

Advisor: _____

Name: _____

Date admitted into Major: _____

Transfer credits: _____

**BACHELOR OF SCIENCE
GEOLOGICAL SCIENCES
GEOLOGY CONCENTRATION**

GENERAL EDUCATION CORE REQUIREMENTS

Competencies			
<input type="checkbox"/>	Basic College Math		
<input type="checkbox"/>	Reading Comprehension		
<input type="checkbox"/>	Computer Literacy		
ENG	101	Composition I	3 _____
ENG	102	Composition II	3 _____
SPC	101	(Public Speaking)	3 _____
SMS	_____	(Health)	3 _____
SMS	_____	(Activity)	.5 _____
SMS	_____	(Activity)	.5 _____
Distribution Sequences (18-20 credits)			
+/*	_____	(Lab Science I)	3-4 _____
+/*	_____	(Lab Science II)	3-4 _____
HIS	101	World History I	3 _____
HIS	102	World History II	3 _____
_____	_____	(Literature I)	3 _____
_____	_____	(Literature II)	3 _____
Distribution Electives (15 credits)			
Among the distribution electives, the student must earn at least 3 but no more than 9 additional semester hours in each of the three divisions.			
Humanities (Division I)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Science/Mathematics (Division II)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Social Sciences (Division III)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
(Note: Courses allowable as distribution electives are marked DI, DII, or DIII in the College Catalog.)			
QUANTITATIVE (Q)	_____	DIVERSITY (V)	_____
		WRITING (W)	_____

COURSES IN MAJOR (51-52 credits total)

Major Core Courses (31 credits)

GLS	100	Physical Geology w/Lab	4 _____
GLS	201	Historical Geology	4 _____
GLS	210	Geomorphology	4 _____
GLS	221	Mineralogy	4 _____
GLS	322	Petrology	4 _____
GLS	334	Sedimentation & Stratigraphy	4 _____
GLS	341	Structural Geology & Tectonics	4 _____
GLS	353	Geochemistry	3 _____

Major Concentration Courses (11-12 credits)

GLS	101	Field Studies in Earth Science	4 _____
GLS	330	Paleontology	4 _____
GLS	_____	Elective numbered 200 and above	3-4 _____

Major Capstone Courses (9 credits)

†	GLS	470	Field Geology	3 _____
†	GLS	485	Earth Science Study-Field Sem	3 _____
	GLS	500	Senior Research	3 _____

SUPPORT COURSES (12-16 credits total)

Choose two courses from the following list:

MAT	110	Precalculus	3 _____
MAT	220	Calculus I	4 _____
MAT	221	Calculus II	4 _____
MAT	247	Statistics	3 _____

And two courses from BIO, CHE, PHS MAT or ‡GPH:

_____	_____	_____	_____
_____	_____	_____	_____

MINOR/FREE ELECTIVES (4 credits minimum)

May be necessary to take additional credits to attain the minimum 120 credits required for graduation.

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

* These are **required** support courses which may also be used to satisfy the indicated Distribution requirements. A student may choose to fulfill Distribution requirements with courses other than the ones listed, but these listed courses must still be taken.

Note: If a course is used to satisfy two or more requirements, (for example, a support course and a distribution elective), the credits are counted in only one place. Using a course to satisfy more than one requirement does **not** reduce the total credits required for graduation.

+ Science sequence must be chosen from the following list: BIO 121/122, BIO 131/132, BIO 115H/116H, CHE 120/121, CHE 130/131, CHE 130/212, OHS 101A/102A, PHS 211A/212A, PHS 221/222, .

‡ Choose from: GPH 320, 343, or 421

Acceptable science electives can be substituted with permission of Department Chairperson.

† 6 credits must be earned in any combination of GLS 470/GLS 485.

LEVEL I TO BE COMPLETED IN THE FIRST 30 CREDITS LEVEL II TO BE COMPLETED IN THE FIRST 53 CREDITS LEVEL III TO BE COMPLETED BEFORE GRADUATION

Exceptions in the timing of courses will be made for transfer students.

Total minimum credits for graduation: 120

Effective: 9/09

Advisor: _____

Name: _____

Date admitted into Major: _____

Transfer credits: _____

**BACHELOR OF SCIENCE
GEOLOGICAL SCIENCES
EARTH POLICY CONCENTRATION**

GENERAL EDUCATION CORE REQUIREMENTS

Competencies			
<input type="checkbox"/>	Basic College Math		
<input type="checkbox"/>	Reading Comprehension		
<input type="checkbox"/>	Computer Literacy		
ENG	101	Composition I	3 _____
ENG	102	Composition II	3 _____
SPC	101	(Public Speaking)	3 _____
SMS	_____	(Health)	3 _____
SMS	_____	(Activity)	.5 _____
SMS	_____	(Activity)	.5 _____
Distribution Sequences (18-20 credits)			
+/*	_____	(Lab Science I)	3-4 _____
+/*	_____	(Lab Science II)	3-4 _____
HIS	101	World History I	3 _____
HIS	102	World History II	3 _____
_____	_____	(Literature I)	3 _____
_____	_____	(Literature II)	3 _____
Distribution Electives (15 credits)			
Among the distribution electives, the student must earn at least 3 but no more than 9 additional semester hours in each of the three divisions.			
Humanities (Division I)			
*	PHL	224	Environmental Ethics 3 _____
_____	_____	_____	_____
_____	_____	_____	_____
Science/Mathematics (Division II)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Social Sciences (Division III)			
*	ECO	319	Env. & Nat. Resource Economics 3 _____
_____	_____	_____	_____
_____	_____	_____	_____
(Note: Courses allowable as distribution electives are marked DI, DII, or DIII in the College Catalog.)			
QUANTITATIVE (Q)	_____	DIVERSITY (V)	_____
		WRITING (W)	_____

COURSES IN MAJOR (52 credits total)

Major Core Courses (31 credits)

GLS	100	Physical Geology w/Lab	4	_____
GLS	201	Historical Geology	4	_____
GLS	210	Geomorphology	4	_____
GLS	221	Mineralogy	4	_____
GLS	322	Petrology	4	_____
GLS	334	Sedimentation & Stratigraphy	4	_____
GLS	341	Structural Geology & Tectonics	4	_____
GLS	353	Geochemistry	3	_____

Major Concentration Courses (9 credits)

Choose three courses from the following list:

GPH	265	Land Use Planning	3	_____
HIS	210	Legal History	3	_____
POL	304	Environmental Politics	3	_____
IDS	366	Energy and the Environment	3	_____

Major Capstone Courses (9 credits)

†	GLS	470	Field Geology	3	_____
†	GLS	485	Earth Science Study-Field Sem	3	_____
	GLS	500	Senior Research in Geology	3	_____

SUPPORT COURSES (9-12 credits total)

Choose one course from the following list:

MAT	110	Precalculus	3	_____
MAT	220	Calculus I	4	_____
MAT	247	Statistics	3	_____

And choose two courses from BIO, CHE, PHS, MAT, or ‡GPH

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

FREE ELECTIVES (Minimum 8 credits total)

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

- * These are **required** support courses which may also be used to satisfy the indicated Distribution requirements. A student may choose to fulfill Distribution requirements with courses other than the ones listed, but these listed courses must still be taken.
- Note: If a course is used to satisfy two or more requirements, (for example, a support course and a distribution elective), the credits are counted in only one place. Using a course to satisfy more than one requirement does **not** reduce the total credits required for graduation.
- + Science sequence must be chosen from the following list: BIO 121/122, BIO 131/132, BIO 115H/116H, CHE 120/121, CHE 130/131, CHE 130/212, PHS 101A/102A, PHS 211A/212A, PHS 221/222
- † 6 credits must be earned in any combination of GLS 470 or GLS 485.
- ‡ Acceptable GPH courses include: 320, 343, or 421
- # Acceptable science electives can be substituted with permission of Department Chairperson.

LEVEL I TO BE COMPLETED IN THE FIRST 30 CREDITS LEVEL II TO BE COMPLETED IN THE FIRST 53 CREDITS LEVEL III TO BE COMPLETED BEFORE GRADUATION

Exceptions in the timing of courses will be made for transfer students.

Total minimum credits for graduation: 120

Effective: 9/09

Advisor: _____

Name: _____

Date admitted into Major: _____

Transfer credits: _____

**BACHELOR OF SCIENCE
GEOLOGICAL SCIENCES
EARTH RESOURCES CONCENTRATION**

GENERAL EDUCATION CORE REQUIREMENTS

Competencies			
<input type="checkbox"/>	Basic College Math		
<input type="checkbox"/>	Reading Comprehension		
<input type="checkbox"/>	Computer Literacy		
ENG	101	Composition I	3 _____
ENG	102	Composition II	3 _____
SPC	101	(Public Speaking)	3 _____
SMS	_____	(Health)	3 _____
SMS	_____	(Activity)	.5 _____
SMS	_____	(Activity)	.5 _____
Distribution Sequences (18-20 credits)			
+/*	_____	(Lab Science I)	3-4 _____
+/*	_____	(Lab Science II)	3-4 _____
HIS	101	World History I	3 _____
HIS	102	World History II	3 _____
_____	_____	(Literature I)	3 _____
_____	_____	(Literature II)	3 _____
Distribution Electives (15 credits)			
Among the distribution electives, the student must earn at least 3 but no more than 9 additional semester hours in each of the three divisions.			
Humanities (Division I)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Science/Mathematics (Division II)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Social Sciences (Division III)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
(Note: Courses allowable as distribution electives are marked DI, DII, or DIII in the College Catalog.)			
QUANTITATIVE (Q)	_____	DIVERSITY (V)	_____
		WRITING (W)	_____

COURSES IN MAJOR (49-50 credits total)

Major Core Courses (31 credits)

GLS	100	Physical Geology w/Lab	4	_____
GLS	201	Historical Geology	4	_____
GLS	210	Geomorphology	4	_____
GLS	221	Mineralogy	4	_____
GLS	322	Petrology	4	_____
GLS	334	Sedimentation & Stratigraphy	4	_____
GLS	341	Structural Geology & Tectonics	4	_____
GLS	353	Geochemistry	3	_____

Major Concentration Courses (9-10 credits)

Choose three courses from the following list:

GLS	222	Gemology	3	_____
GLS	231	Global Geochemical Cycles	3	_____
GLS	351	Economic Geology	3	_____
GLS	356	Hydrology	4	_____
GLS	352	Petroleum Geology	3	_____
IDS	366	Energy & the Environment	3	_____

Major Capstone Courses (9 credits)

†	GLS	470	Field Geology	3	_____
†	GLS	485	Earth Science Study-Field Sem	3	_____
	GLS	500	Senior Research in Geology	3	_____

SUPPORT COURSES (9-12 credits total)

Choose one course from the following list:

MAT	110	Precalculus	3	_____
MAT	220	Calculus I	4	_____
MAT	247	Statistics	3	_____

And choose two courses from BIO, CHE, PHS, MAT, or ‡GPH

MINOR/FREE ELECTIVES (10 credits minimum)

May be necessary to take additional credits to attain the minimum 120 credits required for graduation.

Note: If a course is used to satisfy two or more requirements, (for example, a support course and a distribution elective), the credits are counted in only one place. Using a course to satisfy more than one requirement does **not** reduce the total credits required for graduation.

+ Science sequence must be chosen from the following list: BIO 121/122, BIO 131/132, BIO 115H/116H, CHE 120/121, CHE 130/131, CHE 130/212, PHS 101A/102A, PHS 211A/212A, PHS 221/222, .

† 6 credits must be earned in any combination of GLS 470/GLS 485.

‡ Choose from : GPH 320, 343, or 421

Acceptable science electives can be substituted with permission of Department Chairperson.

LEVEL I TO BE COMPLETED IN THE FIRST 30 CREDITS LEVEL II TO BE COMPLETED IN THE FIRST 53 CREDITS LEVEL III TO BE COMPLETED BEFORE GRADUATION

Exceptions in the timing of courses will be made for transfer students.

Total minimum credits for graduation: 120

Effective: 9/09

Salem State College

Advisor: _____

Name: _____

Date admitted into Major: _____

Transfer credits: _____

**BACHELOR OF SCIENCE
GEOLOGICAL SCIENCES
EARTH SCIENCE CONCENTRATION**

GENERAL EDUCATION CORE REQUIREMENTS

Competencies				
<input type="checkbox"/>	Basic College Math			
<input type="checkbox"/>	Reading Comprehension			
<input type="checkbox"/>	Computer Literacy			
ENG	101	Composition I	3	_____
ENG	102	Composition II	3	_____
SPC	101	(Public Speaking)	3	_____
SMS	_____	(Health)	3	_____
SMS	_____	(Activity)	.5	_____
SMS	_____	(Activity)	.5	_____
Distribution Sequences (18-20 credits)				
*	GLS	100	Physical Geology with Lab	4 _____
*	GPH	100P	Weather and Climate	4 _____
	HIS	101	World History I	3 _____
	HIS	102	World History II	3 _____
	_____	_____	(Literature I)	3 _____
	_____	_____	(Literature II)	3 _____
Distribution Electives (15 credits)				
Among the distribution electives, the student must earn at least 3 but no more than 9 additional semester hours in each of the three divisions.				
Humanities (Division I)				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Science/Mathematics (Division II)				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Social Sciences (Division III)				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
(Note: Courses allowable as distribution electives are marked DI, DII, or DIII in the College Catalog.)				
QUANTITATIVE (Q)	_____	DIVERSITY (V)	_____	WRITING (W)

COURSES IN MAJOR (48-49 credits total)

Major Core Courses (27 credits)

GLS	201	Historical Geology	4	_____
GLS	210	Geomorphology	4	_____
GLS	221	Mineralogy	4	_____
GLS	322	Petrology	4	_____
GLS	334	Sedimentation & Stratigraphy	4	_____
GLS	341	Structural Geology & Stratigraphy	4	_____
GLS	353	Geochemistry	3	_____

Major Concentration Courses (12-13 credits)

GLS	120	Our Geologic Environment	3	_____
GPH	350P	Meteorology	3	_____
GLS	212	Submarine Geology (3 cr.)		_____
		OR		
GPH	252P	Oceanography (3 cr.)		_____
		OR		
BIO	322	Biological Oceanography (4 cr.)	3-4	_____
GLS	115	Geology of the Solar System (3 cr.)		_____
		OR		
PHS	207	Astronomy (3 cr.)	3	_____

Major Capstone Courses (9 credits)

†	GLS	470	Field Geology	_____
†	GLS	485	Earth Science Study-Field	_____
†	GLS	500	Senior Research	_____

SUPPORT COURSES (15-20 credits total)

Choose two courses from the following list:

MAT	110	Precalculus	3	_____
MAT	220	Calculus I	4	_____
MAT	221	Calculus II	4	_____
MAT	247	Statistics I	3	_____

And choose three courses from BIO, CHE, PHS, MAT, or ‡GPH:

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

MINOR/FREE ELECTIVES (3 credits minimum)

May be necessary to take additional credits to attain the minimum 120 credits required for graduation.

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

- * These are **required** support courses which may also be used to satisfy the indicated Distribution requirements. A student may choose to fulfill Distribution requirements with courses other than the ones listed, but these listed courses must still be taken.
- Note: If a course is used to satisfy two or more requirements, (for example, a support course and a distribution elective), the credits are counted in only one place. Using a course to satisfy more than one requirement does **not** reduce the total credits required for graduation.
- † 6 credits must be earned in any combination of GLS 470 or GLS 485.
- ‡ Acceptable GPH courses include: 320, 343, or 421
- # No more than one course of each type without permission of Department Chairperson.

LEVEL I TO BE COMPLETED IN THE FIRST 30 CREDITS LEVEL II TO BE COMPLETED IN THE FIRST 53 CREDITS LEVEL III TO BE COMPLETED BEFORE GRADUATION

Exceptions in the timing of courses will be made for transfer students.

Total minimum credits for graduation: 120

Effective:9/09

Advisor: _____

Name: _____

Date admitted into Major: _____

Transfer credits: _____

**BACHELOR OF SCIENCE
GEOLOGICAL SCIENCES
ENVIRONMENTAL GEOLOGY CONCENTRATION**

GENERAL EDUCATION CORE REQUIREMENTS

Competencies			
<input type="checkbox"/>	Basic College Math		
<input type="checkbox"/>	Reading Comprehension		
<input type="checkbox"/>	Computer Literacy		
ENG	101	Composition I	3 _____
ENG	102	Composition II	3 _____
SPC	101	(Public Speaking)	3 _____
SMS	_____	(Health)	3 _____
SMS	_____	(Activity)	.5 _____
SMS	_____	(Activity)	.5 _____
Distribution Sequences (18-20 credits)			
+	_____	Lab Science Sequence I	4 _____
+	_____	Lab Science Sequence II	4 _____
HIS	101	World History I	3 _____
HIS	102	World History II	3 _____
_____	_____	(Literature I)	3 _____
_____	_____	(Literature II)	3 _____
Distribution Electives (15 credits)			
Among the distribution electives, the student must earn at least 3 but no more than 9 additional semester hours in each of the three divisions.			
Humanities (Division I)			
_____	_____	_____	_____
_____	_____	_____	_____
Science/Mathematics (Division II)			
_____	_____	_____	_____
_____	_____	_____	_____
Social Sciences (Division III)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
(Note: Courses allowable as distribution electives are marked DI, DII, or DIII in the College Catalog.)			
QUANTITATIVE (Q)	_____	DIVERSITY (V)	_____
		WRITING (W)	_____

COURSES IN MAJOR (51-52 credits total)

Major Core Courses (31 credits)

GLS	100	Physical Geology	4 _____
GLS	201	Historical Geology	4 _____
GLS	210	Geomorphology	4 _____
GLS	221	Mineralogy	4 _____
GLS	322	Petrology	4 _____
GLS	334	Sedimentation & Stratigraphy	4 _____
GLS	341	Structural Geology & Tectonics	4 _____
GLS	353	Geochemistry	3 _____

Major Concentration Courses (11-12 credits)

Choose three courses from:

GLS	356	Hydrology	4 _____
GLS	357	Environmental Geology	3 _____
GLS	380	Applied Environmental Geophysics	4 _____
GLS	214	Coastal Geology	4 _____

Major Capstone Courses (9 credits)

†	GLS	470	Field Geology	_____
†	GLS	485	Earth Scienc Study Field	_____
	GLS	500	Senior Res in Geology	3 _____

SUPPORT COURSES (12-16 credits total)

Choose two courses from the following list:

MAT	110	Precalculus	3 _____
MAT	220	Calculus I	4 _____
MAT	221	Calculus II	4 _____
MAT	247	Statistics	3 _____

#And choose two courses from BIO, CHE, PHS, MAT, or ‡GPH:

MINOR/FREE ELECTIVES (4 credits minimum)

May be necessary to take additional credits to attain the minimum 120 credits required for graduation.

Note: If a course is used to satisfy two or more requirements, (for example, a support course and a distribution elective), the credits are counted in only one place. Using a course to satisfy more than one requirement does **not** reduce the total credits required for graduation.

+ Science sequence must be chosen from the following list: BIO 121/122, BIO 131/131, CHE 120/121, CHE 130/131. CHE 130/212, PHS 101A/102A, PHS 211A/212A, PHS 221/222.

† 6 credits must be earned in any combination of GLS 470/485.

Acceptable science electives can be substituted with permission of Department Chairperson.

‡ Choose from: GPH 320, 343, or 421.

LEVEL I TO BE COMPLETED IN THE FIRST 30 CREDITS LEVEL II TO BE COMPLETED IN THE FIRST 53 CREDITS LEVEL III TO BE COMPLETED BEFORE GRADUATION

Exceptions in the timing of courses will be made for transfer students.

Total minimum credits for graduation: 120

Effective: 9/09

Salem State College

Advisor: _____

Name: _____

Date admitted into Major: _____

Transfer credits: _____

**BACHELOR OF SCIENCE
GEOLOGICAL SCIENCES
GEOARCHEOLOGY CONCENTRATION**

GENERAL EDUCATION CORE REQUIREMENTS

Competencies				
<input type="checkbox"/>	Basic College Math			
<input type="checkbox"/>	Reading Comprehension			
<input type="checkbox"/>	Computer Literacy			
ENG	101	Composition I	3	_____
ENG	102	Composition II	3	_____
SPC	101	(Public Speaking)	3	_____
SMS	_____	(Health)	3	_____
SMS	_____	(Activity)	.5	_____
SMS	_____	(Activity)	.5	_____
Distribution Sequences (18-20 credits)				
+/*	_____	(Lab Science I)	3-4	_____
+/*	_____	(Lab Science II)	3-4	_____
HIS	101	World History I	3	_____
HIS	102	World History II	3	_____
_____	_____	(Literature I)	3	_____
_____	_____	(Literature II)	3	_____
Distribution Electives (15 credits)				
Among the distribution electives, the student must earn at least 3 but no more than 9 additional semester hours in each of the three divisions.				
Humanities (Division I)				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Science/Mathematics (Division II)				
*	MAT	110	Precalculus	3 _____
*	MAT	247	Statistics	3 _____
_____	_____	_____	_____	_____
Social Sciences (Division III)				
*	GPH	320	Geographic Information Systems	3 _____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
(Note: Courses allowable as distribution electives are marked DI, DII, or DIII in the College Catalog.)				
QUANTITATIVE (Q) _____ DIVERSITY (V) _____ WRITING (W) _____				

COURSES IN MAJOR (55 credits total)

Major Core Courses (31 credits)

GLS	100	Physical Geology w/Lab	4	_____
GLS	201	Historical Geology	4	_____
GLS	210	Geomorphology	4	_____
GLS	221	Mineralogy	4	_____
GLS	322	Petrology	4	_____
GLS	334	Sedimentation & Stratigraphy	4	_____
GLS	341	Structural Geology & Tectonics	4	_____
GLS	353	Geochemistry	3	_____

Major Concentration Courses (11 credits)

GLS	235	Forensic Geology	4	_____
GLS	235	Geoarcheology	3	_____
GLS	380	Applied Env. Geophysics	4	_____

Major Capstone Courses (9 credits)

†	GLS	470	Field Geology	_____
†	GLS	485	Earth Science Study-Field Sem	_____
	GLS	500	Senior Research in Geology	3 _____

SUPPORT COURSES (9 credits total)

HIS	376	Introduction to Archeology	3	_____
HIS	377	Architectural History of America	3	_____
HIS	378	American Material Culture	3	_____

MINOR/FREE ELECTIVES (12 credits minimum)

May be necessary to take additional credits to attain the minimum 120 credits required for graduation.

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

* These are **required** support courses which may also be used to satisfy the indicated Distribution requirements. A student may choose to fulfill Distribution requirements with courses other than the ones listed, but these listed courses must still be taken.

Note: If a course is used to satisfy two or more requirements, (for example, a support course and a distribution elective), the credits are counted in only one place. Using a course to satisfy more than one requirement does **not** reduce the total credits required for graduation.

+ Science sequence must be chosen from the following list: BIO 121/122, BIO 131/132, BIO 115H/116H, CHE 120/121, CHE 130/131, CHE 130/212, PHS 101A/102A, PHS 211A/212A, PHS 221/222, .

† 6 credits must be earned in any combination of GLS 470/GLS 485.

LEVEL I TO BE COMPLETED IN THE FIRST 30 CREDITS LEVEL II TO BE COMPLETED IN THE FIRST 53 CREDITS LEVEL III TO BE COMPLETED BEFORE GRADUATION

Exceptions in the timing of courses will be made for transfer students.

Total minimum credits for graduation: 120

Effective: 9/09

Salem State College

Advisor: _____

Name: _____

Date admitted into Major: _____

Transfer credits: _____

**BACHELOR OF SCIENCE
GEOLOGICAL SCIENCES
GEOTECHNOLOGY CONCENTRATION**

GENERAL EDUCATION CORE REQUIREMENTS

Competencies			
<input type="checkbox"/>	Basic College Math		
<input type="checkbox"/>	Reading Comprehension		
<input type="checkbox"/>	Computer Literacy		
ENG	101	Composition I	3 _____
ENG	102	Composition II	3 _____
SPC	101	(Public Speaking)	3 _____
SMS	_____	(Health)	3 _____
SMS	_____	(Activity)	.5 _____
SMS	_____	(Activity)	.5 _____
Distribution Sequences (18-20 credits)			
+/*	_____	(Lab Science I)	3-4 _____
+/*	_____	(Lab Science II)	3-4 _____
HIS	101	World History I	3 _____
HIS	102	World History II	3 _____
_____	_____	(Literature I)	3 _____
_____	_____	(Literature II)	3 _____
Distribution Electives (15 credits)			
Among the distribution electives, the student must earn at least 3 but no more than 9 additional semester hours in each of the three divisions.			
Humanities (Division I)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Science/Mathematics (Division II)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Social Sciences (Division III)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
(Note: Courses allowable as distribution electives are marked DI, DII, or DIII in the College Catalog.)			
QUANTITATIVE (Q)	_____	DIVERSITY (V)	_____
		WRITING (W)	_____

COURSES IN MAJOR (51-52 credits total)

Major Core Courses (31 credits)

GLS	100	Physical Geology w/Lab	4 _____
GLS	201	Historical Geology	4 _____
GLS	210	Geomorphology	4 _____
GLS	221	Mineralogy	4 _____
GLS	322	Petrology	4 _____
GLS	334	Sedimentation & Stratigraphy	4 _____
GLS	341	Structural Geology & Tectonics	4 _____
GLS	353	Geochemistry	3 _____

Major Concentration Courses (11-12 credits)

Choose three courses from:

GLS	101	Field Studies in Earth Science	4 _____
GLS	343	Intro to Geophysics	4 _____
GLS	345	Geological Engineering	3 _____
GLS	356	Hydrology	4 _____
GLS	372	Surveying I	4 _____
GLS	373	Surveying II	4 _____
GLS	380	Applied Env. Geophysics	4 _____

Major Capstone Courses (9 credits)

†	GLS	470	Field Geology	3 _____
†	GLS	485	Earth Science Study-Field Sem	3 _____
	GLS	500	Senior Research in Geology	3 _____

SUPPORT COURSES (12-16 credits total)

Choose 2 courses from the following list:

MAT	110	Precalculus	3 _____
MAT	220	Calculus I	4 _____
MAT	221	Calculus II	4 _____
MAT	247	Statistics	3 _____

#And choose two courses from: BIO, CHE, PHS, MAT, or ‡ GPH

_____	_____	_____	_____
_____	_____	_____	_____

MINOR/FREE ELECTIVES (4 credits minimum)

May be necessary to take additional credits to attain the minimum 120 credits required for graduation.

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

* These are **required** support courses which may also be used to satisfy the indicated Distribution requirements. A student may choose to fulfill Distribution requirements with courses other than the ones listed, but these listed courses must still be taken.

Note: If a course is used to satisfy two or more requirements, (for example, a support course and a distribution elective), the credits are counted in only one place. Using a course to satisfy more than one requirement does **not** reduce the total credits required for graduation.

+ Science sequence must be chosen from the following list: BIO 121/122, BIO 131/132, BIO 115H/116H, CHE 120/121, CHE 130/131, CHE 130/212, PHS 101A/102A, PHS 211A/212A, PHS 221/222.

† 6 credits must be earned in any combination of GLS 470/GLS 485.

‡ Acceptable GPH courses include: GPH 320, 343, or 421.

Acceptable science electives can be substituted with permission of Department Chairperson.

LEVEL I TO BE COMPLETED IN THE FIRST 30 CREDITS LEVEL II TO BE COMPLETED IN THE FIRST 53 CREDITS LEVEL III TO BE COMPLETED BEFORE GRADUATION

Exceptions in the timing of courses will be made for transfer students.

Total minimum credits for graduation: 120

Effective: 9/09

Salem State College

Advisor: _____

Name: _____

Date admitted into Major: _____

Transfer credits: _____

**BACHELOR OF SCIENCE
GEOLOGICAL SCIENCES
MARINE GEOLOGY CONCENTRATION**

GENERAL EDUCATION CORE REQUIREMENTS

Competencies			
<input type="checkbox"/>	Basic College Math		
<input type="checkbox"/>	Reading Comprehension		
<input type="checkbox"/>	Computer Literacy		
ENG 101	Composition I	3	_____
ENG 102	Composition II	3	_____
SPC 101	(Public Speaking)	3	_____
SMS _____	(Health)	3	_____
SMS _____	(Activity)	.5	_____
SMS _____	(Activity)	.5	_____
Distribution Sequences (18-20 credits)			
+/* _____	(Lab Science I)	3-4	_____
+/* _____	(Lab Science II)	3-4	_____
HIS 101	World History I	3	_____
HIS 102	World History II	3	_____
_____	(Literature I)	3	_____
_____	(Literature II)	3	_____
Distribution Electives (15 credits)			
Among the distribution electives, the student must earn at least 3 but no more than 9 additional semester hours in each of the three divisions.			
Humanities (Division I)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Science/Mathematics (Division II)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Social Sciences (Division III)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
(Note: Courses allowable as distribution electives are marked DI, DII, or DIII in the College Catalog.)			
QUANTITATIVE (Q) _____	DIVERSITY (V) _____	WRITING (W) _____	

COURSES IN MAJOR (50-51 credits total)

Major Core Courses (31 credits)

GLS 100	Physical Geology w/Lab	4	_____
GLS 201	Historical Geology	4	_____
GLS 210	Geomorphology	4	_____
GLS 221	Mineralogy	4	_____
GLS 322	Petrology	4	_____
GLS 334	Sedimentation & Stratigraphy	4	_____
GLS 341	Structural Geology & Tectonics	4	_____
GLS 353	Geochemistry	3	_____

Major Concentration Courses (10-11 credits)

GLS 212	Submarine Geology	3	_____
GLS 214	Coastal Geology	4	_____

Choose one course from the following list:

GLS 330	Paleontology	3-4	_____
	OR		
BIO 322	Biological Oceanography		
	OR		
GPH 225P	Oceanography		

Major Capstone Courses (9 credits)

† GLS 470	Field Geology	_____	_____
† GLS 485	Earth Science Study-Field Sem	_____	_____
GLS 500	Senior Research in Geology	3	_____

SUPPORT COURSES (12-16 credits total)

Choose two courses from the following list:

MAT 110	Precalculus	3	_____
MAT 220	Calculus I	4	_____
MAT 221	Calculus II	4	_____
MAT 247	Statistics	3	_____

#And choose two courses from: BIO, CHE, PHS, MAT, or ‡ GPH

_____	_____	_____	_____
_____	_____	_____	_____

FREE ELECTIVES (5 credits minimum)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

* These are **required** support courses which may also be used to satisfy the indicated Distribution requirements. A student may choose to fulfill Distribution requirements with courses other than the ones listed, but these listed courses must still be taken.

Note: If a course is used to satisfy two or more requirements, (for example, a support course and a distribution elective), the credits are counted in only one place. Using a course to satisfy more than one requirement does **not** reduce the total credits required for graduation.

+ Science sequence must be chosen from the following list: BIO 121/122, BIO 131/131, CHE 120/121, CHE 130/131. CHE 130/212, PHS 101A/102A, PHS 211A/212A, PHS 221/222.

† 6 credits must be earned in any combination of GLS 470/485.

‡ Choose from: GPH 320, 343, or 421.

Acceptable science electives can be substituted with permission of Department Chairperson.

LEVEL I TO BE COMPLETED IN THE FIRST 30 CREDITS LEVEL II TO BE COMPLETED IN THE FIRST 53 CREDITS LEVEL III TO BE COMPLETED BEFORE GRADUATION

Exceptions in the timing of courses will be made for transfer students.