

COURSE SYLLABUS
Fall Semester 2017

EXP ENG 5711 – Explosives in Industry
Department of Mining and Nuclear Engineering
Missouri University of Science and Technology

Number of Credit Hours: 3 Hours
Meeting time: Distance
Meeting location: Distance

Instructor: Dr. Kyle A. Perry, P.E.
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Course Description: Overview of how explosives are applied in various industrial settings. Focus is placed on the general application, identification, and necessity of explosives in industry. Topics include explosive use in surface and underground mining, road development, construction, utility placement, demolition, oil, gas, and underwater.

Prerequisites: None

Course Goals: Upon conclusion of this course, students will have the knowledge and skills necessary to identify different explosive types and understand their function. The students will be knowledgeable in the terminology associated with explosives and have a fundamental understanding of how explosives are applied.

Textbook: None. Notes distributed throughout semester.

References: ISEE Blasters' Handbook 18th Edition, ISBN: 9781892396198
Explosives Engineering, P. Cooper, ISBN: 0471186368
Introduction to the Technology of Explosives, P. Cooper, ISBN: 047118635X

Course Format: The course is broken down into Modules. Each module covers a specific topic and has lectures, videos, quizzes, homeworks, etc. associated with it. Each module will take 1-3 weeks depending on the topic. Students will follow along with the instructor as he goes through the modules and will not be allowed to "jump ahead" of the rest of the class.

Course Topics: History of Explosives (Module 1)
Types of Modern Detonators (2)
Types of Modern Explosives (3)
Explosives Safety (4)
Explosives in Mining (5)
Explosives in Road Development (6)
Explosives in Construction (7)
Trenching (8)

Demolition (9)
Specialty (10)

Course Homeworks: Homeworks will be assigned throughout the semester. Homework grades will be reduced 20% for each day they are late. Each homework will be due at the time specified on the homework.

Course Projects: A research paper is required of all students on an explosives related topic.

Course Grading:

Grade Components		Grade Scale		
Homework	20%	90 - 100 %	A	
Quizzes	20%	80 - 89.9%	B	
Research Paper	20%	70 - 79.9%	C	
Mid-Term Exam	20%	60 - 69.9%	D	
Final Exam	20%	< 60%	E	

Exams: A midterm and comprehensive final exam will be given. The midterm will cover modules 1-5. The professor reserves the right to alter/adjust the modules covered on each exam.

Student Regulations: Missouri S&T's "Student Academic Regulations" is available at this website. <http://registrar.mst.edu/academicregs/> All students are encouraged to review the sections

Disability Support: If you have a documented disability and anticipate needing accommodations in this course, you are strongly encouraged to meet with me early in the semester. You will need to request that the Disability Services staff send a letter to me verifying your disability and specifying the accommodation you will need before I can arrange your accommodation. <http://dss.mst.edu/>

Academic Dishonesty: This includes cheating, plagiarism, or sabotage. If you have any questions regarding these issues, please contact Dr. Jeff Cawlfeld, Vice Provost, Office of Academic Support, at jdc@mst.edu.