**NORTHESTERN STATE UNIVERSITY**

GRADUATE COLLEGE

Master of Science in Natural Science (7700)

Degree Plan

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| **Name:** |  | | | **N-Number:** |  |
| **Address:** |  | | | **Phone:** |  |
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**Steps to Complete M.S. Natural Sciences Degree**

* Admission to NSU Graduate College.
* Admission to M.S. Natural Sciences.
* Identify Thesis or Capstone route for degree completion.
* File degree plan.
* For thesis students, an advisory committee is formed during the first semester. Membership of the thesis committee is filed with the M.S. Natural Sciences program chair.
* Meet candidacy requirements.
* Apply for degree.
* Deliver Thesis or Capstone defense (whichever is applicable).

**Selection of Thesis or Capstone Route to Degree Completion**

Thesis Candidate

Capstone Candidate

**Required Courses**

The required coursework for the M.S. Natural Sciences degree is listed in the attached degree plan, which is printed from the NSU Graduate Catalog. This document, along with the Statement of Understanding, are a binding part of this degree plan.

**Additional Comments**

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The attached course work along with the Statement of Understanding are a binding part of this degree plan. Any changes to this degree plan require prior written approval.

**Student’s Signature: Date:**

**Program Chair’s Signature: Date:**

**Graduate Dean’s Signature: Date:**

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| |  | | --- | | **Natural Science, M.S. - Major Code 7700** | |  |   OSRHE Program Code: 150 CIP Code: 301801  (36 Semester Hours)  **Purpose**  The Master of Science in Natural Sciences program at Northeastern State University will provide students with multi-disciplinary training in the Natural Sciences beyond that of the baccalaureate degree.  Students will gain experience in the design, execution, and reporting of scientific research by completing a research project and Master’s thesis.  The curriculum will consist of formal courses in one or more areas of concentration and incorporate the candidate’s background, goals, and objectives.  A central goal of the program is to prepare students for doctoral programs and/or employment in the natural sciences or advancement in their current profession.  The graduate courses chosen for this program are intended to give students depth in one area of concentration in the Natural Sciences.  Adequate classroom instruction is a critical part to broadening student understanding of science and enabling them to be successful researchers.  However, the program also specifically includes multi-disciplinary courses that will give a student exposure to a wider range of concepts and topics than are typically included in a more traditional, discipline specific graduate program.  Many of the issues our society faces today are multi-disciplinary in nature, and scientists who are comfortable with approaching these issues from a multi-disciplinary angle will be very valuable.  Thus, the coursework for this program is designed to provide students the skills they need to understand and appreciate multi-disciplinary approaches to problem solving in science, without sacrificing the deeper understanding of a specific discipline in science.  All students involved in the program are required to conduct research and disseminate the results of their work through appropriate venues.  Research training is a crucial part of graduate training in the sciences; thus, this aspect of the program directly relates to the overall objective of training future scientists for their intended career.  **Admission Requirements**  Students admitted in full standing must meet the following requirements:   * The student must have a bachelor’s degree from a college or university accredited by agencies recognized by Northeastern State University or equivalent education from a foreign university. * The student must have an overall GPA of 3.00 on a 4.00 scale for the last 60 hours of course work, and a combined Graduate Record Examination (GRE) score of 298 with a minimum score of 143 on the quantitative section of the GRE, submit a program application. * The student must be admitted to Northeastern State University and the Graduate College.  For more information concerning admission, visit [www.nsuok.edu](http://www.nsuok.edu). * International applicants are also required to submit a score of not less than 550 on the paper-based or a comparable score of 213 on the computer-based TOEFL, with a minimum of 50th percentile on the Listening Comprehension Section. * The student must have an undergraduate background of at least 20 semester hours in the natural sciences and/or engineering, excluding Introductory Biology I and II, General Chemistry I and II, General Physics I and II, or Engineering Physics I and II lectures and labs.  Additional course work may be required for admission.   Admission to the program will be determined by the Program Admissions committee after reviewing the application documents.  **Degree Requirements (minimum of 36 hours)**  *Advisory Committee.*  Initially, each student will be advised by the departmental coordinator of graduate studies from the student’s emphasis area.  Within the first semester, the student will select a graduate faculty member from that department to chair a graduate advisory committee consisting of at least three faculty members.  This committee will supervise the remainder of the student’s program.  *Program of Study*.  Each individualized program will be structured by the advisory committee in consultation with the student.  The academic background, professional experience, academic objectives, and personal needs will be considered in establishing the individual’s program. |
| **M.S. in Natural Science - 36 hours**  **I. Required Courses - 10 hours**  MATH 5533 - Statistics for the Natural Sciences  SCI 5511 - Research Seminar (repeated 4 times)  SCI 5803 - Topics in Natural Sciences    **II. Electives - 12 hours**  Complete 12 hours from the following courses.  In consultation with their advisor, students may focus the hours in area(s) of their choice.  Students may petition the program chair for permission to count hours not on the following list.  BIOL 5003 - Advanced Experimental Design  BIOL 5103 - Developmental Biology  BIOL 5133 - General Virology  BIOL 5164 - Medical Microbiology  BIOL 5200 - Advanced Topics in Biology  BIOL 5214 - Animal Parasitology  BIOL 5234 - Mammalogy  BIOL 5242 - Trends & Issues in Molecular Biology  BIOL 5264 - Ornithology  BIOL 5324 - Principles of Fisheries & Wildlife Management  BIOL 5343 - Biological Aspects of Environmental Health  BIOL 5354 - Immunology  BIOL 5543 - Molecular Biology  BIOL 5554 - Limnology  CHEM 5113 - Advanced Organic Chemistry  CHEM 5123 - Spectroscopic Methods in Chemistry  CHEM 5213 - Advanced Biochemistry  CHEM 5223 - Polymer Chemistry  CHEM 5233 - Bioinorganic Chemistry  CHEM 5243 - Materials Science  CHEM 5253 - Separations  CHEM 5360 - Special Topics in Chemistry  CHEM 5513 - Medicinal Chemistry  CHEM 5523 - Physical Chemistry  CHEM 5713 - Electrochemistry  PHYS 5613 - Classical Mechanics  PHYS 5623 - Electrodynamics  PHYS 5633 - Quantum Mechanics  PHYS 5643 - Thermodynamics and Statistical Mechanics    **III. Thesis or Capstone - 14 hours**  **Thesis Candidates**  The student will give an oral defense of his/her research thesis. The thesis shall be approved by the advisory committee and by the Dean of the Graduate College before the degree is conferred. A maximum of six hours of thesis credit can be applied toward the minimum hours required for the master’s degree.  SCI 5530 - Research in the Natural Sciences (6 hours)  Complete 2 additional hours of SCI 5530 or  SCI 5502 - Research Rotation  SCI 5900 - Thesis (6 hours)    **Capstone Candidates**  The student will complete 8 hours of electives and the capstone sequence.  Additional electives (8 hours) to be selected from the approved electives listed in section II above.  SCI 5983 - Capstone I  SCI 5993 - Capstone II |