

Energy Resource Management and Development *BACHELOR OF SCIENCE* & Geospatial Information Science and Technology *UNDERGRADUATE CERTIFICATES*

Geospatial knowledge is in high demand with employers and is particularly important in energy development. Geographic Information Systems (GIS) and remote sensing technologies are used throughout the energy industry including:

- Siting new generation facilities including wind farms and solar arrays

- Establishing routes for transmission and distribution lines
- Assessing social and environmental impacts
- Creating energy resource market scenarios
- Monitoring assets including pipelines and power lines

GEOGRAPHIC INFORMATION SYSTEMS (GIS) *CERTIFICATE*

The GIS certificate requires 10 credit hours. Students in the Energy Resource Management and Development program can receive the certificate with 6 additional credit hours.

Course ID	Course Description	Credit Hours	Prerequisite	Semester Usually Offered	Notes
GIST 2100	Introduction to GIS	4	None	Fall, Spring	Required ERS class
GIST 2200	Introduction to Spatial Data Visualization	3	None	Spring	
GIST 2150	Introduction to Programming in GIS&T	3	None	Spring	

REMOTE SENSING (RS) *CERTIFICATE*

The Remote Sensing certificate requires 9 credit hours. Students in the Energy Resource Management and Development program can receive the certificate with 3 to 6 additional credit hours, dependent upon how elective credits are used.

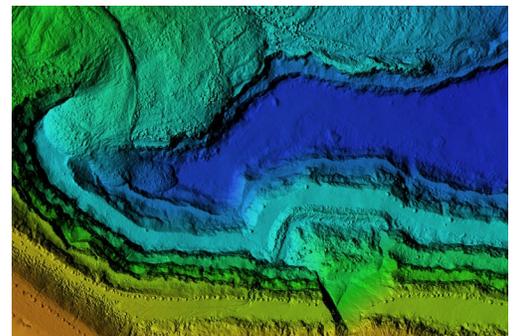
Course ID	Course Description	Credit Hours	Prerequisite	Semester Usually Offered	Notes
GIST 3111	Introduction to Remote Sensing of Environment	3	USP Q	Fall	Required GIST class; ERS elective in place of GEOG 4111

Take 6 hours of elective remote sensing credits.

Course ID	Course Description	Credit Hours	Prerequisite	Semester Usually Offered	Notes
GIST 2160	Survey of Remote Sensing Apps	3	USP Q; Sophomore or Junior standing	Spring	ERS elective
GIST 4211	Advanced Remote Sensing	3	GIST 3111 or 4130	Spring	ERS elective in place of GEOG 4211
GIST 4130	Remote Sensing for Agricultural Management	3	USP Q; 9 credit hours in major; Junior or Senior standing	Fall	
GIST 4410	UAS Sensors and Platforms	1	None	Spring and Fall	
GIST 4420	UAS Mission Planning	1	None	TBD	
GIST 4430	UAS Regulations and Safety	1	None	Summer and Fall	
GIST 4440	Ground and UAS Operation	2	None	Summer and Fall	

Visit uwyo.edu/wygisc/academics/undergraduate-programs/undergraduate-certificates.html to learn more.

Information is subject to change without notice.



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School of
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