investigating how students at a Hispanic- serving institute identify. 27th Biennial Conference on Chemical Education. West Lafayette, IN. July 31 – August 4, 2022.
51. Donnelly, J; Lapeyrouse, N; Rex, M; Legron-Rodriguez, T; Paradiso, J. Adaptation and adoption of OER in introductory chemistry courses. AAC&U 2022 Capital PKAL Regional Network Conference. March 25, 2022.
52. Legron-Rodriguez, T; Scanlon, E; Schreffler, J*; Ibadlit, E†; Vasquez, E; Chini, J. Examining the accessibility of curricular materials for general chemistry using the Universal Design for Learning (UDL) framework. 25th Biennial Conference on Chemical Education. South Bend, IN. July 29 – August 2, 2018.
53. Legron-Rodriguez, T. Pedagogy Mashup: Implementation of Team-Based Learning, a flipped approach, and distributed practice strategies in a forensic chemistry course. 25th Biennial Conference on Chemical Education. South Bend, IN. July 29 – August 2, 2018.
54. Legron-Rodriguez, T. Using the Universal Design for Learning framework to design curricula that supports all learners. 94th American Chemical Society Florida Annual Meeting and Exposition. Innisbrook, FL. May 3-5, 2018.
55. Legron-Rodriguez, T. Implementation of Team-Based Learning: Pitfalls and triumphs. Sunshine State Teaching and Learning Conference. St. Pete Beach, FL. January 31- February 2, 2018.
56. Legron-Rodriguez, T. Improving STEM education (panel). Sunshine State Teaching and Learning Conference. St. Pete Beach, FL. February 15-17, 2017.

57. Legron-Rodriguez, T; Clausen, C; Yestrebsky, C. Laboratory studies for the development of and in situ remediation technology for polychlorinated biphenyl contaminated concrete. 89th American Chemical Society Florida Annual Meeting and Exposition. Innisbrook, FL. May 9-11, 2013.
58. Legron-Rodriguez, T; Saitta, E. Starting a WAC project in a chemistry department: A case study. 11th International Writing Across the Curriculum Conference. Savannah, GA. June 7-9, 2012.
59. Zemliansky, P; Owens, L; Legron-Rodriguez, T. The WAC fellows program: A catalyst for developing writing-related learning outcomes across the disciplines. UCF Summer Faculty Development Conference. Orlando, FL. May 1-4, 2012.
60. Saitta, E; Legron-Rodriguez, T; Bowdon, M. Synchronous communication in service-learning: A comparison of the technologies used to aid in university/K-12 partnerships. 67th Southwest Regional Meeting of the American Chemical Society (ACS). Austin, TX. November 8-12, 2011.
61. Legron-Rodriguez, T; Saitta, E; Bowdon, M. Developing student attributes through guided inquiry and service-learning in the freshman chemistry laboratory. 67th Southwest Regional Meeting of the American Chemical Society (ACS). Austin, TX. November 9-12, 2011.
62. Albo, R; Legron, T; Geiger, C; Clausen, C. Development of a remediation technology for energetic compounds (TNT, RDX, nitrocellulose, and TATP). 7th International Battelle Conference: Remediation of Chlorinated and Recalcitrant Compounds. Monterrey, CA. May 24-27, 2010.
63. Albo, R; Legron, T; Geiger, C; Clausen, C. Reductive metal systems for the degradation of energetic materials. Florida Society of Environmental Analysts (FSEA) Semi-Annual Meeting. Palm Beach, FL. October 28-30, 2009.

CONFERENCE PRESENTATIONS (POSTER)

Presenter(s), †Post-Doc, *Graduate student, ‡ Undergraduate student

1. Lemma, A†; Legron-Rodriguez, T. Revisiting Sense of Belonging in General Chemistry Courses: Validation of and Insights from a New Survey. Gordon Research Conference: Chemistry Education Research and Practice. Bates College, Lewiston, ME. July 6-11, 2025.
2. Barnett, M‡; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. STEM Identity: Undergraduate students' self-perception of their STEM major. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2025.
3. Bechard, C*; Ellis, J; Legron-Rodriguez, T; Lapeyrouse, N. External validation: A look into the affirmation and reconsideration of commitment factors from the PISQ-5d responses of organic chemistry students. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2025.
4. Chee-Awai, A‡; Sharman, L‡; Legron-Rodriguez, T. A mixed-methods study to investigate student perceptions of a flipped forensic chemistry course. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2025.
5. Disney, C‡; Dennis, D; Legron-Rodriguez, T. Investigating student understanding of laboratory errors and instrument calibration. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2025.
6. Ellis, J‡; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. STEM identity: Factors influencing STEM identity among undergraduate students. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2025.
7. Khogali, F‡; Rios, G‡; Legron-Rodriguez, T. Evaluation of multiple-choice questions from publishers used in introduction to forensic science using item writing flaws evaluation instrument. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2025.
8. Lindquist, A‡; Barnett, M‡; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Exploring external factors that impact STEM students' relationship with their majors and STEM identities. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2025.
9. Morales, K‡; Nguyen, B‡; Donnelly, J; Legron-Rodriguez, T. Shifting student expectations in a Process Oriented Guided Inquiry Learning (POGIL) physical chemistry course. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2025.
10. Richards, A‡; Donnelly, J; Legron-Rodriguez, T. A qualitative analysis of the effect of diversity on group cohesion in a general chemistry course. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2025.

11. Rios, G; Khogali, F; Legron-Rodriguez, T. Analyzing instructor-designed multiple-choice questions in introduction to forensic sciences courses using the item writing flaws evaluation instrument. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2025.
12. Disney, C; Dennis, D; Legron-Rodriguez, T. Investigating student understanding of laboratory errors and instrument calibration. Florida Undergraduate Research Conference. Tampa, FL. February 14-15, 2025.
13. Ellis, J; Bechard, C; Castillo, A; Legron-Rodriguez, T; Lapeyrouse, N. Factors influencing STEM identity among undergraduate students. Florida Undergraduate Research Conference. Tampa, FL. February 14-15, 2025.
14. Khogali, F; Rios, G; Legron-Rodriguez, T. Evaluation of multiple-choice questions from publishers used in introduction to forensic science using item writing flaws evaluation instrument. Florida Undergraduate Research Conference. Tampa, FL. February 14-15, 2025.
15. Lindquist, A; Barnett, M; Bechard, C; Legron-Rodriguez, T; Lapeyrouse, N. Investigating external factors influence on STEM students' relationship with their major and future profession. Florida Undergraduate Research Conference. Tampa, FL. February 14-15, 2025.
16. Rios, G; Khogali, F; Legron-Rodriguez, T. Item writing flaws evaluation instrument to assess instructor's multiple choice questions in forensic science courses. Florida Undergraduate Research Conference. Tampa, FL. February 14-15, 2025.
17. Barnett, M; Bechard, C; Legron-Rodriguez, T; Lapeyrouse, N. Undergraduate student's STEM identity: Self perception of future professionals. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2024.
18. Bechard, C; Ellis, J; Castillo, A; Legron-Rodriguez, T; Lapeyrouse, N. STEM identity: How students' see themselves as future STEM graduates. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2024.
19. Castillo, A; Bechard, C; Legron-Rodriguez, T; Lapeyrouse, N. Examining factors that can impact students' professional identity in forensic science. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2024.
20. Chee-Awai, A; Sharman, L; Legron-Rodriguez, T. Investigating students' perceived engagement in flipped biochemistry courses. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2024.
21. Ellis, J; Bechard, C; Castillo, A; Legron-Rodriguez, T; Lapeyrouse, N. STEM identity: How students' see themselves as future STEM graduates. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2024.
22. Goberville, L; Marcano Maldonado, P; Donnelly, J; Legron-Rodriguez, T. Team-Based Learning in chemistry: Exploring team function and performance. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2024.
23. Lindquist, A; Barnett, M; Bechard, C; Legron-Rodriguez, T; Lapeyrouse, N. Exploring factors that impact STEM students relationship with their majors. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26th-27th, 2024.
24. Marcano Maldonado, P; Goberville, L; Legron-Rodriguez, T; Donnelly, J. Team composition and performance in a large-enrollment Team-Based Learning (TBL) introductory chemistry course. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2024.
25. Miller, J; Cinque, A; Lapeyrouse, N; Legron-Rodriguez, T. Students' end-of-semester perspectives on adaptive learning modules. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2024.
26. Morales, K; Legron-Rodriguez, T; Donnelly, J. An analysis of the change of students expectations in a reformed physical chemistry course. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2024.
27. Senespleda, C; Torres, Z; Muller, K; Legron-Rodriguez, T. Do students feel they belong? Measuring student sense of belonging in general chemistry. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2024.
28. Sharman, L; Chee-Awai, A; Legron-Rodriguez, T. Exploring student perceptions of learning in flipped biochemistry courses. University of Central Florida Scholar Symposium. Orlando, FL. March 26-27, 2024.

29. Torres, Z†; Senespleda, C†; Muller, K†; Legron-Rodriguez, T. Qualitative analysis of students' sense of belonging in general chemistry. University of Central Florida Student Scholar Symposium. Orlando, FL. March 26-27, 2024.
30. Chee-Awai, A†; Sharman, L†; Legron-Rodriguez, T. Investigating the effect flipped classroom structure has on perceived student engagement in a post-secondary forensic science course. 76th American Academy of Forensic Sciences Conference. Denver, CO. February 19-24, 2024.
31. Sharman, L†; Chee-Awai, A†; Legron-Rodriguez, T. Investigating student perceptions of learning in the flipped classroom setting within a forensic science course. 76th American Academy of Forensic Sciences Conference. Denver, CO. February 19-24, 2024.
32. Barnett, M†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Undergraduate students' STEM identity: Self perception of future professionals using a deep learning approach. Florida Undergraduate Research Conference. Jacksonville, FL. February 16-17, 2024.
33. Ellis, J†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. STEM identity: How students' see themselves as future STEM graduates. Florida Undergraduate Research Conference. Jacksonville, FL. February 16-17, 2024.
34. Goberville, L†; Marcano Maldonado, P†; Donnelly, J; Legron-Rodriguez, T. Team-Based Learning in chemistry: Exploring team function and performance. Florida Undergraduate Research Conference. Jacksonville, FL. February 16-17, 2024.
35. Marcano Maldonado, P†; Goberville, L†; Legron-Rodriguez, T; Donnelly, J. Team composition and performance in a large-enrollment Team-Based Learning (TBL) introductory chemistry course. Florida Undergraduate Research Conference. Jacksonville, FL. February 16-17, 2024.
36. Miller, J†; Cinque, A†; Lapeyrouse, N; Legron-Rodriguez, T. Students' end-of-semester perspectives on adaptive learning modules. Florida Undergraduate Research Conference. Jacksonville, FL. February 16-17, 2024.
37. Morales, K†; Legron-Rodriguez, T; Donnelly, J. An analysis of the change of students expectations in a reformed physical chemistry course. Florida Undergraduate Research Conference. Jacksonville, FL. February 16-17, 2024.
38. Senespleda, C†; Torres, Z†; Muller, K†; Legron-Rodriguez, T. Do Students feel they belong? Measuring student sense of belonging in general chemistry. Florida Undergraduate Research Conference. Jacksonville, FL. February 16-17, 2024.
39. Torres, Z†; Senespleda, C†; Muller, K†; Legron-Rodriguez, T. Qualitative analysis of students' sense of belonging in general chemistry. Florida Undergraduate Research Conference. Jacksonville, FL. February 16-17, 2024.
40. Chee-Awai, A†; Sharman, L†; Legron-Rodriguez, T. Exploring perceived student engagement in a flipped classroom, senior-level forensic chemistry course. Southeast Regional Meeting of the American Chemical Society. Durham, NC. October 25-28, 2023.
41. Sharman, L†; Chee-Awai, A†; Legron-Rodriguez, T. Student perceptions of learning in a senior-level flipped forensic chemistry course. Southeast Regional Meeting of the American Chemical Society. Durham, NC. October 25-28, 2023.
42. Torres, Z†; Muller, K†; Legron-Rodriguez, T; Identifying themes of students' sense of belonging in general chemistry. Southeast Regional Meeting of the American Chemical Society. Durham, NC. October 25-28, 2023.
43. Harris, C†; Legron-Rodriguez, T. From capstone to overpass: The bridge between research in theory and research in practice. University of Central Florida High Impact Practice Student Showcase. April 19, 2023.
44. Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Investigating changes in undergraduate students' identity statuses using the PISQ-5D survey. National Meeting of the American Chemical Society (ACS Sci-Mix). Virtual. March 26-30, 2023.
45. Castillo, A†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Exploring potential factors that can impact students' professional identity in STEM. National Meeting of the American Chemical Society (ACS Sci-Mix). Virtual. March 26-30, 2023.
46. Lopez-Castilla, C†; Brackett, M†; Legron-Rodriguez, T; Lapeyrouse, N. Investigation of how Individuals are represented in college general chemistry textbooks. National Meeting of the American Chemical Society (ACS Sci-Mix). Indianapolis, IN. March 26-30, 2023.
47. Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Examining how undergraduate students' identity status may change in a semester using the PISQ-5D Questionnaire. 2023 University of Central Florida Student Scholar Symposium. March 27-28, 2023.

48. Castillo, A†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Exploring potential factors that can impact students' professional identity in forensic science. University of Central Florida Student Scholar Symposium. March 27-28, 2023.
49. Guillen, G†; Legron-Rodriguez, T. Investigating student perceptions of flipped classrooms in chemistry. University of Central Florida Student Scholar Symposium. March 27-28, 2023.
50. Kooner, S†; Legron-Rodriguez, T; Donnelly, J. Analysis of an application of the electronic notebook in higher educational settings. University of Central Florida Student Scholar Symposium. March 27-28, 2023.
51. Muller, K†; Legron-Rodriguez, T. Exploring student sense of belonging in chemistry courses. University of Central Florida Student Scholar Symposium. March 27-28, 2023.
52. Castillo, A†; Bechard, C*; Legron-Rodriguez, T; Lapeyrouse, N. Exploring potential factors that can impact students' professional identity in forensic science. 75th American Academy of Forensic Sciences Conference. Orlando, FL. February 13-18, 2023.
53. Legron-Rodriguez, T. Putting forensic standards into practice: From guided investigations to project creation and evaluation. AAC&U 2022 Ohio PKAL Fall Regional Conference. Virtual. October 29, 2022.
54. Bechard, C*; Castillo, A†; Legron-Rodriguez, T; Lapeyrouse, N. Professional STEM identity: Exploring how students identify within their profession and factors that impact it. 73rd Southeast Regional Meeting of the American Chemical Society. San Juan, PR. October 19-22, 2022.
55. Bechard, C*; Legron-Rodriguez, T; and Lapeyrouse, N. Investigating STEM student responses to the PISQ-5D survey: A mixed methods approach. 2022 UCF Student Scholar Symposium. March 30-31, 2022.
56. Legron-Rodriguez, T. Development and implementation of senior capstone ePortfolios. Florida Online Innovation Summit. Virtual. February 23-24, 2022.
57. Legron-Rodriguez, T; Yestrebsky, C. Development of an *in-situ* remediation technology for PCB contaminated concrete. University of Central Florida Graduate Research Forum. Orlando, FL. April 2, 2013.
58. Legron-Rodriguez, T; Gerszuny, A†; Yestrebsky, C. Development of *in-situ* degradation technologies for chlordane residues. 49th Annual Florida Pesticide Residue Workshop. St. Pete Beach, FL. July 15-18, 2012.
59. Gerszuny, A†; Legron-Rodriguez, T; Yestrebsky, C. Degradation of chlordane using magnesium and acidified alcohol. University of central Florida Showcase of Undergraduate Research Excellence. Orlando, FL. April 5, 2012.

RESEARCH MENTORING AND SUPERVISION

POST-DOCTORAL MENTEE

Active:

2024-present. Abayneh Lemma, Ph.D. – Students' Sense of Belonging, AI for Chemistry Education, Implementation and Evaluation of Team-Based Learning.

UNDERGRADUATE RESEARCH STUDENTS

Active:

2023-present. Zamira Torres (Biotechnology BS) – Students' sense of belonging in chemistry

2023-present. Amanda Chee-Awai (Chemistry BS) – Student perceptions of the flipped classroom

2024-present. Charlotte Gillis (Biomedical Sciences BS) – Laboratory experiments for forensic chemistry

2024-present. Fatima Khogali (Biomedical Sciences BS) – Evaluation of assessment tools

2024-present. Gabrielle Rios (Biomedical Sciences BS) – Evaluation of assessment tools

Graduated:

2023-present. Lacey Sharman (Biomedical Sciences BS) – Student perceptions of flipped classroom

2023-2024. Camila Senespleda (Biomedical Sciences BS) – Student sense of belonging in chemistry

2023-2024. Linne Goberville (Health Sciences BS) – Students performance Team-Based Learning courses

2023-2024. Jennifer Miller (Biomedical Sciences BS) – Use of mastery challenge adaptative learning modules

2022-2024. Keila Muller (Psychology BS) – Student sense of belonging in chemistry

2022-2023. Guadalupe Guillen (Chemistry BS) – Student perceptions of flipped classroom learning

2022. Scott Mooney (Forensic Science BS) – Evaluating a Chemistry OER utilizing the UDL framework

2017. Elkin Howard (Forensic Science BS) – Technical and soft skills of B.S. forensic scientists

STUDENT AWARDS

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|---|------------|
| • Best Poster, UCF Student Scholar Symposium: Amanda Chee-Awai | March 2025 |
| • HCII Conference Travel Award: Jennifer Miller | March 2024 |
| • Best Poster, UCF Student Scholar Symposium: Camila Senespleda | March 2024 |
| • ACS Travel Award: Keila Muller | March 2023 |

DISSERTATION COMMITTEES

Active:

2021-present. Cameron Bechard (Chemistry; Prof. Nicole Lapeyrouse)

2022-present. Kathleen Lugo (Chemistry; Prof. Erin Saitta)

2025- present. Jarah Dreamerson (Chemistry; Prof. Erin Saitta)

Graduated:

2020-2023. AJ Sona, 2023 (Chemistry; Prof. Erin Saitta)

2018-2021. Ashley Geraets, 2021 (Chemistry; Prof. Erin Saitta)

2016-2018. Adibah Almutairi, 2018 (Chemistry; Prof. Cherie Yestrebsky)

2016-2018. Amal Mogharbel, 2018 (Chemistry; Prof. Cherie Yestrebsky)

2016-2018. Roaa Mogharbel, 2018 (Chemistry; Prof. Cherie Yestrebsky)

HONORS UNDERGRADUATE THESIS (HUT) COMMITTEES

Active:

2023-present. Kevin Morales (Chemistry; Prof. Julie Donnelly)

2025- present. Charabelle Handfield (Chemistry; Prof. Nicole Lapeyrouse)

UNIVERSITY, COLLEGE, AND DEPARTMENT SERVICE

College of Sciences Dean's Advisory Council	Fall 2024-present
Central Florida Regional Chemistry Curriculum Alignment Committee	Spring 2023-present
Chemistry Department I/L promotion development committee, Chair	Spring 2022
Chemistry Department Engagement and Retention Committee	2021 – present
Chemistry Department: Forensics Teaching Division Committee, Chair	2020 – present
Faculty Advisor to the Forensic Science Association	2016 – present
Chemistry Department Undergraduate Curriculum Committee (Chair 2015-2021)	2015 – present
Faculty Senate (Senator)	Fall 2021-Spring 2023
Faculty Senate Personnel Committee	2021 – present
College of Sciences Diversity, Equity, and Inclusion Action Team	2022 – present
HIP Course Designation Committee	2018 – 2022
Student Perception of Instruction Task Force	2019-2021
Chemistry Department Search Committees	2017-present
Faculty Search (7 total, 3 as chair); Dept Chair (2 total); Staff Search (3 total, 1 as chair)	
UCF Quality Enhancement Plan Advisory Board	2017-2019
UCF General Education Course Innovation Fellow	2018
University Undergraduate Course Review Committee	2017-2019
UCF Student Scholar Symposium (Showcase of Undergraduate Research) Judge	2017-2019, 2022-2025
Graduate Research Forum Judge	2017
Helmsley Foundation Faculty Learning Cohort	2015-2016

PROFESSIONAL SERVICE AND MEMBERSHIP

Council on Forensic Science Education	2021 – present
Invited Reviewer, Chemistry Education Research and Practice	2019 – present
Invited Reviewer, Journal of Chemical Education	2022 – present
Invited Reviewer, Journal of Forensic Science Education	2024 – present
NACADA National Academic Advising Association	2024 – present

COMMUNITY SERVICE AND OUTREACH

UCF STEM Day	Fall/Spring 2016-2025
Fun with Forensic Science Event Supervisor	
Lake Mary High School – Law Day guest speaker	January 2023
Florida Science Olympiad (K-12)	2017, 2018, 2019
State Tournament, Forensic Science Event Supervisor	2017
Regional Tournament, Forensic Science Event Supervisor	
Central Florida Boy Scout Jamboree	December 2017
Sunlake High School Career Day guest speaker	October 2015
Orange County Science Fair /Science Exposition Judge (K-12)	February 2014
AP College Board Laboratory Consultant	2013, 2014
EXCEL Applications to Calculus I Guest Speaker	2009-2012
OCTET Chemistry Olympiad Laboratory Workshop	March 2012
GO Bowl (GO GK-12) Judge	April 2009

PROFESSIONAL DEVELOPMENT

Chemical Education Conference	July 2025
NACADA Global Advising – Region 4 Conference	April 2025
AI Fundamentals for Faculty (6 weeks)	Spring 2025
Neurodiversity in Higher Education Learning Community	Spring 2024
Team-Based Learning Collaborative Conference	March 2023
Current Trends in Seized Drug Analysis Symposium	Jan 2021, 2022, 2023, 2025
Current Trends in Forensic Toxicology	June 2021, 2022
Women’s Mentoring Community	Fall 2020
Personalized Adaptive Learning Certification (PAL 6000)	Summer 2020
Zoom Essentials Certification	May 2020
Teaching in Active Learning Spaces	Spring 2019
Faculty Development Conference (FCTL)	Dec 2015; May, Dec 2016;
University of Central Florida – Orlando, FL	May, Dec 2017; May, Dec 2018; May 2019; Dec 2020; May, Dec 2021; May, Dec 2022; May 2023; May 2024; May 2025
Biennial Conference of Chemical Education	
• University of Notre Dame – South Bend, IN	July 2018
• Purdue University	July 2022
• University of Kentucky	July 2024

American Academy of Forensic Sciences	
• Baltimore, MD	Feb 2019, 2025
• Seattle, WA	Feb 2018, Feb 2022
• Orlando, FL	Feb 2023
• Denver, CO	Feb 2024
Non-Tenure Earning Faculty Community	2018
Quality Enhancement Plan Course Designation Workshop	Spring 2018
Sunshine State Teaching and Learning Conference – <i>St. Pete, FL</i>	2017, 2018
Florida Forensic Science Conference – <i>Orlando, FL</i>	Oct 2017
Active Learning in STEM Classes Big and Small	June 2017
Quality Enhancement Plan ePortfolio Bootcamp Program	June 2017
Leica Microscopy Workshop for Teaching	March 2017
Instructor/Lecturer Excellence Program Certification	Spring 2017
Online Course Development Certification (IDL 6543)	Spring 2016
Faculty Certification in Online Teaching (TO 101)	Summer 2014
Preparing Tomorrow's Faculty	Summer 2012
Writing Across the Curriculum	Spring 2012