

Rebecca Alexander

Director of Academic Planning, Wake Downtown & Professor, Department of Chemistry at Wake Forest University

Winston-Salem, NC, US

Alexander combines scientific expertise and creativity to apply science across the curriculum.

Biography

Rebecca Alexander combines her scientific expertise and innate creativity to apply science across a curriculum spanning chemistry, dance, and women's and gender studies. An expert in molecular biochemistry, she has published articles in journals such as *Biochemistry*, *Proceedings of the National Academy of Sciences (USA)* and *Journal of Molecular Biology*, but her work is anything but elemental. Alexander has channeled her expertise into developing courses that blend creativity, passion and a strong liberal arts spirit to get students excited about science.

Alexander's primary teaching responsibility is undergraduate and graduate biochemistry courses, but she has expanded her curriculum to include classes that incorporate her other interests as well. In her first-year seminar "Well-Behaved Women Rarely Make (Scientific) History," students learn about female scientists and the obstacles they have had to overcome. The course also includes a service-learning component in which students perform scientific experiments with and mentor middle school students in an after-school program. "Movement and the Molecular" uses dance to teach cellular processes, engaging students' – especially women's – minds and bodies in a more physical way. She has also co-taught dedicated women's and gender study courses and started a summer biochemistry study abroad program in London, England. Not only has Alexander's initiative provided non-traditional but valuable opportunities for students, but it has also stimulated her own curiosity in topics of women in science.

Areas of Expertise

Biochemistry, Molecular Chemistry, Protein Structures, RNA-Protein Interactions, Protein Biosynthesis, Women in Science and STEM, Molecular dissection of aminoacyl-tRNA synthetase structure and function, Nucleic acid structure and function, Computational modeling of protein dynamics

Education

MIT and the Scripps Research Institute

Postdoctoral Research Physics

University of Pennsylvania

Ph.D. Chemistry

University of Delaware

B.S. Chemistry and Biology

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