Design EPICS Program
Adjunct Instructor for Hand Sketching

Colorado School of Mines invites applications for a part-time position as an adjunct instructor for hand sketching in the Design EPICS Program. The EPICS curriculum teaches students how to solve complex, open-ended problems using critical thinking and workplace skills. Students work in multidisciplinary teams to learn through doing, with emphasis on defining and diagnosing the problem through a holistic lens of technology, people, and environment. Students follow a user-centered design methodology throughout the process, seeking to deeply understand a problem from multiple perspectives and accept its ambiguities before attempting to solve it. Spatial visualization skills and graphical representations of concepts and ideas are a vital part of this problem-solving process.

EPICS is a two-semester course sequence: EPIC151, generally taken in the first year, and EPIC251, generally taken in the second or third year. The EPIC151 course is required for all students at Mines and serves approximately 1,100 students per academic year; it is these students who learn hand and field sketching skills. More information about the program, courses, and learning objectives can be found at http://epics.mines.edu.

Responsibilities: An EPICS hand sketching Instructor provides instruction and practice to all 11-15 classes of 50 EPICS I students, through 3 or 4 two-hour classes through the semester. The learning objectives of the hand sketching units are achieved through instruction and practice both in and outside of class, and are as follows:

1. Ability to sketch quickly what you see,
2. Ability to sketch quickly a concept in your mind,
3. Eliminate resistance to sketching in front of people,
4. Ability to include a sketch in a technical document (*block letter labeling, reference dimension*),
5. Ability to apply ANSI standards to Computer Aided Design (CAD) and solid modeling (eg SolidWorks, AutoCAD, Sketchup), in order to:
   - Read, act upon, edit, and evaluate designs in engineering and production drawings,
   - Graphically document and communicate design and fabrication information in a universally accepted manner, via CAD drawing modes from solid modeling modes (e.g., SolidWorks, AutoCAD, Inventor, Sketchup).

The Adjunct Instructor shall be able to teach all skills identified in the Essential Skill Set below, hold regular office hours, and participate in faculty curriculum discussions. The Instructor will not have to teach CAD, but technical drawing standards and formatting will be applied by students in a separate instructional module.

Essential Skill Set:
- Provide instruction, practice and guidance in visualization, field sketching, and concept representation.
- Provide guidance to students who are both skilled and unskilled in hand sketching techniques.
- Provide guidance to students in sketching and engineering drawing conventions.
- Evaluate student proficiency in the learning outcomes, by creating program-wide guidelines and effective methods to assign a realistic grade for each student.

Qualifications: Applicants must possess an earned bachelor’s or master’s degree in visual arts, drafting, technical drawing, design, or engineering with field sketching and technical drawing experience. Because of a primary emphasis on teaching, as indicated in the Essential Skill Set, the successful candidate must have:
- Command of field sketching approaches including 1- and 2-point perspective projection, landscapes, providing subject context, the basic human figure, depicting processes, etc.
- Command of ANSI standards and 3rd angle projection conventions for isometric, orthographic, auxiliary, section, and detail views and projections, dimensioning formatting and placement, and other basic technical drawing components.
- Documented teaching proficiency in 50-person classes, which are a combination of lecture and lab.

*Minerals is an EEO/AA employer and is committed to enhancing the diversity of its campus community. Women, minorities, veterans, and individuals with disabilities are encouraged to apply.*

*Employment with Mines is contingent upon the satisfactory completion of a background investigation.*
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• Incorporating technology in delivering content; comfort using a Learning Management System such as Blackboard, and podium peripherals such as a PowerPoint-enabled computer and document camera.
• Ability to determine effective and efficient assessment methods to evaluate student performance.
• Ability to manage and direct teaching assistants to support students in their learning, and for grading.

Additional preferred proficiencies include:
• Understanding of the basics of engineering and scientific occupations coursework to better fold lectures and rationale into the world of a Mines student
• User-centered design: identifying and engaging with stakeholders and users throughout the design and problem solving processes.

Compensation: Determined based upon qualifications.

How to Apply: Interested applicants should send a letter of interest and CV, along with a portfolio of graphical samples that illustrate the above graphical competencies, to Katherine Gordon: katherinegordon@mines.edu