GEOS - GEOSCIENCES

GEOS 611 Data Management for the Geosciences

Credits 3. 3 Lecture Hours. Study of data creation and data project execution plans in geosciences; interactive data workflow-based infrastructures; maintaining data identity and quality during data transformation processes; fundamental geosciences data management planning; data collection by environmental sensors. **Prerequisite:** Graduate classification.

GEOS 612 Data Quality for the Geosciences

Credits 3. 3 Lecture Hours. Study of quality procedures and concerns for analysis-ready data for geosciences applications; fundamental functions to evaluate and produce high-quality geosciences data; data quality status and reliability; identification and extraction of mandatory elements of geoscience data. **Prerequisite:** Graduate classification.

GEOS 613 Data Governance in the Geosciences

Credits 3. 3 Lecture Hours. Study of geosciences data governance activities and communications; operational, technological, digital and intellectual geosciences data resources; creation of accurate and reliable geosciences data; preparation of high-quality geosciences data for governance purposes; organizational data rules and standards for the geosciences. **Prerequisite:** Graduate classification.

GEOS 669 Introduction to Processing Geoscience Data with R

Credits 3. 3 Lecture Hours. Scientific programming; handling of data in the earth sciences; differences among spatial and temporal datasets; use of short programming scripts in the open-source language R, clean data sets, application of simple data visualizations. **Prerequisite:** Graduate classification.

GEOS 676 Capstone Experience

Credits 3 to 6. 3 to 6 Lecture Hours. Integration of knowledge and skills gained through other courses and experiences in the Master of Geoscience program, application of conceptual geoscience knowledge to solve applied problems in the discipline; development of teamwork, communication and professional skills through interactions with industry professionals. **Prerequisites:** Enrollment in Master of Geoscience.