MSU Geospatial Curriculum (as of Fall 2020)

Geospatial Undergraduate Curriculum

GPHY 284 (Earth Sciences Fall/Su, & LRES Spr)
Intro to GIS Science & Cartog, 3 Credits
Foundational course for geospatial curriculum, focus on GIS, also introduces GPS & Remote Sensing

GPHY 284 – (Summer, 4 wks)

GPHY 284 – (Spr, Fall)

Prerequisite

Prerequisite

Prerequisite

GPHY 384 (Spr, Fall)
GIS and Spatial Analysis, 3 Credits
Advanced data model concepts in the context of spatial analysis.

GPHY 357 (Spr, Fall)
GPS Fundamentals /App in Mapping, 3 Credits
Theory and application of the Global Navigation Satellite Systems (GNSS) to mapping in natural resource and land management sciences.

GPHY 426/429R (Spr)
Remote Sensing, 3 Credits
Intended for students not in geospatial or GIS majors or minors. Theory and application of remote sensing, the electromagnetic spectrum, earth-energy interactions, and operation of multispectral sensors.

Prerequisite

Prerequisite

Prerequisite

GPHY 484 R – (Spr)
Applied GIS and Spatial, 3 Credits
Semester projects apply theory and concepts to a project related to student's discipline.

GPHY 358 (Spr, Fall)
GPS Service Learning, 1 Credit modules
Participation in one of three 1) Gallatin County Search and Rescue (SAR) trail mapping; 2) Urban mapping projects with City of Bozeman GIS; 3) AGAI canal mapping to update the Gallatin Valley inventory of water resources.

GPHY XXX (Pending)
Advanced Remote Sensing

Geospatial Graduate Offerings

GPHY 504
GIS Research Fundamentals, 3 Credits

LRES 505 (On-line, Pending) CI   M
Concepts of GIS in Env Sci (Summer, 8 wks)

LRES 525 (Spr)
Applied Remote Sensing, 3 Credits
Emphasis is on using remote sensing technologies for solving applied land resource issues.

LRES 535
Techniques of Spatial Analysis, 3 Credits
Emphasis is placed on practical applications within geographic information systems & image processing.

LRES 572 (Fall, On-line)
Frontiers in Remote Sensing, 1 Credit

LRES 573 (Fall, On-line)
Remote Sensing Applications in Env Sci

GPHY 591
Geospatial Special Topics, 1-4 Credits