31-GNC

10. *COMPLETE CATALOG DESCRIPTION including dept., number, title, credits, credit distribution, cross-listings and/or stacking (50 words or less if possible):*

PETE 6XX Flow Assurance in the Petroleum Industry (3 credits)
Study of the thermodynamics of gas hydrates, paraffin waxes, asphaltenes, scale and chemistry of corrosion and

18. ESTIMATED IMPACT

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

Existing classrooms will be used. Current faculty (Abhijit Dandekar) will teach the entire course. There are no impacts.

19. LIBRARY COLLECTIONS

Have you contacted the library collection development officer (kljensen@alaska.edu, 474-6595) with regard to the adequacy of library (and other learning resource

choice of a given field architecture and the specification of its production process and hence, flow assurance must take on a new perspective and focus. Therefore, flow assurance is the need of the hour of the petroleum industry; thus it is crucial that future petroleum engineering graduate students gain specific expertise in this area for the overall benefit of the petroleum industry. Herein lies the purpose of proposing this new course so that we produce a work force ready to face the industry's newer challenges.

Since this course primarily entails fluid flow processes and thermodynamics it will be equally suitable and valuable for civil as well as mechanical engineering graduate students, and undergraduate students who can take this course as their engineering or technical elective.

The proposed course does not lower the quality of UAF education in anyway. As a matter of fact it rather elevates the quality of UAF education because clearly the objective is to be proactive in producing students who will be adequately trained to face petroleum industry's challenges. Moreover, this type of course or

PETROLEUM ENGINEERING DEPARTMENT

PETE 608: Flow Assurance in the Petroleum Industry

Semester:	XXX
Credits:	3
Class Meetings:	3 hours of lecture per week (day TBD); 6-9pm proposed given our Anchorage based students
Room:	DUCK 344 (proposed, since this is VC equipped so the course is also delivered to our graduate students located in Anchorage)
Instructor:	Professor Abhijit Y. Dandekar, Ph.D.
Office:	DUCK 415
Contact information:	(907) 474-6427; Fax: (907) 474-5912; adandekar@alaska.edu
Office hours:	9-11am following the day of course offering

PROPOSED CATALOG DESCRIPTION

Study of the thermodynamics of gas hydrates; paraffin waxes; asphaltenes; scale and chemistry of corrosion and erosion processes. Study of chemical and physical methods used for mitigation of solid phase formation. Experimental analysis and modeling of solid phase formation envelopes. Analysis of flow regimes resulting from the presence of solid phases in oil

INSTRUCTIONAL METHODS

The class will consist of 3 hour lecture per week which will also include in class exercises

demonstration of flow assurance spreadsheet based calculations and discussion of case studies.

GRADING POLICY

Grades will depend on the following:

- Take home mid-term examination (100 points)
- Take home final examination (100 points)
- 5 homework assignments (10 points each)
- Final project (presentation and report is mandatory) will be based on the design of flow assurance strategies for a given case (100 points; 70 for report and 30 for presentation)

Letter grade cut-offs are shown below. Final percentage will be computed on the basis of total points earned by each student to assign a grade. For example if a student earns 350 points, this will result in 100% and A+ grade will be awarded. If a student earns 210 points, this will

COURSE POLICIES

Attendance in class is your responsibility. Students are responsible for making up any missed work (lectures and homeworks). Students are encouraged to arrive to class on time. Make-up examinations will be held only under exceptional circumstances (e.g. illness, family crises, etc.)