

# INTERDISCIPLINARY SCIENCE (INSC)

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**INSC 201. Energy!. 3 Hours.**

Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: MATH 131, MATH 139, MATH 141, MATH 151, MATH 200 or higher MATH; or BUSN 171\*, BUSN 212\*\* or SCMA 301\*\*\*; or STAT 208, STAT 210, STAT 212 or higher STAT; or satisfactory score on the VCU Mathematics Placement Test within the one-year period immediately preceding the beginning of the course. A study of global energy demands, how they are being met, environmental consequences and alternative energy sources. \*Formerly MGMT 171, SCMA 171; \*\*formerly MGMT 212, SCMA 212; \*\*\*formerly MGMT 301.

**INSC 300. Experiencing Science. 3 Hours.**

Semester course; 5 studio hours. 3 credits. Prerequisites: 4 credits in biology, 3 credits in physical science, 3 credits in mathematics, and STAT 208, 210, 212, or 312. Study of the methods and processes used by scientists in investigations. Guided, active replication of great discoveries in major scientific disciplines in physical science, life science and earth science.

**INSC 301. Investigatory Mathematics and Science. 3 Hours.**

Semester course; 3 lecture hours. 3 credits. Prerequisites: 4 credits in biology, 4 credits in physical science, 3 credits in mathematics and STAT 208 or STAT 210. Students investigate real-world science problems, formulate model solutions to the problems, produce project reports and present their solutions to class. Problems selected from areas including water quality, epidemics and spread of diseases, heat loss and gain, genetics and drugs in the body.

**INSC 310. Content of Elementary Science. 3 Hours.**

Semester course; 4 lecture/laboratory hours. 3 credits. Prerequisite: 11 credits of science courses. Designed for preservice elementary school teachers. Develops mastery of select topics in the physical, earth and life science strands appropriate to the K-6 level. Topics will be presented in the context of hands-on activities designed for the classroom, using techniques such as guided inquiry and the learning cycle.

**INSC 490. Capstone Research Experience in Interdisciplinary Science. 3 Hours.**

Semester course; 3 lecture hours (delivered online). 3 credits. Prerequisite: UNIV 200 or HONR 200. Enrollment is restricted to seniors in the science major with at least 85 credit hours earned toward the degree. Intensive study of a contemporary scientific problem engaging more than one scientific discipline. Emphasis on understanding scientific research and science writing. Course is taught online and requires an average of six to 10 hours per week of student effort.