

MEP PARTICIPATION REQUIREMENTS ADDENDUM

The Multicultural Engineering Program (MEP) at the University of Colorado at Boulder has implemented several programs that have proven successful in supporting students in their transitions from high school to college. The freshman year is critical; this is the period that engineering students are most likely to leave school. Our experience shows that active involvement in the following MEP activities (during the freshman year) dramatically increases the probability that students will graduate. For this reason these program activities are required for all incoming MEP Grant recipients.

(1) *Summer Bridge Program June 17th - July 24th*

Summer Bridge is an academic program designed to prepare incoming students for their first year in college. For five weeks during the summer students will live on campus and attend classes in calculus I or calculus plus (II, III and a little differential equations) chemistry, physics, writing and computing. In addition students will participate in an engineering projects course that will help develop problem solving and team-building skills.

In addition to a \$500 stipend, participation in the Summer Bridge program will also qualify the students to be eligible for the 4-year MEP scholarship. Students choosing not to participate in the summer bridge program will only be eligible to receive a 2-year scholarship from the MEP.

(2) *Self Management and Leadership Principles I and II (GEEN 1510 & 1520)*

The primary focus of this two-semester course is to develop a strong sense of group cohesiveness, academic excellence, and familiarity with campus resources. Class activities are conducted to build students into a supportive peer network, develop an attitude of excellence through mutual support, and develop leadership skills. Numerous research studies have shown that a feeling of isolation is a major contributor to the large number of students dropping out of college during their first year. This course addresses this issue by helping students through their first year of college, when this need is most relevant.

Topics covered in class include:

- Community Building and Diversity
- Academic Success Skills and Strategies
- Personal and Professional Development
- Overview of Engineering Disciplines
- Orientation to the University and the College of Engineering

Typically, the class format involves student participation in supportive individual/small group exercises, field trips and interactive meetings with distinguished speakers from government, education, industry, consulting firms, etc. Students receive two hours of academic credit in the Fall and one hour of credit in the Spring.

(3) ***Engineering Projects Course (GEEN 1400)***

Students are strongly recommended to register for the Engineering Projects course. This course allows first year students an opportunity to utilize their strong mathematical and scientific skills in interdisciplinary engineering projects. Students work in teams to design and create engineering projects throughout the semester. At the end of the semester students are given the opportunity to display their projects at the College's design expo.

(4) ***Academic Excellence Workshops [A.E.W.(s)] in key "Gate-keeping" Courses***

The Academic Excellence Workshops are small, honors study sessions conducted for MEP freshmen enrolled in Calculus I, II, III, Differential Equations, Chemistry I, and Physics I. Additional A.E.W.(s) are provided for sophomore and junior level engineering courses. Under the direction of a skilled graduate student facilitator, MEP students work together in small groups to solve extra homework problems. Students who participate regularly in the workshops are far more likely to receive A's or B's in these subjects.

In addition to acquiring a mastery of the subject matter, the workshops are designed to help students form close and lasting friendships. Students meet twice a week for a total of at least three hours in each subject. The material the students work on in the workshops consists of difficult homework problems, challenging problems that have yet to be presented in class, and timely practice exams. The students learn to support one another in their efforts to achieve their best. There is no credit for these workshops.

(5) ***Clustered "Gate-keeping" Courses***

"Gate-keeping" courses -- including Calculus I, II, III, Chemistry I, and Physics I -- are the courses, which serve as a foundation to the engineering curriculum, and have proven to be difficult for freshmen students. MEP students taking "gate-keeping" courses are clustered into a given section of these courses.

The clustering of students facilitates the formation of study groups that have proven effective for enhancing academic excellence and cementing social-support networks. Studies show that once students successfully complete the "gate-keeping" courses they have a better than 85% chance of graduating from engineering. Please note that these sections are in no way "special" from any other CU course. MEP students comprise no more than one-fourth of the students in a given course section. See attachment for specific course numbers, days and times of clustered courses.

(6) ***On a broader scale, MEP also provides opportunities for all students to refine their organizational and leadership skills. These opportunities exist in the form of:***

-Student Panels:

Student panels are generally conducted in an effort to recruit new students. Typically, MEP Staff and one or more MEP students, when available, visit various high schools and inform students of the opportunities at CU-Boulder and the College of Engineering. Our students talk about the campus, college life and their experiences. MEP student panelists also talk to new freshmen, parents and corporate visitors.

-Committees:

There are two annual events that students will participate in and help plan:

The Multicultural Career Fair in late September, is a mini-career fair specifically for MEP students and participants in similar academic communities throughout the campus. Representatives from various corporations set up booths, giving students an opportunity to network with recruiters and learn about jobs in industry. Students are able to secure potential internships and full-time or summer jobs. As many as 50 different companies will be represented.

The Annual MEP Awards and Recognition Gala occurs around the first or second week of April. The Gala is an opportunity for MEP to honor incoming high school graduates, outstanding MEP students and corporate sponsors. The Gala is planned and implemented by the students and supported heavily by industry.

Other Committees are formed as necessary. Some other activities that provide opportunities for committee work are Summer Bridge and the Success Institute.

-Interactive Training Sessions:

The *MEP Fall Welcome Retreat* and the *LEAD Alliance Retreat*, held in late August/early September, gathers all MEP students together for an overview of upcoming events and activities for the year. Students participate in small and large group sessions designed to build community and equip and train students for the professional workplace. The LEAD Alliance is an opportunity to meet students from other academic neighborhoods around campus like MEP. A few of you will be long to more than one.

The Regional Leadership Conference usually in the early Spring Semester (sometimes in the Fall) also brings engineering student society leaders from across the Colorado region to network and share society practices in an interactive training environment. Qualified trained facilitators lead all workshops and seminars.

-Student Organizations:

There are four engineering student organizations affiliated with the MEP Program:

- 1) American Indian Science and Engineering Society (AISES)
- 2) Society of Mexican American Engineers and Scientists (MAES)
- 3) National Society of Black Engineers (NSBE)
- 4) Society of Hispanic Professional Engineers and Scientists (SHPES)

The MEP supports these student organizations and encourages students to become actively involved. It's a great way to meet other students, gain professional contacts, develop leadership skills and qualify for additional scholarships.

-BOLD Study Center:

The BOLD Study Center (ECCE100) serves as the communications hub for all MEP services. Here students are encouraged to study and socialize. Information on scholarships as well as internship and research opportunities can be found in the study center. In addition, various student meetings are held in the center.

The Center houses a Computer Lab with 14 PC-Workstations with Laser Printers. The workstations provide access to software that students will need to succeed in the engineering curriculum including Microsoft Word, Excel and PowerPoint. The Center also includes a copier machine, a library, kitchenette and a number of other video and career related resources to assist students with their academic needs.

-Recruiting

The success of the MEP depends on students completing the supplemental activities it provides. Therefore, the program must continuously seek qualified students at the local, state and national levels. MEP students are asked to participate in this effort by attending events with MEP Staff, particularly if it is in your home area. Students are also asked to help pinpoint students from their communities that need mentoring and assistance in college preparation.

These opportunities are provided for our MEP students through the generous support of the College of Engineering and Applied Science and many companies and government agencies. We sincerely would like each student to feel welcome on the CU-Boulder campus and in the College of Engineering and Applied Science, and more importantly, to receive the support needed to become a master engineering student.