

15-326

UWUCC: App 9/1/15
Senate: Info 10/6/15

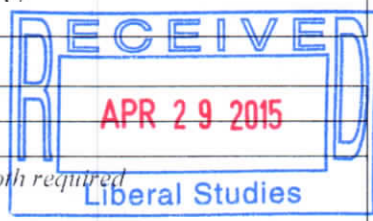
Template E

Distance Education Course Proposal Template

Steps to the approval process:

1. Complete the applicable template(s) and email them to the departmental or program curriculum committee chair. (If this is a new course that will include DE, complete Templates A and E. If adding DE to an existing course that is otherwise unchanged, complete Template E only. If revising a course and adding DE, complete Templates A and E.)
2. The curriculum chair emails the proposal to the curriculum committee, then to the department/program faculty for a vote and finally to the department/program chair.
3. The department/program chair emails the proposal to curriculum-approval@iup.edu; this email will also serve as an electronic signature.
4. Curriculum committee staff will log the proposal, forward it to the appropriate dean's office(s) for review within 14 days and post it on the X Drive for review by all IUP faculty and administrators. Following the dean's review the proposal goes to the UWUCC/UWGC and the Senate.
5. Questions? Email curriculum-approval@iup.edu.

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| Contact Person: | Dr. Laura Helmrich-Rhodes | Email Address: | lhrhodes@iup.edu |
| Proposing Depart/Unit: | Safety Sciences | Phone: | 724-357-3017 |



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| Course Prefix/Number | SAFE 104 | | |
| Course Title | Introduction to Safety in the Natural Gas Industry | | |
| Adding DE to an Already Approved Course | <input type="checkbox"/> Yes – <i>Template E only required</i> <input checked="" type="checkbox"/> No – <i>Template A and E both required</i> | | |
| Type of Proposal | <i>(See CBA, Art. 42.D.1 for definition)</i> <input checked="" type="checkbox"/> Online <input type="checkbox"/> ITV | | |
| Brief Course Outline – if adding DE to an approved course <i>Give an outline of sufficient detail to communicate the course content to faculty across campus. It is not necessary to include specific readings, calendar, or assignments.</i> | A. Status of Worker Protection in Natural Gas Procurement (5 Hours) 1. History of Occupational Safety and Health in the natural gas industry <ul style="list-style-type: none"> ▪ Case studies of large losses 2. Global disasters and the legislation that followed 3. Other important legislation and safety standards <ul style="list-style-type: none"> ▪ Construction Safety Act ▪ OSH Act and OSHA Recordkeeping ▪ American Petroleum Institute Standards ▪ EPA (PA DEP Ch 78) B. Basics of the Natural Gas Procurement, Development and Transport Process (4 Hours) 1. Steps to finding gas <ul style="list-style-type: none"> ▪ Seismic | | |

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- Landowners

- Permitting

2. Steps to preparing site for gas extraction

3. Extraction

4. Production (well site production, compression, pipeline)

5. Review of basic hazards of steps

- Lease construction

- Drilling

- Workover/Well Servicing

- Wireline

- Snubbing

- Coiled Tubing

- Production

- Well Site

- Compression

- Pipeline

6. Current safety, health and environmental issues in natural gas extraction industry

C. Basic Hazard Identification Techniques

(5 Hours)

1. Inspections

2. Audits

3. Job safety analysis

4. Haz Op

5. Current business applications of hazard identification (data management tasks)

D. Managing Workers' Compensation in Various States

(4 Hours)

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| | <ol style="list-style-type: none">1. Legislation2. Definition3. Coverage4. Program elements5. Cost containment strategies6. Professional liability under various states' Workers' Compensation Acts |
| | <p>E. Accident Investigation (5 Hours)</p> <ol style="list-style-type: none">1. Accident causation theories2. Modern strategies for accident investigations3. Step-by-step conducting of an effective accident investigation4. Preventing recurrence through meaningful recommendations and implementation5. Using accident Statistics and software packages to support safety program efforts6. Handling catastrophic loss at the personal level for all stakeholders |
| | <p>F. Environmental Safety and Industrial Hygiene (6 Hours)</p> <ol style="list-style-type: none">1. Recognizing occupational health exposures2. Evaluating and controlling health hazards3. Managing environmental risk4. Legislation overview5. Current issues in the natural gas industry |
| | <p>G. Fire and Emergency Response (4 Hours)</p> <ol style="list-style-type: none">1. Principles of fire protection2. Recognizing fire hazards, hazardous locations, and their controls3. Pertinent standards4. Local, regional and Federal emergency planning regulations |
| | <p>H. Fleet Safety (3 Hours)</p> |

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| | <ol style="list-style-type: none"> 1. Extent of exposure 2. Basic program elements and implementation requirements 3. Driver selection, development and control 4. Preventative maintenance 5. Recordkeeping <p>I. Ergonomics (2 Hours)</p> <ol style="list-style-type: none"> 1. Fundamentals of human performance 2. Common ergonomic hazards in natural gas industry 3. Hazard analysis and engineering controls 4. Current issues in ergonomic protection <p>J. Managing the Safety Function (4 Hours)</p> <ol style="list-style-type: none"> 1. Principles of fire protection 2. Codes of ethics 3. Getting the job done (setting goals, assigning responsibility, accountability and authority, safety program maintenance, behavior based safety initiatives) 4. Maintaining priorities (safety metrics, statistics, convincing others) <p>K. Culminating Activity (finals week) (2 Hours)</p> |
| Rationale for Proposal (Required Questions from CBA) | |
| <p>How is/are the instructor(s) qualified in the Distance Education delivery method as well as the discipline?</p> | <p>All department faculty are well versed in on-line teaching due to consistent use of D2L at the undergrad level, and the online masters and PhD programs in Safety Sciences. Anticipated involvement in the gas industry by more faculty is anticipated due to research projects thus making more faculty qualified to teach this course. Additional faculty qualifications: OSHA Oil and Gas safety training, private sector safety training by companies such as CONSOL, in the field research projects (On-site Silica and Fugitive Gas sampling methods research in process), trade association memberships and private practice.</p> |
| <p>For each outcome in the course, describe how the outcome will be achieved using Distance Education technologies.</p> | <p>Students completing this course will be able to:</p> <ol style="list-style-type: none"> A. Describe the history of safety and health in the natural gas industry and the events resulting in safety and health legislation. <ul style="list-style-type: none"> • Course materials and Live Lecture B. Define the major hazards associated with each step of natural gas procurement and processing. <ul style="list-style-type: none"> • OSHA E-tools, American Petroleum Institute on-line support materials, Video |

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| | <p>clips from groups such as Chemical Safety Board, Guest speaker videos (Alumni) Live Lecture and text book usage</p> <p>C. Describe established methods used for recognizing, evaluating and controlling occupational health exposures and risk in the natural gas industry.</p> <ul style="list-style-type: none"> • Students will be asked to visit a well site if possible otherwise an alternate assignment using video of hazards will be used. Mock OSHA Inspection with applicable standards (including all applicable OSHA,API, ANSI etc standards covered in this course) <p>D. Explain the basic principles of emergency preparedness and response including identifying pertinent standards and fire hazards/controls unique to the natural gas industry.</p> <ul style="list-style-type: none"> • Project <p>E. Describe the basic program elements and implementation requirements for an effective fleet safety program.</p> <ul style="list-style-type: none"> • Course module material, Keller Online DOT materials <p>F. Explain how accident investigation strategies can determine root causes of workplace accidents in the various stages of natural gas procurement.</p> <ul style="list-style-type: none"> • Case studies and accident data management projects <p>G. Apply reporting, recording and accident investigation strategies to the various stages of natural gas procurement.</p> <ul style="list-style-type: none"> • Development of written recommendations in form of electronic checklists, internal business memos and external business letters |
| <p>How will instructor-student and student-student, if applicable, interaction take place?</p> | <p>Several options could be used by the faculty member including Blackboard Collaborative Live Classroom (used extensively in our other programs), Video conferencing, email, phone, video submissions by students</p> |
| <p>How will student achievement be evaluated?</p> | <p>Online quizzes, Class participation in live classroom, tests and projects</p> |
| <p>How will academic honesty for tests and assignments be addressed?</p> | <p>Test banks of questions will be used to generate random questions for shorter test/quiz times. Quiz questions with answers will not be published together, "Originality Reports" will be used for all written submission, and frequently revision of projects</p> |