



**SCIENCE K-12 CONCENTRATION FORM**  
**Effective Catalog Year 2013-2014**

**18 Graduate Credit Hours:** 12 credits Advanced Education Coursework in Science + 6 credits Science Content Courses

Student Name \_\_\_\_\_ Email \_\_\_\_\_

Advisor \_\_\_\_\_ Phone: \_\_\_\_\_ Email \_\_\_\_\_

*Only six credit hours may be transferred from another institution, with approval of the Science Advisor.*

**Twelve credits: Advanced Education Courses – All Science Teachers K – 12**

<u>Required Courses</u>	Sem. Hrs.
EDCI 670 Advanced Methods of Science Teaching in K – 12 Classrooms Application of major principles of education and psychology for the improvements of science teaching in K-12 classrooms.	3
EDCI 671 Innovations in Science Teaching Focuses on the development and selection of teaching materials that reflect concepts of technology innovation with an emphasis on K-12 science.	3
EDUC 547 Scientific Inquiry and the Nature of Science Incorporates advanced understanding about scientific knowledge in K-12 classrooms. Builds fundamental knowledge of scientific inquiry and the nature of scientific knowledge and skills to weave this knowledge explicitly in curriculum. Focuses on developing inquiry-based lessons for students to investigate science and assessing student understanding of science and the nature of science.	3
EDCI 663 Research in Science Teaching Provides an in-depth examination and analysis of literature and research in science education. Examines theoretical foundations of research studies in science education, discusses methodologies of research, critique research, and examines trends in emerging science education research.	3

**Total of 12 Credits in Advanced Education**

**Six credits of Content based Elective Science Courses--**

**To be selected in consultation with and approval from the science education advisor**

Science – K-12 Teachers	Sem. Hrs.
6 Credits of Science Courses: In consultation with her/his advisor, the student may select any two 500-level and above science courses currently offered by Science Departments of GMU; these should correspond to the student's science discipline	
Science Elective 1	3
Science Elective 2	3

**Total of 6 Credits in Science  
 Concentration Total of 18 credits**