Capstone Project in Biological Sciences – Pre-Fall 2015

This description applies only to capstone projects completed before the start of the Fall 2015 semester. If your capstone project will be completed during Fall 2015 and later, refer to the updated description on the Biology & Wildlife webpage http://www.bw.uaf.edu or contact the department office at uaf-bw-dept@alaska.edu.

The intent of the Biological Sciences capstone project is to integrate a range of knowledge and skills learned in previous courses, including scientific knowledge, quantitative literacy, and communication skills, and to apply these products of the university education to a creative activity. For a biologist, a fundamental expression of applied knowledge, creativity, and critical reasoning is to engage in scientific inquiry.

The capstone project in Biological Sciences consists of a mentored research project on a biological topic that is completed in the junior or senior year. The capstone project must be designed or chosen by the student in consultation with a faculty mentor. The faculty mentor must approve the project before work begins. The project must include both evaluation of data and communication of the study intent, methods, results, interpretation, and conclusion in a report written by the student. The capstone project requirement may be met in two ways, detailed below.

First, the student may pass, with C grade or better, a designated capstone course in Biological Sciences or Wildlife Biology and Conservation. Capstone courses are offered across a range of sub-disciplines within biology. A list of capstone courses in Biological Sciences can be found in the UAF catalog. All capstone courses include the expectation that the student will complete a biological research project. Typically, the capstone course instructor will introduce one or several model study systems and methodologies that will form the basis for the student’s project. The course instructor will assist the student to design a study and analyze the results. The student will communicate the results of the project in a written report. Some capstone courses may require that students communicate their research findings in additional ways, such as in an oral report or poster presentation.

Second, the student may satisfy the capstone requirement by conducting a research project with a faculty mentor, typically a member of the UAF Biology & Wildlife faculty. A student may receive course credits for the research project by enrolling in independent study (BIOL F397 or F497) or undergraduate biology research (BIOL F490 or URSA F488); however, course credits are not necessary for completion of the capstone project requirements. A more informal arrangement, in which the student performs and communicates a project under the supervision of a member of the Biology & Wildlife faculty or completes research in the context of an internship, may satisfy the capstone requirements as well. In either case, to satisfy the capstone requirement using a research project conducted outside a designated capstone course, the student must file a petition with the Biology & Wildlife department chair. The petition must include a memo by the student’s faculty mentor confirming that the work was completed and a copy of the mentor’s written assessment of the final paper, showing that the work was of satisfactory quality.

All capstone projects will be assessed using a common set of expectations. The evaluation form used by mentors to grade capstone projects may be viewed on the Biology & Wildlife Department website, http://www.bw.uaf.edu/undergraduates/capstone.php.