Course Syllabus
PNGE 701
ENVIRONMENTAL ISSUES IN PETROLEUM ENGINEERING

Course Introduction
- Credit Hours: 3
- Prerequisite Courses: Graduate Standing
- Method of Instruction: Lecture
- Instructor: Kashy Aminian, Ph.D., Professor
- Class Meets: 1 Sessions/week, 150 minutes per Session
- Course Description: Environmental impacts of petroleum exploration and production, methods to minimize or eliminate potential environmental impacts, treatment and disposal of the drilling and production wastes, and remediation methods for petroleum contaminated sites.

Learner Support
- Instructor Office Location: 325C MRB
- Office Hours: 10-11:50 M-T-W-Th.
- Instructor Email: khaminian@mix.wvu.edu
- Phone: 304.293.3964
- Method of Making Appointment: Email

Instructional Materials
- Required Instructional Materials: Electronic copies of the course notes will be posted on eCampus.

Course Learning Objectives
- To recognize the environmental impacts caused by oil and gas exploration and production.
- To develop alternative design approaches to minimize the environmental impacts.
- To understand the petroleum waste management techniques.
- To select the remediation methods for the petroleum contaminated sites.

Course Activities
1. Introduction to Environmental Issues in Petroleum Industry Gas
2. Environmental Regulations and Protection
3. Environmental Impacts of Drilling and production Operations
4. Petroleum Waste Treatment
5. Remediation of Petroleum Contaminated Soils and Aquifers
6. Environmental Impacts Associated with Offshore Exploration and Production
7. Naturally Occurring Radioactive Materials
8. Impact of Hydrocarbon Utilization on Air Quality
**Assessment**

- **Major Assignments/Assessments:**
  Attendance, Homework, and Exams

- **Grading Criteria:**
  - Attendance is required in the class and the lab.
  - Each absence in the class will result in 10% reduction in Attendance Grade.
  - Homework must be prepared in MS-Word and/or Excel and be submitted on-line.
  - Homework must be prepared by each student separately and must include Homework Number, Name, The Date, Solution Method, and the Results.
  - Two Exams, Mid-term and the Final, will be given. Exam are open-book.

- **Weight of Course Points:**
  Attendance 10%, Homework 30%, and Exams 60%

- **Expected Timeline:**
  One Homework each week (5 before the mid-term)
  Mid-term Exam: 7th week of Class

- **Response Time and Feedback Plan:**
  Homework Solutions Grade will be posted on eCampus within one week of the due date.
  The Mid-term Exam Grade will be posted on eCampus within one week of the exam.

**Final Grading Scale:** A>90, B: 75-89, C: 61-74, D: 50-60, F<50

**Course and Institutional Policies**

- **Attendance Policy:**
  Attendance is required in the class.
  Each absence in the class will result in 10% reduction in Attendance Score. Students who are absent from the class for any reason are responsible for all missed work.
  No makeup exam will be given for students who are absent during the exams.

- **Late Assignment and Missed Exam Policy:**
  The absence or missed work can be excused for medical reasons (document is necessary).
  Prior approval must be obtained for the absence or the missed work due to non-medical reasons.
  Makeup exam will be given for students with prior approval or for medical reasons.

- **Institutional Policies:** Students are responsible for reviewing Policies on:
  Inclusivity, Academic Integrity, Incompletes, Sale of Course Materials, Sexual Misconduct, Adverse Weather, Student Evaluation of Instruction, And Days of Special Concern/Religious Holiday Statements.