

SCIENCE IN MIDDLE GRADES (SCIM)

SCIM 501 - Biology for Middle Grade Teaching 4 Credits

Prerequisite(s): Restricted to majors in Elementary School with Subject Matter Specialization: Science 5-8 or program coordinator approval Special fee. This course will provide concepts and learning activities for middle school teacher and will emphasize the study of life from molecule to organism, with a focus on the structure and function of cells, mechanisms of heredity and change, biodiversity, phylogenetic relationships among organisms, biology of populations, and communities, and ecosystems. 3 hours lecture, 2 hours lab.

SCIM 502 - Physics for Middle Grades Teaching 4 Credits

Prerequisite(s): Restricted to majors in Elementary School with Subject Matter Specialization: Science 5-8 or program coordinator approval Special fee. To provide individuals interested in teaching middle school science with knowledge of the principles and applications in physics from a unified energy-based outlook, and how to present the laws of physics to the middle grades students. Emphasis will be placed on problem solving methods and the development of critical thinking skills. 3 hours lecture, 2 hours lab.

SCIM 503 - Earth and Space Science for Middle Grade Teaching 4 Credits

Prerequisite(s): Restricted to majors in Elementary School with Subject Matter Specialization: Science 5-8 or program coordinator approval Special fee. This course introduces students to the physical world and how humans and other organisms fit into that world. The events that lead to the Earth's present configuration, natural phenomenon and water resource questions will be discussed. 3 hours lecture, 2 hours lab.

SCIM 504 - Chemistry for Middle Grade Teaching 4 Credits

Prerequisite(s): Restricted to majors in Elementary School with Subject Matter Specialization: Science 5-8 or program coordinator approval Special fee. This course will provide concepts and learning activities in Chemistry for middle school teachers. Emphasis will be on examining changes of state, solutions, and simple chemical reactions. These teachers will develop the knowledge and experience that will allow them to define the properties of chemical compounds and elements. Laboratory investigations of the properties of substances and their changes through various chemical interactions will provide a basis for the high school student to understand diverse types of chemical reactions and their applications. 3 hours lecture, 1 hour lab.