Master’s Learning Objectives – Natural Sciences

USC Dornsife master’s degrees in the Natural Sciences offer students the opportunity to gain mastery in their chosen fields of study. The USC Dornsife master’s degree in the Natural Sciences provides rigorous, applied training over two to six semesters of study. Over the course of their programs, students will demonstrate mastery in critically applying theories, methodologies, and knowledge to address fundamental questions in their fields of study at an advanced level, as evidenced by their academic performance in the program’s curricular requirements. Student earn their degrees by meeting the requirements of the coursework, passing written comprehensive examinations, and/or by producing a capstone project.

Learning Objectives

**Disciplinary Knowledge:** The master’s degree in Natural Sciences coursework provides the students with practical and applicable expertise in their fields of study. Emphasis is placed upon building knowledge that can establish a foundation of professional success in one or more industries related to the program’s subject matter. Theoretical and hands-on training are combined to enable graduates of these programs to apply what they have learned throughout their careers.

**Application of Research:** Students will build proficiency in analyzing both primary and secondary sources of research by identifying the main arguments or thought, placing it in context, and interpreting it critically based on the logic and evidence presented. Students will have the ability to apply key theories and concepts acquired during their studies to issues facing them in their current profession or in the pursuit of a career within their field of study.

**Technical Competence:** Show competence in the use of laboratory equipment and the ability to master new techniques and equipment.

**Analytical Skills:** Students will develop competence in analyzing and interpreting data in various forms to gain insights related to issues in society, business, and other domains.

**Written and Oral Communication:** Students will develop the ability to write and deliver oral presentations effectively for both specialist and general audiences with equal facility. Students will have the ability to write clear and coherent prose, and make compelling and original arguments as demonstrated in a thesis, a treatise, or other type of capstone project.

**Collaborative Skills:** Though paired and team-based projects and discussions, students will learn to work collaboratively, to divide and delegate work, and to communicate effectively for better results.

**Professionalization:** Students will develop skills and knowledge that are directly translatable to the job markets related to the degrees. Over the course of their programs, they will develop and demonstrate persistence, intellectual ability, and discipline; qualities that are sought after by employers and that will serve them well throughout their careers.