Date:

R-REAL Curriculum Program Alignment Proposal

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	unless all four REAL areas are fulfilled by accreditation or licensure requirements.																														
_	A single minor or certificate degree program may fulfill no more than two REAL areas.																														
	Degree program may cover up to two REAL areas using a single prefix. All the second of the sec																														
	 All courses documenting the coverage of a REAL area must fulfill all learning outcomes and be designated in that area. 																														
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Dept/School Signature

Geology Minor

A student who wishes to elect a minor in geology is required to take:

GEOL 120 – Earth Science and Society (3)

GEOL 121 – Earth Science and Society Laboratory (1)

GEOL 105 - Exploring Earth (4)

GEOL 106 – It's About Time: A History of Earth, Life, and Global Change (4)

Plus a minimum of four additional semester hours from a choice of following geology courses:

GEOL 310 – Mineralogy (4)

GEOL 320 - Sedimentary Petrology and Stratigraphy (4)

GEOL 360 – Geomorphology 4)

GEOL 365 – Earth's Ocean and Climate Systems (4)

SCIENTIFIC AND QUANTITATIVE REASONING

R Area:	Is this course required	or an elective for your degree program? $oximes$ Required $oximes$ Elective
Course Prefix: GEOL	Is this course offered v	within your dept/school? ⊠ Yes □ No
Course Number:105	If no, collaborating dept/	school must also complete the remaining elements, and must sign below.
Course Title:Exploring Earth		
Credit Hours: 4	Course Rotation:	□ Fall □ Spring □ Intersession □ Other (Explain below)
New course: ☐ Yes		
Revised course: ☐ Yes No	Intended Frequency:	☑ Every academic year ☑ Every semester ☐ Every other year
		☐ At least once every three years ☐ Other
Projected student enrollment		
per academic year: 200		ting chair/director indicating acknowledgement for inclusion and designation if
	not offered in dept/sc	
R Area:	Is this course required	or an elective for your degree program? $oximes$ Required $oximes$ Elective
Course Prefix: GEOL		within your dept/school? ⊠ Yes □ No
Course Number: 106	If no, collaborating dept/	school must also complete the remaining elements, and must sign below.
Course Title: It's About Time: A		
History of Earth, Life and Global	Course Rotation:	☐ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below)
Change		
Credit Hours: 4	Intended Frequency:	☑ Every academic year □ Every semester □ Every other year
New course: ☐ Yes No		☐ At least once every three years ☐ Other
Revised course: ⊠ Yes □ No		
	_	ting chair/director indicating acknowledgement for inclusion and designation if
Projected student enrollment	not offered in dept/sc	hool:
per academic year:20		
R Area:		or an elective for your degree program? ☐ Required ☐ Elective
Course Prefix: GEOL		within your dept/school? ⊠ Yes □ No
Course Number: 310	If no, collaborating dept/	school must also complete the remaining elements, and must sign below.
Course Title: Mineralogy		
Credit Hours: 4	Course Rotation:	☐ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below)
New course: ☐ Yes 🗵 No		
Revised course: ☐ Yes ☒ No	Intended Frequency:	☑ Every academic year ☐ Every semester ☐ Every other year
		☐ At least once every three years ☐ Other
Projected student enrollment	Cignoture of collabora	ting chair/director indicating columnyladgement for inclusion and designation if
per academic year:	not offered in dept/sc	ting chair/director indicating acknowledgement for inclusion and designation if
R Area:		or an elective for your degree program? ☐ Required ☑ Elective
Course Prefix: GEOL		within your dept/school? ⊠ Yes □ No
Course Number: 320		school must also complete the remaining elements, and must sign below.
Course Title: Sedimentary	, , , ,	
Petrology and Stratigraphy	Course Rotation:	☑ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below)
Credit Hours: 4		
New course: ☐ Yes ☒ No	Intended Frequency:	☑ Every academic year ☐ Every semester ☐ Every other year
Revised course: ☐ Yes ☒ No		☐ At least once every three years ☐ Other
The vised course. El res El ro		, ,
Projected student enrollment	Signature of collabora	ting chair/director indicating acknowledgement for inclusion and designation if
per academic year: 15	not offered in dept/sc	
R Area:	Is this course required	or an elective for your degree program? ☐ Required ☒ Elective
Course Prefix: GEOL		within your dept/school? ⊠ Yes □ No
Course Number: 360		school must also complete the remaining elements, and must sign below.
Course Title: Geomorphology		
Credit Hours: 4	Course Rotation:	☐ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below)
New course: ☐ Yes ☒ No		
Revised course: ☐ Yes ☒ No	Intended Frequency:	☐ Every academic year ☐ Every semester ☒ Every other year
The vised course. In 163 PS INO	,	☐ At least once every three years ☐ Other
Projected student enrollment		•
per academic year: 20	Signature of collabora	ting chair/director indicating acknowledgement for inclusion and designation if
<u> </u>	not offered in dept/sc	hool:
R Area:	Is this course required	or an elective for your degree program? \square Required \boxtimes Elective
Course Prefix: GEOL	Is this course offered v	within your dept/school? ⊠ Yes □ No
Course Frenk, GLOL		school must also complete the remaining elements, and must sign below.

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Course Number: 365 Course Title: Earth's Ocean and Climate Systems	Course Rotation: ☐ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below)
Credit Hours: 4 New course: ☐ Yes ☐ No Revised course: ☐ Yes ☐ No	Intended Frequency: ☐ Every academic year ☐ Every semester ☒ Every other year ☐ At least once every three years ☐ Other
Projected student enrollment per academic year: 24	Signature of collaborating chair/director indicating acknowledgement for inclusion and designation if not offered in dept/school:
	quired within the Program of Study Approved for Inclusion in the General
Education Coursework: (please list at least one, can also be listed above but does not need to be) GEOL 120,
GEOL 121, GEOL 105, GEO	L 106
R Area: Learning Goal: To apply s mathematics, or related	scientific and quantitative reasoning to questions about the natural world, areas.
Learning Outcome 1: Student scientific and quantitative information to test problems draw conclusions.	Data will be collected from the REAL General Studies Minor
Learning Outcome 2: Students evaluate the quality data, methods, or inferences to generate scientific and quantitative knowledge.	I Data Will be collected from the NEAE defictal studies willion
Additional information for RE	AL Council consideration:

Date:

Date:

-	adequate to support this program alignment onal material resources would be needed?	t proposal?
- ·	equate to support this program alignment ponal space resources would be needed?	roposal?
· ·	dequate to support this program alignment onal human resources would be needed?	proposal?
Department Curriculum Committee Recommendation:	Signature:	Date:
Chair/Dean on Behalf of Dept/School:	Signature:	Date:
College Curriculum Committee Approval:	Signature:	Date:
Dean/AVP Approval:	Signature:	Date:
REAL Council Recommendation:	Signature:	Date:
Faculty Senate Curriculum Committee Recommendation:	Signature:	Date:
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Signature:

Signature:

Faculty Senate Approval:

Provost Approval:

Date:

I REAL Curriculum Program Alignment Proposal

Department or	School:	Department of Geology	Da	ate:	October 7, 2020
Degree type:	□BS [□BA □BBA □BSN □BM □BFA □BSW 図N	∕linor □Ce	rtifica	ate
Program:	Planet	ary Science minor			
REAL Area Pro	gram D	esignation Sought (check all that apply):	⊠R		E 🗆 A 🗆 L
Dept/School Co	ntact:	Ryan Sincavage, rsincavage@radford.edu			
BS/BA Requiren	nents:	N/A			
area cov A single unless al A single Degree p All cours designat All cours required formally degree p partnerin Department requirem conducte If depart duplicate included	rered. An major de major de major de minor of corogram de ments or ments for ed yearle the se the se lin the reave this	document fulfillment of a REAL area within a aught by the department/school. However, inicate with other departments about reliand plans of study. Indicate this through signature the plans of study. Indicate this through signature the plans of study. Indicate this through signature the through signature the schools that seek to fulfill REAL areas must or those areas. Assessment of degree seeking by by the department or school offering the cor schools want to use a menu of courses to ctions below for each REAL area and include menu of options. file for submission as PROGRAM NAME_Pro	he 300 levelee REAL are ensure required than to a gle prefix. fulfill all lead a degree produce on and it acknowledges students it degree progefulfill a pare information.	rning rograr ts/sch nclusi ge assis requigram. ticula on for	r any one student, nents. EAL areas. coutcomes and be m of study are NOT hools are expected to ion of courses in their irector of the sessment uired to be ar area, please reach course
By signing, the	departn	nent/school acknowledges the above cond	ditions and	cons	siderations:

Dept/School Signature

Official Program Description:

The Department of Geology at Radford University proposes a new minor in Planetary Science. Research in the solar system and the celestial bodies within it advance fundamental science knowledge, and provide pathways for technological advances that benefit the entire human species. By deepening our understanding of the Earth and its neighbors, we not only gain insights into the changes Earth has undergone through its long history, but we are awarded windows into its possible future through knowledge of natural systems and processes on other planets in our solar system. A recent resurgence in interest of space exploration, fostered by groundbreaking research on Mars, makes a dedicated program to the study of our solar system desirable to today's undergraduate population. Providing a sequence of planetary science courses increases scientific awareness and literacy among our graduates, to the benefit of society as a whole.

Planetary Science minor (minimum 17 credits)

GOAL: To understand the structure, composition, and evolution of Earth and the other planets and celestial bodies of the solar system.

TARGET: Majors outside of the natural sciences with an interest in the physical processes operating on Earth and within our solar system.

Required core courses (7-8 credits):

GEOL 105 (4): Exploring Earth

ASTR 111 (4): General Astronomy I

OR

ASTR 220 (3): Introduction to Astrophysics

Electives (choose *three* additional courses from the list below):

ASTR 310 (3): Observational Methods in Astronomy (prerequisite - ASTR 220)

ASTR 421 (3): Solar System Astronomy (prerequisite - ASTR 220)

GEOL 106 (4): It's About Time: A History of Earth, Life, and Global Change (*prerequisite- GEOL 105 or permission of instructor*)

GEOL 310 (4): Mineralogy (prerequisite- GEOL 105, corequisite CHEM 111 or permission of instructor)
GEOL 320 (4): Sedimentary Petrology and Stratigraphy (prerequisite- GEOL 310)
GEOL 365 (4): Earth's Ocean and Climate Systems (prerequisite- 7 hours of natural science)
PHYS 301 (4): Atmospheric Physics (prerequisite- PHYS 111 or 221, or ASTR 220)

SCIENTIFIC AND QUANTITATIVE REASONING

R Area:	Is this course required	or an elective for your degree program? ⊠ Required ☐ Elective
Course Prefix: GEOL	Is this course offered v	within your dept/school? ⊠ Yes □ No
Course Number:105	If no, collaborating dept/	school must also complete the remaining elements, and must sign below.
Course Title: Exploring Earth		
Credit Hours:4	Course Rotation:	☑ Fall ☑ Spring ☐ Intersession ☐ Other (Explain below)
New course: ☐ Yes 🗵 No		
Revised course: ☐ Yes ☒ No	Intended Frequency:	☑ Every academic year □ Every semester □ Every other year
		☐ At least once every three years ☐ Other
Projected student enrollment		
per academic year: 200	Signature of collabora	ting chair/director indicating acknowledgement for inclusion and designation if
	not offered in dept/sc	hool:
R Area:	Is this course required	or an elective for your degree program? ⊠ Required □ Elective
Course Prefix: ASTR	Is this course offered v	within your dept/school? ⊠ Yes □ No
Course Number: 111	If no, collaborating dept/	school must also complete the remaining elements, and must sign below.
Course Title: General		
Astronomy I	Course Rotation:	☐ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below)
Credit Hours: 4		
New course: ☐ Yes No	Intended Frequency:	☑ Every academic year □ Every semester □ Every other year
Revised course: ☐ Yes No		☐ At least once every three years ☐ Other
Projected student enrollment	Signature of collabora	ting chair/director indicating acknowledgement for inclusion and designation if
per academic year: 125	not offered in dept/sc	hool:
R Area:	Is this course required	or an elective for your degree program? □ Required Elective
Course Prefix: GEOL	Is this course offered v	within your dept/school? ⊠ Yes □ No
Course Number: 106	If no, collaborating dept/	school must also complete the remaining elements, and must sign below.
Course Title: It's About Time: A		
History of Earth, Life, and	Course Rotation:	☐ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below)
Global Change		
Credit Hours: 4	Intended Frequency:	☑ Every academic year ☐ Every semester ☐ Every other year
New course: ☐ Yes		☐ At least once every three years ☐ Other
Revised course: ⊠ Yes ☐ No		, ,
	Signature of collabora	ting chair/director indicating acknowledgement for inclusion and designation if
Projected student enrollment	not offered in dept/sc	hool:
per academic year: 20		
R Area:	Is this course required	or an elective for your degree program? □ Required Elective
Course Prefix: ASTR	Is this course offered v	within your dept/school? ⊠ Yes □ No
Course Number: 310	If no, collaborating dept/	school must also complete the remaining elements, and must sign below.
Course Title: Observational		
Methods in Astronomy	Course Rotation:	☐ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below)
Credit Hours: 3		
New course: ☐ Yes No	Intended Frequency:	oxtimes Every academic year $oxtimes$ Every semester $oxtimes$ Every other year
Revised course: ☐ Yes No		☐ At least once every three years ☐ Other
Projected student enrollment	Signature of collabora	ting chair/director indicating acknowledgement for inclusion and designation if
per academic year: 20	not offered in dept/sc	hool:
R Area:	Is this course require	d or an elective for your degree program? ☐ Required Elective
Course Prefix: ASTR	Is this course offered	within your dept/school? ⊠ Yes □ No
Course Number: 220	If no, collaborating dep	t/school must also complete the remaining elements, and must sign below.
Course Title: Introduction to		
Astrophysics	Course Rotation:	□ Fall □ Spring □ Intersession □ Other (Explain below)
Credit Hours: 3		
New course: ☐ Yes	Intended Frequency:	☑ Every academic year □ Every semester □ Every other year
Revised course: ☐ Yes ☒ No		☐ At least once every three years ☐ Other
Projected student enrollment		ating chair/director indicating acknowledgement for inclusion and designation if
per academic year: 20	not offered in dept/s	chool:
R Area:	Is this course require	d or an elective for your degree program? ☐ Required Elective
Course Prefix: GEOL		within your dept/school? 🛛 Yes 🔲 No
Course Number: 365	If no, collaborating dep	t/school must also complete the remaining elements, and must sign below.

Course Title: Earth's Ocean and Climate Systems Credit Hours: 4 New course:
Credit Hours: 4 New course: ☐ Yes ☐ No Revised course: ☐ Yes ☐ No Projected student enrollment per academic year: 20 R Area: ☐ Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: ☐ Is this course required or an elective for your degree program? ☐ Required ☐ Elective Is this course offered within your dept/school? ☐ Yes ☐ No Course Number: 301 Course Title: Atmospheric Physics ☐ Course Rotation: ☐ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below) Credit Hours: 4 New course: ☐ Yes ☐ No Revised student enrollment per academic year: 20 R Area: ☐ Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: ☐ Is this course required or an elective for your degree program? ☐ Required ☐ Elective Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: ☐ Is this course required or an elective for your degree program? ☐ Required ☐ Elective Is this course required or an elective for your degree program? ☐ Required ☐ Elective Is this course required or an elective for your degree program? ☐ Required ☐ Elective Is this course offered within your dept/school? ☐ Yes ☐ No
Revised course: Yes No
Revised course: ☑ Yes ☐ No ☐ At least once every three years ☐ Other Projected student enrollment per academic year: 20 R Area: Course Prefix: PHYS Course Number: 301 Course Title: Atmospheric Physics Credit Hours: 4 New course: ☐ Yes ☒ No Revised student enrollment per academic year: 20 R Area: Course Rotation: Co
Projected student enrollment per academic year: 20 R Area:
not offered in dept/school: R Area: Course Prefix: PHYS Course Number: 301 Course Title: Atmospheric Physics Credit Hours: 4 New course: ☐ Yes ☒ No Revised course: ☐ Yes ☒ No Projected student enrollment per academic year: 20 R Area: Course Prefix: PHYS Is this course erequired or an elective for your degree program? ☐ Required ☒ Elective Is this course offered within your dept/school? ☒ Yes ☐ No If no, collaborating dept/school must also complete the remaining elements, and must sign below. Course Rotation: ☒ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below) Intended Frequency: ☐ Every academic year ☐ Every semester ☒ Every other year ☐ At least once every three years ☐ Other Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Is this course required or an elective for your degree program? ☐ Required ☒ Elective Is this course offered within your dept/school? ☒ Yes ☐ No
R Area: Course Prefix: PHYS Course Number: 301 Course Title: Atmospheric Physics Credit Hours: 4 New course: □ Yes ☒ No Revised course: □ Yes ☒ No Projected student enrollment per academic year: 20 R Area: Course Prefix: PHYS Is this course required or an elective for your degree program? □ Required ☒ Elective Is this course offered within your dept/school? ☒ Yes □ No If no, collaborating dept/school must also complete the remaining elements, and must sign below. Course Rotation: ☒ Fall □ Spring □ Intersession □ Other (Explain below) Intended Frequency: □ Every academic year □ Every semester ☒ Every other year □ At least once every three years □ Other Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Is this course required or an elective for your degree program? □ Required ☒ Elective Course Prefix: GEOL Is this course offered within your dept/school? ☒ Yes □ No
Course Prefix: PHYS Course Number: 301 Course Title: Atmospheric Physics Credit Hours: 4 New course: □ Yes □ No Revised course: □ Yes □ No Projected student enrollment per academic year: 20 R Area: Course Prefix: PHYS Is this course offered within your dept/school? ☑ Yes □ No If no, collaborating dept/school must also complete the remaining elements, and must sign below. Course Rotation: □ Fall □ Spring □ Intersession □ Other (Explain below) Intended Frequency: □ Every academic year □ Every semester ☑ Every other year □ At least once every three years □ Other Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Course Prefix: GEOL Is this course required or an elective for your degree program? □ Required ☑ Elective Is this course offered within your dept/school? ☑ Yes □ No
Course Number: 301 Course Title: Atmospheric Physics Credit Hours: 4 New course: ☐ Yes ☒ No Revised course: ☐ Yes ☒ No Projected student enrollment per academic year: 20 R Area: Course Rotation: ☐ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below) Intended Frequency: ☐ Every academic year ☐ Every semester ☒ Every other year ☐ At least once every three years ☐ Other Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Course Rotation: ☒ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below) Intended Frequency: ☐ Every academic year ☐ Every semester ☒ Every other year ☐ At least once every three years ☐ Other Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Course Rotation: ☒ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below) Intended Frequency: ☐ Every academic year ☐ Every semester ☒ Every other year ☐ At least once every three years ☐ Other Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Is this course required or an elective for your degree program? ☐ Required ☒ Elective Signature of collaborating other inclusion and designation in not offered in dept/school:
Course Title: Atmospheric Physics Credit Hours: 4 New course: Yes No Revised course: Yes No Projected student enrollment per academic year: 20 R Area: Course Rotation: Fall Spring Intersession Other (Explain below) Intended Frequency: Every academic year Every semester Every other year At least once every three years Other Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Course Rotation: Fall Spring Intersession Other (Explain below) Intended Frequency: Every academic year Devery semester Every other year At least once every three years Other Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Course Rotation: Fall Spring Intersession Other (Explain below) Intended Frequency: Every academic year Bevery semester Every other year At least once every three years Other Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Is this course required or an elective for your degree program? Required Elective Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school:
Physics Credit Hours: 4 New course: ☐ Yes ☒ No Revised course: ☐ Yes ☒ No Projected student enrollment per academic year: 20 RArea: Course Rotation: ☒ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below) Intended Frequency: ☐ Every academic year ☐ Every semester ☒ Every other year ☐ At least once every three years ☐ Other Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Course Prefix: GEOL Is this course equired or an elective for your degree program? ☐ Required ☒ Elective Is this course offered within your dept/school? ☒ Yes ☐ No
Credit Hours: 4 New course: ☐ Yes ☒ No Intended Frequency: ☐ Every academic year ☐ Every semester ☒ Every other year Revised course: ☐ Yes ☒ No ☐ At least once every three years ☐ Other Projected student enrollment per academic year: 20 Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Is this course required or an elective for your degree program? ☐ Required ☒ Elective Course Prefix: GEOL Is this course offered within your dept/school? ☒ Yes ☐ No
New course: Yes No Intended Frequency: □ Every academic year □ Every semester ☑ Every other year Projected student enrollment per academic year: 20 Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Is this course required or an elective for your degree program? □ Required ☑ Elective Course Prefix: GEOL Is this course offered within your dept/school? ☑ Yes □ No
Revised course: ☐ Yes ☒ No ☐ At least once every three years ☐ Other Projected student enrollment per academic year: 20 Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: R Area: Is this course required or an elective for your degree program? ☐ Required ☒ Elective Course Prefix: GEOL Is this course offered within your dept/school? ☒ Yes ☐ No
Projected student enrollment per academic year: 20 R Area: Course Prefix: GEOL Signature of collaborating chair/director indicating acknowledgement for inclusion and designation in not offered in dept/school: Is this course required or an elective for your degree program? ☐ Required ☑ Elective
per academic year: 20 not offered in dept/school: R Area: Is this course required or an elective for your degree program? ☐ Required ☑ Elective Course Prefix: GEOL Is this course offered within your dept/school? ☑ Yes ☐ No
R Area: Is this course required or an elective for your degree program? ☐ Required ☑ Elective Course Prefix: GEOL Is this course offered within your dept/school? ☑ Yes ☐ No
Course Prefix: GEOL Is this course offered within your dept/school? \boxtimes Yes \square No
Course Number, 220 If no, collaborating dept/school must also complete the remaining elements, and must sign below
Course Number: 520 35
Course Title: Sedimentary
Petrology and Stratigraphy Course Rotation: ☐ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below)
Credit Hours: 4 New course: □ Yes ☒ No Intended Frequency: ☒ Every academic year □ Every semester □ Every other year
New course: ☐ Yes ☒ No Intended Frequency: ☒ Every academic year ☐ Every semester ☐ Every other year Revised course: ☐ Yes ☒ No ☐ At least once every three years ☐ Other
Revised course. The second of the second o
Projected student enrollment Signature of collaborating chair/director indicating acknowledgement for inclusion and designation if
per academic year: 20 not offered in dept/school:
R Area: Is this course required or an elective for your degree program? ☐ Required ☒ Elective
Course Prefix: GEOL
Course Number: 310 If no, collaborating dept/school must also complete the remaining elements, and must sign below.
Course Title: Mineralogy
Credit Hours: 4 Course Rotation: ☐ Fall ☐ Spring ☐ Intersession ☐ Other (Explain below)
New course: ☐ Yes ☒ No
Revised course: ☐ Yes ☒ No Intended Frequency: ☒ Every academic year ☐ Every semester ☐ Every other year
☐ At least once every three years ☐ Other Projected student enrollment
per academic year: 20 Signature of collaborating chair/director indicating acknowledgement for inclusion and designation if
not offered in dept/school:
R Designated Course Required within the Program of Study Approved for Inclusion in the General
Education Coursework: (please list at least one, can also be listed above but does not need to be): GEOL
105
, ===

R Area:

Learning Goal: To apply scientific and quantitative reasoning to questions about the natural world, mathematics, or related areas.

Learning Outcome 1: Students apply scientific and quantitative information to test problems and draw conclusions.

Description of learning outcome assessment plan:

Data will be collected from the REAL General Studies Minor assessments conducted by the university in the student's senior year. Once the data is received in the department the department's assessment committee will review the data to determine if corrective action is necessary. If needed the assessment committee will develop an improvement plan in combination with faculty teaching classes in this area and the department's curriculum committee. The

	agreed upon changes will be incorporated department's assessment committee with the collected assessment data to determine further	Il then continue monitoring nine the effectiveness of the actions if necessary.
Learning Outcome 2: Students evaluate the quality of data, methods, or inferences used to generate scientific and quantitative knowledge.	Description of learning outcome assessing Data will be collected from the REAL Gerassessments conducted by the university Once the data is received in the departmassessment committee will review the data action is necessary. If needed the assess develop an improvement plan in combin classes in this area and the department's agreed upon changes will be incorporated department's assessment committee will the collected assessment data to determine further	neral Studies Minor y in the student's senior year nent the department's ata to determine if corrective ment committee will nation with faculty teaching s curriculum committee. The ed into the classes. The Il then continue monitoring nine the effectiveness of the
Additional information for REAL Cour		,
☑ Yes ☐ No If not, what additi	adequate to support this program alignm onal material resources would be needed equate to support this program alignmen	1?
☐ Yes ☐ No If not, what addition	onal space resources would be needed?	
	dequate to support this program alignme onal human resources would be needed?	
Department Curriculum Committee Recommendation:	Signature:	Date:
Chair/Dean on Behalf of Dept/School:	Signature:	Date:
College Curriculum Committee Approval:	Signature:	Date:
Dean/AVP Approval:	Signature:	Date:
REAL Council Recommendation:	Signature:	Date:

Faculty Senate Curriculum Committee Recommendation:	Signature:	Date:
Faculty Senate Approval:	Signature:	Date:
Provost Approval:	Signature:	Date: