3 UCI professors named in Orange County Business Journal’s Women in STEM list

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Professors Kimberly Edwards, Amanda Holton and Renee Link were recognized by the Orange County Business Journal for their impact on STEM fields in Orange County.

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UCI

The Orange County Business Journal named 42 women who have impacted STEM fields in Orange County. The list recognizes three outstanding faculty from the UCI School of Physical Sciences.

Kimberly Edwards, Professor of Teaching

“Kimberly Edwards, Professor of Teaching in Chemistry at UC Irvine, has dedicated her career to providing high quality laboratory experiences for students at all levels. Professor Edwards has revolutionized the general chemistry laboratory curriculum at UC Irvine by creating courses based in Argument Driven Inquiry (ADI). Students in an ADI course are first introduced to an experimental technique through a traditional lab procedure. Then student teams use their understanding of the technique to gather evidence to answer an inquiry-based question by designing their own experimental procedures. Student teams analyze data together, create claims based on their evidence, and engage in an argumentation session in which they compare experimental procedures, results, claims, and evidence with other student teams. ADI lab courses introduce students to how science is done.

In addition to her teaching role, Professor Edwards is the UCI campus liaison for the OC Regional Science Olympiad. In this role she created a course in which UCI undergraduate students use their scientific knowledge and experience to write, proctor and score events for the Science Olympiad. Professor Edwards’ dedication to the success of this enormous event has ensured that students throughout the OC area take part in an engaging and successful Science Olympiad on the UCI campus each year.”

Amanda Holton, Professor of Teaching

“Amanda Holton, professor of Teaching in Chemistry at UC Irvine, creates innovative courses that provide solid foundations to future scientists, engineers, and medical professionals. Professor Holton created a pedagogically sound and engaging full-year series of online general chemistry courses designed to provide students with flexibility in their course scheduling. Professor Holton’s early experiences teaching online courses proved invaluable to many colleagues in the 2020 emergency pivot to remote courses. Large general chemistry lecture courses are often deemed

“gatekeeper” courses, and students who struggle in general chemistry are often pushed out of STEM majors. To address equity concerns in this course series, Professor Holton designed “General Chemistry Plus,” a course offered concurrently with general chemistry to assist students who may struggle initially with their college-level chemistry.

Professor Holton drew on her extensive experience as a nationally-recognized expert in using flipped classroom approaches in large chemistry courses and the state-of-the-art classrooms in UCI’s Anteater Learning Pavilion to make “General Chemistry Plus” a fully active learning experience for students who work with peers to build problem solving skills with direct assistance from a professor and graduate student assistants. Professor Holton meets students at their existing chemistry skill levels and provides a supportive environment to support their success.”

Renee Link, Professor of Teaching

“Renee Link, chemistry professor at UC Irvine, is a leader in the development and implementation of innovative teaching methodologies. Her commitment to student-centered active learning has revolutionized chemistry classrooms. Through presentations and publications, Dr. Link empowers educators nationwide to implement their own pedagogical techniques, most significantly specifications grading in a giant organic chemistry laboratory course. This research-based grading method focuses on competency and master standards rather than points to redirect focus to learning instead of grades.

Not content with merely transforming her own classroom, Dr. Link played a pivotal role in establishing and administering the Teaching Experiment Academy. The community draws participants from UCI, San Jose State and Cal Poly Pomona serving as a catalyst for pedagogical innovation. Here, educators are equipped to revitalize their courses via active learning and specifications grading. Through her mentorships of faculty, Dr. Link’s impact extends beyond her classroom as she has spread evidence-based techniques which help thousands of students each year. Her dedication to mentoring ensures these transformative methods are not only adopted

in her at UCI, but that mentees disseminate their own work, exponentially reaching other universities, faculty and students.”

OC Business Journal Women in STEM
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