CRJ 577 Family Violence (A). Focuses on the dynamics of family violence and the legal and social system response to the phenomena. Explores and analyzes in-depth the scope and theoretical explanations of the issues of the various forms of family violence, e.g. spousal abuse, marital rape, elderly abuse. 3 Cr.

CRJ 579 Victimology (A). Cross-listed as WMS 479. Develops an understanding of crime victimization, both direct and indirect. Focuses on street crime, social and political oppression, victimization of women, and victims of corporate deviance. Emphasizes theory and policy analysis. 3 Cr.

CRJ 581 Women and the Criminal Justice System (A). Examines women’s relationships with crime and the criminal justice system. Specifically provides a study of women and crime, victimization and occupational obstacles and opportunities. Develops student understanding of how social, political and economic conditions affect these problems. 3 Cr.

CRJ 585 Issues in Juvenile Justice (A). Provides an in-depth analysis of 10-12 selected topics germane to the juvenile justice system. Includes topics such as child abuse and domestic violence, alternatives for the status offender, ethical issues, children’s rights, right to treatment and right to refuse treatment, the politics of juvenile justice, and the court as a socio-legal institution. 3 Cr.

CRJ 589 Police Problems (A). Discusses specific problems of law enforcement and policing in contemporary American society. Emphasizes the development, nature and function of law enforcement as it relates to criminal justice. Covers topical issues and problems such as ethics, corruption, deadly force and civil liabilities. 3 Cr.

CRJ 590 Special Topics (A). Enables students to learn the basic operations of a criminal justice agency and participate in agency activity. Involves group discussion, weekly log and final report. 3 Cr.

CRJ 593 Seminar in Criminal Justice (A). Allows students to gain an understanding of a selected criminal justice issue. Utilizes research skills to prepare and present research projects, and defend findings to an audience of critical judges. May be repeated with chair’s permission. 3 Cr.

CRJ 594 Criminology (A). Provides a review and critical analysis of the major criminological theories including the classical school; biological school; and psychological, sociological and psychoanalytic orientations, including economic determinism. Considers various forms of criminality, as well as studies dealing with the frequency of crime in different places at different times. 3 Cr.

CRJ 599 Independent Study in Criminal Justice (A). To be defined in consultation with the instructor-sponsor and in accordance with college policy prior to registration. May be repeated with chair’s permission. 1-6 Cr.
Earth Sciences Courses

ESC 512 Hydrology with Lab (A). Prerequisites: ESC 311, ESC 350, ESC 391 and PHS 235, PSH 240, and MTH 202 or instructor’s permission. Covers atmospheric thermodynamics; physical processes of condensation; electrical phenomena in the atmosphere; radiative transfer. 3 Cr. Odd Fall.

ESC 516 Thermodynamics and the Boundary Layer (A). Prerequisites: ESC 311, ESC 350, ESC 391, MTH 201 and PHS 235 or instructor’s permission. Covers thermodynamic processes and stability in the lower atmospheric layers; transfer of mass, energy and momentum in the boundary layer. 3 Cr. Odd Fall.

ESC 517 Dynamic Meteorology (A). Prerequisites: ESC 312; ESC 350; ESC 391; PHS 235; MTH 202 and either MTH 255 or PHS 301 or instructor’s permission. Covers the development of the governing equations of motion and simplifications, introduction to concepts of divergence, circulation, vorticity; mid-latitude synoptic scale motions; numerical methods and linear perturbation theory. 3 Cr. Odd Spring.

ESC 518 Watershed Sciences (A). Prerequisite: ESC 412 or GEL 462, ESC 350 and ESC 391 or instructor’s permission. Explores the art and science of evaluating water, air and land resources in a watershed to provide scientific information for management policy decisions. Covers utilization of maps and other physical resources information, sampling, data processing and analysis. 3 Cr. Even Fall.

ESC 520 Radar and Satellite Meteorology (A). Prerequisites: ESC 211, MTH 122. Corequisites ESC 350 and ESC 391 or instructor’s permission. Students learn the standards of weather observation and the physical operating principles of meteorological instrumentation, including radars, satellites, and also in situ platforms. Focus is toward the interpretation of radar and satellite imagery. Examines topics from conventional and Doppler radars to polarimetric radars and multispectral satellite analyses. 4 Cr. Even Spring.

ESC 521 Air Pollution Meteorology (A). Prerequisites: ESC 350 and ESC 391 or instructor’s permission. For students, engineers and professional people training to measure air pollution levels or measure and evaluate meteorological parameters which affect the diffusion and concentration of pollutants in the atmosphere. Provides knowledge of the effects of meteorology in air pollution. Covers factors related to site selection, control programs and interpretation of surveys. Also studies diffusion using mathematical models. 3 Cr.

ESC 531 GIS Applications in Earth and Environmental Science (A). Prerequisite: ESC 230. Introduces students to spatial analysis theories, techniques and issues associated with ecological and environmental applications. Provides hands-on training in the use of spatial tools while addressing a real problem. Allows students to experience linking GIS analyses to field assessments and monitoring activities. 3 Cr. Spring.

ESC 532 Tropical Meteorology (A). Prerequisites: ESC 311 and MTH 201. Corequisite: ESC 391 or instructor’s permission. Provides a comprehensive description of the characteristics of the atmosphere in the Tropics, as well as in-depth discussions on the weather systems and climatic patterns that affect and develop in tropical regions, such as hurricanes, monsoonal circulations, El Niño Southern Oscillation, and the Madden-Julian Oscillation. Also discusses interactions between the atmosphere and oceans at various time scales. 3 Cr. Even Fall.

ESC 552 Mesoscale Meteorology (A). Prerequisites: ESC 312, ESC 350, ESC 391, MTH 201 and PHS 235, or instructor’s permission. An introduction to mesoscale processes and precipitation systems, with an emphasis on deep convection and severe weather. Covers severe storm type, structure, and organization; radar and satellite signatures of mesoscale and convective features; and the roles of atmospheric instabilities in the growth of mesoscale phenomena. Includes diagnosis and short-term prediction of severe storms via lecture and exercises. 3 Cr. Even Spring.

ESC 555 Soils Science (A). Prerequisites: ESC 511 and MTH 201, CHM 205, ESC 350 and ESC 391 or instructor’s permission. Explores the formation, properties and characterization of soils, especially those of New York state; measurement of physical and chemical properties in field and classroom; and management, conservation and applications of soil survey. 3 Cr. Even Fall.

ESC 557 Marine Geology-Bahamas (A). Involves preparation in the fall semester for a two-week January intersession field experience in coral reef biology and geology on San Salvador island in the Bahamas. Covers identification, behavior and ecology of marine organisms in five habitats associated with coral reefs. Teaches students to prepare a scientific field notebook and to design, conduct and write a paper on a personal research project. 3 Cr. Fall.

ESC 562 Hydrometeorology (A). Prerequisites: ESC 350, ESC 211 and MTH 201 or instructor’s permission. Recognizing that the interface between meteorologic and hydrologic processes governs the impact that weather has on the human and natural environment, the course examines underlying processes behind extreme events such as flooding,
storm surge, and desertification. Students learn about the processes that govern them as well as the extent of their effects, their causes and the models used to predict them. 4 Cr. Even Fall.

ESC 599 Independent Study in Earth Science (A). Defined in consultation with the instructor sponsor prior to registration. 1-3 Cr. By Arrangement.


ESC 672 Selected Oceanography Topics (A). Allows for study of selected topics in physical oceanography, dealing with its sensing, analysis, causes, impacts and prediction. A distance-learning course administered by the American Meteorological Society (www.ametsoc.org/dstreme). 3 Cr. Every Semester.


ESC 676 Real-time Ocean Studies (A). Develops principles of oceanography from analysis of electronically delivered current environmental data and learning activities. Relies on computer receipt, analysis, and display of geoscience data with classroom applications. A distance-learning course. 3 Cr. Every Semester.

ESC 677 Real-time Climate Studies (A). A distance-learning course covering selected topics in the study of climate and social interactions utilizing current environmental data. Administered by the American Meteorological Society (www.ametsoc.org/amsedu) 3 Cr. Every Semester.

GEL 508 Structural Geology (A). Prerequisites: GEL 302, ESC 350 and ESC 391 or instructor’s permission. Covers the principles of mechanical behavior of rocks during deformation, theories of origin of major and minor rock structures (folds, faults, rock cleavage, etc.) and their relationships to each other. Also covers plate tectonics models for some major crustal structures. Emphasizes laboratory techniques of analyzing and solving three-dimensional problems gathering structural data in the field. Requires a weekend field trip and report. 4 Cr. Even Spring.

GEL 511 Stratigraphy and Sedimentology (A). Prerequisites: GEL 201, ESC 350 and ESC 391 or instructor’s permission. Covers the physical, chemical and biological characteristics of sedimentary materials; sedimentary environments and geologic time; and the application of stratigraphic principles to a variety of problems involving sedimentary rocks in the geologic record. Employs techniques and instruments used in stratigraphy and sedimentology. Requires a weekend field trip and report. 4 Cr. Odd Fall.

GEL 515 Geomorphology (A). Prerequisites: GEL 201, ESC 350 and ESC 391 or instructor’s permission. Explores surface features of Earth and their origin. Emphasizes processes, both internal and external, which interact to produce land forms. Stresses analytical approach formulations of valid inferences based on accurate observations. 4 Cr. Odd Spring.

GEL 557 Geochemistry (A). Course fee. Prerequisites: GEL 201, ESC 350, ESC 391, and MTH 201 or instructor’s permission. Applies basic chemical principles of thermodynamics, kinetics and equilibrium to the investigation of common geologic problems ranging from the crystallization of silicate melts to surface reactions on soil minerals. Focuses on application of good laboratory practices to wet chemical and instrumental techniques involving geologic materials. 4 Cr. Even Spring.

GEL 562 Groundwater (A). Prerequisite: GEL 201, ESC 350, ESC 391, and MTH 201 or instructor’s permission. Studies groundwater, its occurrence, movement and use, and its place in the hydrologic cycle. Examines the origin of aquifers, use and effects of wells, and water quality and groundwater problems. Laboratory focuses on practical application of principles to solving hydrogeologic problems. 4 Cr. Odd Spring.

GEL 599 Independent Study in Geology (A). Arranged in consultation with the instructor-sponsor prior to registration. 1-3 Cr. By Arrangement.