Course title and number  PETE 627 - Well Completion and Workover
Term (e.g., Fall 200X)  Fall 2010
Meeting times and location  N/A; distance learning group only

Course Description and Prerequisites
This course provides an overview of completions and workover equipment and methods in the oil and gas industry. It is designed to complement the courses on drilling and production engineering which are already offered by the department. The students will learn about the design options to meet deliverability, safety and integrity requirements in completions and workover operations. The main components of a well are described and analyzed by their function and design criteria. The workover systems and procedures are presented and discussed. Case studies will be provided and a group project will help the students understand the hands-on aspects of completions and workovers. Prerequisite: Graduate classification.

Learning Outcomes or Course Objectives
The objectives of the course are for students to:
- 1. Gain an overall understanding of completions and workover equipment and methods in the oil and gas industry.
- 2. Learn about design options available for completions and workover operations.
- 3. Understand the main components, function and design criteria of a well, and workover systems and procedures.
- 4. Understand the hands-on aspects of completions and workovers via case studies and a group project.

Instructor Information
Name  Dr. Catalin Teodoriu
Telephone number  (979) 845-6164
Email address  catalin.teodoriu@pe.tamu.edu
Office hours
Office location  501J Richardson Building

Textbook and/or Resource Material

References
Selected papers

Grading Policies
Final Exam ................................................................. (60%)  
Group Projects/Homework ........................................... (40%)  
Total ................................................................. (100%)  

Grading Scale
A ................................................................. 90-100%
B ................................................................. 80-89%
C ................................................................. 70-79%
D ................................................................. 60-69%
F ................................................................. 0-59%
### Course Topics, Calendar of Activities, Major Assignment Dates

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Well completion: types of wells, completion functions, types of completion</td>
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<td>2</td>
<td>Mechanical aspects of well testing, cased hole logging equipment and application, and perforation methods and perforating equipment</td>
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<td>3</td>
<td>Packers: function, application, proper selection; includes water/gas shot off, horizon separation, etc.</td>
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<td>4</td>
<td>Completion equipment (SSD, SSSV, mandrels, locks, etc.)</td>
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<td>5</td>
<td>Data acquisition in wells; Fibre optics, permanent gauges, memory gauges, SCADA systems; Intelligent completion equipment</td>
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<td>6-7</td>
<td>Tubing string design (dimension, materials, connections,..) based on pressure, temp. operating conditions, media, safety requirements</td>
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<td>8-9</td>
<td>HPHT and horizontal well completions; Workover equipment: WireLine, Snubbing Unit, Coil Tubing</td>
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<td>10</td>
<td>Completion and Workover design and execution</td>
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<td>11</td>
<td>Special Topic: industry people are invited to give presentations on specific topics</td>
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<td>12-14</td>
<td>Class Project</td>
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### Other Pertinent Course Information

Some classes will be delivered in collaboration with:
Dr. Gloria Falcone  
Tel. (979) 847-8912  
Office: Room 401 Richardson Building  
Email: gioia.falcone@pe.tamu.edu

### Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit [http://disability.tamu.edu](http://disability.tamu.edu)

### Academic Integrity

For additional information please visit: [http://www.tamu.edu/aggiehonor](http://www.tamu.edu/aggiehonor)

“An Aggie does not lie, cheat, or steal, or tolerate those who do.”