EBGN 535 Economics of Metal Industries and Markets  
Spring Semester 2020

Credit Hours:  3  
Class meeting times:  Mondays, 3:30-6:15pm  
Class location:  Engineering Hall 211

Instructor and Contact Information:  
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Office Phone: 303-273-3981  
Office Location: Engineering Hall 114  
Office Hours: Anytime my door is open and also by appointment

Pre-requisites: EBGN 509 Mathematical Economics, EBGN 510 Natural Resource Economics

Required Technology: Canvas

Course Description: Metal supply from main product, byproduct, and secondary production. Metal demand and intensity of use analysis. Market organization and price formation. Public policy, comparative advantage, and international metal trade. Metals and economic development in the developing countries. Environmental policy and mining and mineral processing. Students prepare and present a major research paper.

Learning Outcomes - At the completion of the course, you will have:  
1. An understanding of how metal industries and markets behave and why  
2. An enhanced ability to apply economic principles learned in other courses to mineral and metal commodity markets  
3. Stronger analytical skills and research capabilities  
4. Improved communication skills, especially writing skills

Assessments, Grading Policy, and Coursework Return:  
Weekly quizzes (7): 15%  
Group market-analysis presentation: 15%  
Final exam: 35%  
Group research project: 35%

The quiz grade is the average of the best five quiz grades. There are no make-up quizzes for those missed. If you have to be absent during the scheduled exam and have an approved excuse, you will have the opportunity to take a make-up exam.

Quizzes, the exam, and draft and final versions of the research paper will be returned within two weeks along with suitable comments to help you understand how to improve your performance.
Required Text:

I will assign additional articles and other readings as we progress through the course.

Additional Suggested References:
Two other books you might find useful:

Outline:

I. Starting points
   a. Short-run model of a commodity market
   b. Profits, rents and the metal industries

II. Market Analysis
   a. Demand
   b. Supply
   c. Market structures and pricing
   d. Location and product quality
   e. Vertical integration
   f. Porter’s five forces

III. Policy Issues
   a. Microeconomic framework for policy analysis
   b. Rents and fiscal systems
   c. International trade and trade policy
   d. Mining and economic development
   e. Depletion, scarcity and long-run resource availability
   f. Mining, sustainability and sustainable development
Weekly Schedule (subject to change)

January
13: Starting points
20: No class (Martin Luther King Day)
27: Demand and supply, quiz

February
3: Market structures, pricing, vertical integration, location/product quality, Porter’s 5 forces; quiz
10: Group market-analysis presentations
17: No class (Presidents’ Day)
24: Public policy, rents, taxation; quiz

March
2: International trade and trade policy, quiz
9: Mining and economic development, quiz
16: Tentatively no class – work on group projects
23: No class (Spring Break)
30: Depletion and scarcity, quiz

April
6: Mining, sustainability and sustainable development; quiz
13: Exam
20: Return exams, group reports due
27: Group presentations

May
4: Revised group reports due

Diversity and Inclusion:
At Colorado School of Mines, we understand that a diverse and inclusive learning environment inspires creativity and innovation, which are essential to the engineering process. We also know that in order to address current and emerging national and global challenges, it is important to learn with and from people who have different backgrounds, thoughts, and experiences.

Our students represent every state in the nation and more than 90 countries around the world, and we continue to make progress in the areas of diversity and inclusion by providing Diversity and Inclusion programs and services to support these efforts.
Disability Support Services:
The Colorado School of Mines is committed to ensuring the full participation of all students in its programs, including students with disabilities. If you anticipate or experience any barriers to learning in this course, please feel welcome to discuss your concerns with me. Students with disabilities may also wish to contact Disability Support Services (DSS) to discuss options to removing barriers in this course, including how to register and request official accommodations. Please visit their website at disabilities.mines.edu for contact and additional information. If you have already been approved for accommodations through DSS, please meet with me at your earliest convenience so we can discuss your needs in this course.

Accessibility within Canvas:
Read the Accessibility Statement from Canvas to see how the learning management system at the Colorado School of Mines is committed to providing a system that is usable by everyone. The Canvas platform was built using the most modern HTML and CSS technologies, and is committed to W3C's Web Accessibility Initiative and Section 508 guidelines.

Discrimination, Harassment, and Title IX:
All learning opportunities at Mines, including this course, require a safe environment for everyone to be productive and able to share and learn without fear of discrimination or harassment. Mines' core values of respect, diversity, compassion, and collaboration will be honored in this course, and the standards in this class are the same as those expected in any professional work environment. (More information can be found here.) Discrimination or harassment of any type will not be tolerated. As a participant in this course, we expect you to respect your instructor and your classmates. As your instructor, it is my responsibility to foster a learning environment that supports diversity of thoughts, perspectives and experiences, and honors your identities. To help accomplish this:

- Course rosters are provided to the instructor with the student’s legal name. I will honor your request to address you by a preferred name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records.

- If something is said or done in this course (by anyone, including myself) that made you or others feel uncomfortable, or if your performance in the course is being impacted by your experiences outside of the course, please report it to:
  - Me (if you are comfortable doing so)
  - Wellness Center - Counseling (https://www.mines.edu/counseling-center/)
  - Speak Up (https://www.mines.edu/speak-up/) - Anonymous Option

In this course, we will cultivate a community that supports survivors, prevents interpersonal violence, and promotes a harassment free environment. Title IX and Colorado State law protects individuals from discrimination based on sex and gender in
educational programs and activities. Mines takes this obligation seriously and is committed to providing a campus community free from gender and sex-based discrimination. Discrimination, including sexual harassment, sexual violence, dating violence, domestic violence, and stalking, is prohibited and will not be tolerated within the Mines campus community. If these issues have affected you or someone you know, you can access the appropriate resources here: http://www.mines.edu/title-ix/. You can also contact the Mines Title IX Coordinator, Camille Torres, at 303.384.2124 or titleix@mines.edu for more information.

It's on us, all of the Mines community, to engineer a culture of respect.

CARE @ Mines:
If you feel overwhelmed, anxious, depressed, distressed, mentally or physically unhealthy, or concerned about your wellbeing overall, there are resources both on- and off-campus available to you. If you need assistance, please ask for help from a trusted faculty or staff member, fellow student, or any of the resources below. As a community of care, we can help one another get through difficult times. If you need help, reach out. If you are concerned for another student, offer assistance and/or ask for help on their behalf. Students seeking resources for themselves or others should visit care.mines.edu.

Additional suggestions for referrals for support, depending on comfort level and needs include:

- CARE at Mines: care.mines.edu for various resources and options, or to submit an online “CARE report” about someone you’re concerned about, or email care@mines.edu
- CASA - https://www.mines.edu/casa/ for academic advising, tutoring, academic support, and academic workshops
- Counseling Center – https://www.mines.edu/counseling-center/ or students may call 303-273-3377 to make an appointment. There are also online resources for students on the website. Located in the Wellness Center 2nd floor. Located at 1770 Elm St.
- Health Center - https://www.mines.edu/student-health/ or students may call 303-273-3381 for appointment. Located in Wellness Center 1st floor.
- Colorado Crisis Services - For crisis support 24 hrs/7 days, either by phone, text, or in person, Colorado Crisis Services is a great confidential resource, available to anyone. http://coloradocrisisservices.org, 1-844-493-8255, or text “TALK” to 38255. Walk-in location addresses are posted on the website.

All of these options are available for free for students. The Counseling Center, Health Center, and Colorado Crisis Services are confidential resources. The Counseling Center will also make referrals to off-campus counselors, if preferred.
In an emergency, you should call 911, and they will dispatch a Mines or Golden PD officer to assist.

**Absence Policy:**
The [Student Absences](#) webpage outlines CSM's policy regarding student absences. It contains information and documents to obtain excused absences.

Note: All absences that are not documented as excused absences are considered unexcused absences. Faculty members may deny a student the opportunity to make up some or all of the work missed due to unexcused absence(s). However, the faculty members do have the discretion to grant a student permission to make up any missed academic work for an unexcused absence. The faculty member may consider the student’s class performance, as well as their attendance, in the decision.

In the case of an absence, the student is responsible for determining what work was missed and for putting forth a good faith effort to review the material on their own.

**Policy on Academic Integrity/Misconduct:**
The Colorado School of Mines affirms the principle that all individuals associated with the Mines academic community have a responsibility for establishing, maintaining an fostering an understanding and appreciation for academic integrity. In broad terms, this implies protecting the environment of mutual trust within which scholarly exchange occurs, supporting the ability of the faculty to fairly and effectively evaluate every student’s academic achievements, and giving credence to the university’s educational mission, its scholarly objectives and the substance of the degrees it awards. The protection of academic integrity requires there to be clear and consistent standards, as well as confrontation and sanctions when individuals violate those standards. The Colorado School of Mines desires an environment free of any and all forms of academic misconduct and expects students to act with integrity at all times.

Academic misconduct is the intentional act of fraud, in which an individual seeks to claim credit for the work and efforts of another without authorization, or uses unauthorized materials or fabricated information in any academic exercise. Student Academic Misconduct arises when a student violates the principle of academic integrity. Such behavior erodes mutual trust, distorts the fair evaluation of academic achievements, violates the ethical code of behavior upon which education and scholarship rest, and undermines the credibility of the university. Because of the serious institutional and individual ramifications, student misconduct arising from violations of academic integrity is not tolerated at Mines. If a student is found to have engaged in such misconduct sanctions such as change of a grade, loss of institutional privileges, or academic suspension or dismissal may be imposed.

The complete policy can be found in the [Mines’ Policy Library](#).