The Department of Chemical Engineering (CHE) has recently begun a new effort to provide the best learning experience and support for our undergraduate students: the first department-based Tutoring Program on the Davis campus. The Tutoring Program is designed to support our undergraduates in the first three years of the curriculum, all the way from introductory courses through many of the demanding core courses in the third year curriculum. The Program is designed to ensure the best possible learning outcomes for our students, building on the instruction of our faculty and TAs and providing an informal and supportive learning environment for our students.

We first rolled out the Program for two courses, ECH 142 and 143, in Spring 2013. For the 2013-2014 academic year we expanded the program to offer tutoring in 11 CHE classes throughout the academic year:

**FALL 2013**
- ECM 6, Computational Methods
  - 47 students
- ECH 140, Mathematical Methods in Chemical Engineering
  - 128 students
- ECH 148A, Chemical Kinetics and Reaction Engineering
  - 92 students

**WINTER 2014**
- ECH 51, Material Balances
  - 130 students
- ECH 141, Fluid Mechanics for Biochemical and Chemical Engineers
  - 114 students
- ECM 5, Analysis in Biochemical, Chemical and Materials Engineering
  - 164 students

**SPRING 2014**
- ECM 6, Computational Methods Design
  - 97 students
- ECH 142, Heat Transfer for Biochemical and Chemical Engineers
  - 106 students
- ECH 143, Mass Transfer for Biochemical and Chemical Engineers
  - 104 students
- EMS 180, Materials in Engineering Design
  - 78 students

"The tutoring sessions are life savers. There is no way I could have gotten through this quarter without them."

**Students say...**

"Tutoring does really make a difference in these upper division classes. The materials go by so fast and it is amazing to have a place where you can reconcile and reinforce what you have learned or missed in class. Tutoring is a must have!"

"The tutoring was VERY helpful! Please continue to provide it."

We are now continuing with a similar level of tutoring in the current 2014-15 academic year.
The key benefits of the Tutoring Program to our students are:

1) Helping students not only pass but excel in their coursework, producing a higher quality of graduate from our program.
2) Retaining students in our major and build program community.
3) Keeping time-to-degree (TTD) at four years.
4) Providing financial support for the tutors hired.

The tutors tell us that they learn the course material even better by tutoring, and some have decided to pursue academic careers based on the teaching experience they have acquired in the tutoring program. Thus the tutoring positions enable us to financially support our best students and encourage their professional growth.

The Program is staffed by senior-level students in excellent academic standing, selected in consultation with the faculty. The tutoring hours for each course are scattered throughout each week to maximize opportunities for students to attend. For example, the critical ECH 140 class has tutoring offered 4 days per week.

"The tutoring was VERY helpful! Please continue to provide it."

Thus far the Program has been greeted with great enthusiasm by the students, as shown by surveys and the attendance of 30 to 80 students per session.

"It’s an extremely helpful program that needs to be continued."

"The tutoring is great, it really helps me put together what I’ve learned in class so I know how to apply it to problems."

"Keep the tutors coming!"

Recently the success of the Tutoring Program has been recognized by Chevron, which has agreed to help provide funding. In addition, alumni of the department have proposed establishing the Ben McCoy Undergraduate Student Award. This endowed Award would be used to financially support tutors in the Program. If you would like to support the McCoy Award and the Tutoring Program, contact Oliver Ramsey, owramsey@ucdavis.edu.

*Named in honor of Chemical Engineering Professor Emeritus Ben McCoy.