

See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/> for a complete description of the rules governing curriculum & course changes.

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and the basic tools used exploration and exploitation, including subsurface mapping, well logging and exploration geophysics. *Prerequisites: Graduate standing or permission of the instructor.* Cross-listed with GEOS F646. Stacked with GEOS F446. (3 + 0)

3 Credits Offered Fall Even-numbered Years
Examines the origin of petroleum, the geologic controls on its distribution and accumulation and the basic tools used exploration and exploitation, including subsurface mapping, well logging and exploration geophysics. *Prerequisites: Graduate standing or permission of the instructor.* Cross-listed with PETE F646. Stacked with GEOS F446. (3 + 0)

3 Credits Offered Fall Even-numbered Years
Examines the origin of petroleum, the geologic controls on its distribution and accumulation and the basic tools used exploration and exploitation, including subsurface mapping, well logging and exploration geophysics. *Prerequisites: GEOS F314 and F322 or ~~equivalent~~.* Stacked with GEOS F646. (3 + 0) permission of the instructor.

Undergraduate courses only. Consult with CLA Curriculum Council to apply S or H classification appropriately; otherwise leave fields blank.

H = Humanities S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core? **I** **E**, **E** :

IF YES, 37 0 0 .480011 ref 472c 377.4 7h 0 377 0.4j ET n /Cm /F1..... BT 324 0

xxxxxxx permission of the instructor.

to the Provost for fee approval?

Has the course been offered as special topics or trial course previously?

MEMORANDUM

APPROVALS: Add additional signature lines as needed.



Date

9/20/17

Signature Card Program/Department of

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). Note: The guidelines are online:

The Faculty Senate curriculum committees will review the syllabus to ensure that each of the items listed below are included. If items missing or unclear, the proposed course (or

GEOS 446
Petroleum Geology
3 credits

COURSE OUTLINE: (28 CLASS DAYS)

<i>Week</i>	<i>Topic</i>	<i>Homeworks</i>	<i>Readings</i>
1	Intro—Why petroleum?		
	What is Petroleum?		Selley Ch. 2
2	The subsurface environment	Hwk 1: Calculating geothermal gradients	Selley, Ch. 4
	Methods of Exploration	Hwk 2: Rock id	Selley, Ch. 3.1, 3.2, 3.5
3		Hwk 3: Examining well cuttings and well logs	
4		Hwk 4: Interpreting seismic	Selley, Ch. 3.3
5	The source: How oil forms		Selley, Ch. 5

	<u>Midterm I</u>		

6 **The Reservoir:**
What makes a good reservoir rock?

11	Petroleum systems & plate tectonic habitat	Hwk 9: Using seismic data for structural interpretation and timing	Selley, Ch. 8
12		Hwk 10: Plate tectonic setting of modern day basins	

PETE/GEOS 646
Petroleum Geology
3 credits

Prerequisites:

Instructor:

Office Hours:

Text:

Class format:

Grading Policy

9	<ul style="list-style-type: none"> ○ ○ ○ ○ 	Hwk 8: Constructing subsurface structure maps; Identifying play types from subsurface structure maps	
10	<u>Midterm II</u>		
11	Petroleum systems & plate tectonic habitat	Hwk 9: Using seismic data for structural interpretation and timing	Selley, Ch. 8
12		Hwk 10: Plate tectonic setting of modern day basins	
	Reservoir engineering:	Hwk 11: Simple reserve calculation	Selley, Ch. 6.8-6.9
13	Well Drilling and Completion		
	Non conventional hydrocarbon resources		
14			
Student presentations			

Disability Services: