GPHY - GEOSCIENCE: GEOGRAPHY

GPHY 121 Human Geography. 3 Credits
Term Typically Offered: Fall, Spring
Analyzes the interrelationships between man and his environment, including such topics as race, origin and dispersal of technology, livelihood patterns and settlement.
Lecture Hours 3
Department: NAS/PS/SOCL

GPHY 262 Spatial Sciences Tech and Appl. 3 Credits
Term Typically Offered: Fall, Spring
Introduces students to the sciences and technologies used to investigate spatial questions. Particular attention is given to physical processes such as energy transfer and the transportation of materials. Though the primary focus is on physical processes, examples may also be drawn from a variety of other fields, such as biogeography, cultural geography, criminology, marketing, epidemiology and political concerns.
Lecture Hours 3
Department: NAS/PS/SOCL

GPHY 263 Spatial Sciences & Tech Lab. 1 Credit
Term Typically Offered: Fall, Spring
Introduces students to applied problems involving the sciences and technologies used to study spatial problems, especially ones involving physical processes. Other exercises may include problems from areas such as biogeography, cultural geography, criminology, marketing, epidemiology, and political concerns.
Lecture Hours 1
Department: NAS/PS/SOCL

GPHY 282 Mapping Techniques. 3 Credits
Term Typically Offered: Fall
Introduces map interpretation, computer cartography, spatial data and Geographic Information Systems.
Lecture Hours 3
Department: NAS/PS/SOCL

GPHY 291 Special Topics. 1-12 Credits
Department: NAS/PS/SOCL

GPHY 294 Seminar/Workshop. 0.5-6 Credits
Lecture Hours .5-6
Department: NAS/PS/SOCL

GPHY 380 Principles of GIS. 3 Credits
Term Typically Offered: Spring
Prerequisite(s): GPHY 282.
Introduces GIS, spatial analysis, map production, and spatial data handling.
Lecture Hours 3
Department: NAS/PS/SOCL

GPHY 484 Applied GIS/Spatial Analysis. 3 Credits
Term Typically Offered: Spring
Prerequisite(s): GPHY 380.
Applies GIS to a project-based curriculum where students propose, research, and develop a course-long project of their choosing. Students gain experience in spatial data handling, database theory and application, sensor networks, and real-time data analysis.
Lecture Hours 3
Department: NAS/PS/SOCL

GPHY 485 Internet GIS. 3 Credits
Term Typically Offered: Spring
Prerequisite(s): GPHY 380.
Introduces students to web-based GIS including web design, programming using ArcGIS for Server, open-source web-server applications, online charting and graphing, real-time data processing, and spatial analysis. Web-based mapping experience gained through this class can be applied to geography, environmental science, business, medicine, and history.
Lecture Hours 3
Department: NAS/PS/SOCL

GPHY 487 Remote Sensing/Raster GIS. 3 Credits
Term Typically Offered: Fall
Prerequisite(s): GPHY 282.
Introduces students to remote sensing and photogrammetry using aerial and satellite imagery. Students gain experience with the classification of imagery, object detection and extraction, spectral analyses of plants, and 2D/3D data collection and processing. Remote sensing is used in environmental analyses to detect and monitor fire hazards, pollution, climate change, and agriculture.
Lecture Hours 3
Department: NAS/PS/SOCL

GPHY 490 UG Research. 1-6 Credits
Lecture Hours 1-6
Department: NAS/PS/SOCL

GPHY 491 Special Topics. 1-12 Credits
Lecture Hours 1-12
Department: NAS/PS/SOCL

GPHY 492 Independent Study. 1-6 Credits
Prerequisite(s): Consent of instructor and department chairperson.
Provides advanced students an opportunity to explore material not covered in regular geography courses. A contract describing the study must be completed at the time of enrollment.
Department: NAS/PS/SOCL

GPHY 494 Seminar/Workshop. 1-3 Credits
Department: NAS/PS/SOCL

GPHY 498 Cooperative Educ/Internship. 1-9 Credits
Department: NAS/PS/SOCL