

MinE 627: Advanced Coal Preparation Syllabus 2007

Course	MinE 627: Advanced Coal Preparation	
Semester	Spring	
Course Format and Credit Hours	3 credit hr lecture	
Pre-requisite or Co-requisite	Chem 115, MinE 427 or consent	
Instructor	Felicia Peng, 359F Mineral Resource Building Mining Engineering Department, WVU ffpeng@mail.wvu.edu (304) 293-7680 (phone), (304) 293-5708 (fax)	
Schedule	Tuesday 2:00pm-4:30 p.m.	
Class location	Room 209, Mineral Resources Building (MRB)	
Office Hours	Open door policy or by appointment	
Course Objectives	This course is to provide students to gain the knowledge of 1) methods of fine particles characterization, and dynamics of fine coal column flotation system; 2) fundamentals of classification, agglomeration, de-watering and thickening, and fine coal flotation; 3) biotechnology for Hazard Air Pollutants removal; and 4) separation performance evaluation methods, simulation, process control, and instrumentations.	
Expected Learning Outcome	Upon completion of this course, the students have the knowledge of the dynamics of column flotation system, advanced concentration and advanced dewatering systems. The students acquire the abilities for fine coal particle characterization, evaluation separation performance of overall plant, plant simulation, and process control. The students have the knowledge of coking and leaching processes for advanced coal utilization.	
Required Text	1. Peng, F. F., <i>Coal Preparation</i> , NextPrint, Morgantown, WV. 2. <i>Coal Preparation</i> , 4th edition (1989), and 5th edition (1991), ed. by J. W. Leonard, SME, Littleton, CO.	
References	1. Wills, B. A., and Napier-Munn, T. J., 2006, <i>Mineral Processing Technology: An Introduction to the Practical Aspects of Ore Treatment and Mineral Recovery</i> , 7th ed., Butterworth-Heinemann, pp. 456. 2. Additional reading materials will be specified and given in class.	
Topical Areas	1. Dynamics of fine coal column flotation system 2. Fine particle characterization and fine particle characterization 3. Fundamentals of concentration, de-watering, flocculation and thickening 4. Coking process and advanced coal utilization 5. Leaching process and other methods for HAPs removal and control 6. Separation performance evaluation methods, plant simulation 7. Instrumentation and process control 8. Topics for the special topic report will be assigned in class	
Grading Assignment	Attendance + coal preparation plant field trip (mandatory)	10% + 5%
	Homework (mandatory)	25%
	Exam1 and Exam 2	40%
	Selected topical project reports	20%
	Total	100%

	<p>Notes:</p> <ol style="list-style-type: none"> 1) Attendance is absolute necessary. 2) Plant filed trip is mandatory. Or. To be arranged with one of the Department mining field trips. 2) For late assignments and any portions of the project report, the penalty is 20% off the grade each day. 3) To hand-in all the assignments are "mandatory". D grade or F grade will be given to the student for this course, who misses to hand-in any one of the assignments or any portion of the project report. 4) Inexcusable absence from Exams, the penalty will be 30% off the grade each exam. 										
Grading	<table border="1"> <tr> <td>> 90</td> <td>A</td> </tr> <tr> <td>89 – 80</td> <td>B</td> </tr> <tr> <td>79 – 70</td> <td>C</td> </tr> <tr> <td>69 – 60</td> <td>D</td> </tr> <tr> <td>< 60</td> <td>F</td> </tr> </table>	> 90	A	89 – 80	B	79 – 70	C	69 – 60	D	< 60	F
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89 – 80	B										
79 – 70	C										
69 – 60	D										
< 60	F										
Grading Policy	<p>Make-up Exams and Final Exam Policies:</p> <ol style="list-style-type: none"> 1) Make-up exams will only be given to the students handing-in a doctor's note clearly stating his or her sickness, attending a professional society meeting, due to illness or decease in immediate family, family emergency, etc., specified in the University regulations. 2) If you receive less than 40 (out of 100) in your final exam, you will receive an "D" or "F" grade for this course. 										
Attendance Policy	<p>Consistent with WVU guideline, students absent from regularly scheduled examinations because of authorized University activities will have the opportunity to take them at an alternate time. Make up exams for absences due to any other reason will be at the discretion of the instructor.</p>										
Social Justice Statement	<p>"West Virginia University committed to social justice. i concur with that commitment and expect to maintain a positive learning environment based upon open communication, mutual respect, and nondiscrimination. Our University does not discriminate on the basis of race, sex, age, disability, veteran status, religion, sexual orientation, color or national origin. Any suggestions as to how to further such a positive and open environment in this class will be appreciated and given serious consideration."</p> <p>If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this class, please advise me and make appropriate arrangement with Disability Service (293-6700)"</p>										
Days of Special Concern	<p>WVU recognizes the diversity of its students and the needs of those who wish to be absent from class to participate in Days of Special Concern, which are listed in the Schedule of Courses. Students should notify their instructors by the end of the second week of classes or prior to the first Day of Special Concern, whichever is earlier, regarding Day of Special Concern observances that will affect their attendance. Further, students must abide by the attendance policy of their instructors as stated on their syllabi. Faculty will make reasonable accommodation for tests or field trips that a student misses as a result of observing a Day of Special Concern.</p>										
FE Exam and PE Registration	<p>As part of the academic and professional development of Mining and Mineral Processing Engineers, the Department of Mining Engineering encourages students to take the Fundamentals of Engineering (FE) exam, and to then follow this by becoming the registered Professional Engineering (PE).</p>										