

This one-page column will present practical teaching tips in sufficient detail that ChE educators can adopt the tip. The focus should be on the teaching method, not content. With no tables or figures the column should be approximately 500 words. If graphics are included, the length needs to be reduced. Tips that are too long will be edited to fit on one page. Please submit a Word file to Phil Wankat <wankat@ecn.purdue.edu>, subject: CEE Teaching Tip.

APPROACHES TO ACADEMIC INTEGRITY: Confessions of a Reluctant Expert

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In an increasingly competitive job market, students view high course grades as critical to achieving their post-graduation goals (a view that is often justified), and this attitude drives some to cheat. For faculty, the challenges are to create an environment that minimizes the likelihood of cheating, to detect cheating when it occurs, and to deal firmly but fairly with those who choose to cheat. This Teaching Tip suggests some specific tools to accomplish these goals:

- **Communication:** Clearly communicate your expectations regarding academic integrity to your students, both in the syllabus and on the first day of class. Students benefit from clear examples of acceptable and unacceptable behaviors. Adam Melvin and I developed a short skit of examples, which later became a series of short videos (<http://www.che.ncsu.edu/bullard/Academic_integrity.htm>).
- **Collaboration:** Collaboration is desirable, as long as it remains within the boundaries established by the instructor. Encourage students to help each other within your boundaries. Grading on an absolute scale instead of a curve encourages students to help classmates legally, promoting a more collegial environment. Clearly and carefully define expectations for acceptable and unacceptable behavior regarding collaboration on individual assignments. Is it OK for students to consult homework or exams from a previous semester? To check each other's final answers? To work together closely as long as they submit their own work? Examples of specific syllabus language are shown at <http://www.che.ncsu.edu/bullard/Academic_integrity.htm>.
- **Homework:** Some instructors weight homework as a small percentage of the class grade to minimize cheating on individual assignments; others allow students to work collaboratively as long as the contributing members' names are listed on the assignment. Choose a strategy based on students' maturity, course objectives, and the importance of completing the homework to learn the material.
- **Reflection:** Especially when teaching the first ChE course, assign the students to write a reflective essay on academic integrity early in the semester to reinforce your expecta-

tions and ensure that they have a clear understanding of acceptable and unacceptable behavior. An example of this type of assignment is shown at <http://www.che.ncsu.edu/bullard/Academic_Integrity/Reflection.htm>. Doing this not only educates students about your expectations but begins to create and foster a departmental culture of integrity.

- **Troublesome Websites:** There are websites (e.g. <<http://www.coursehero.com/>>) where students are either charged a fee to access course materials and solutions to textbook problems or asked to upload such content in order to access other students' content. Other websites post solutions that can be accessed for free. To address these issues, our faculty have responded by asking students in all of our classes to sign a form, "Restriction on sharing content of course material with third parties," <http://www.che.ncsu.edu/bullard/Academic_Integrity/Content.pdf> which emphasizes that uploading or downloading course materials without permission is illegal, and those who do it are subject to substantial penalties.

These strategies make a difference. In the three years since I've implemented them in a large class, cheating cases have dropped by an encouraging 28%. The video, the syllabus, and the reflection assignments containing concrete examples of appropriate and inappropriate behaviors have cleared up much of the previous ambiguity in academic misconduct policies.

Unfortunately, no precautions or strategies will ever totally eliminate cheating. Some students, even with heightened awareness, are willing to take the risk in order to get a better grade. The best we can do is to minimize the incidence of cheating and to impose meaningful consequences when it occurs, but it is critically important to do that. Our responsibility as faculty members is not just to teach course content but to prepare our students for their professional careers. Dealing with cheating effectively in college will make its occurrence less likely after graduation, when the potential consequences of integrity violations are much more severe.