

## Study Habits

**Angelica:** OK, that is the end of our class for today. Be sure to review Chapter 6, especially the discussion of integration techniques. As usual, the recommended homework assignments are listed on the syllabus. You all need to keep up with the homework. See you later....

Angelica collected her notes and sighed quietly to herself. She had been leading her section of second semester Calculus for six weeks. She liked being the "professor", instead of just working as a grader or assistant for some faculty member; it was nice to work with relative independence. True, the syllabus was laid out in detail, and the hour tests and final exam were to be given in common to all of the sections of the course; but the day-to-day classroom work was up to her.

The fact that she had so much independence made it particularly painful when she thought about how poorly her students had done on the first test – no worse than anyone else's really, but still it had been disappointing, since she had worked so hard.

Walking back to her office after class, she bumped into Simon and Kathy, two other graduate students working on the same course.

**Simon:** Hello Angelica; you look glum. What's the problem?

**Angelica:** Nothing really; but I was really looking forward to teaching this course and now I am finding it kind of depressing. The students are so passive, and most of them are so unprepared. Do you think they study at all?

**Simon:** I am not sure, Angelica. But attitudes about school certainly seem different here in America than they are in my country. In order for me to go to university, I had to pass many very difficult exams. Then when I was accepted I felt very privileged. In fact, we students worked very hard all the time because if we didn't do so, we could be dismissed. I have learned not to expect the same behavior from my students here. I review the material in the book, I answer questions if there are any, I go over problems or talk about what I think are the hard parts of the course – and I try not to worry about what the students are actually learning.

**Angelica:** I also had to work very hard at school in my country and had to pass many exams to get into university, and to stay there. I feel that our students don't work hard enough. They expect us to make everything easy for them.

**Kathy:** I realize both of you worked very hard to get into university, but you shouldn't think our students didn't do likewise. I know lots of them are the first ones in their families to go to college. In addition, many are holding down full time jobs to pay for their education.

**Angelica:** That may be true, but if they are here in school then their schoolwork has to come first. I have thought about this, and I think that we have to force our students to work harder. I think we need more than just hour tests and a final exam. I think we need to have many more graded assignments, like graded homework and quizzes. If we force the students to work more between exams, they will change their priorities.

**Simon:** I don't think you can make a change like this on your own. This class is being run as a group, and everyone has to do the same things in class.

**Kathy:** Besides, Angelica, are you sure this is a good idea? We'll have to grade all of those extra assignments you are proposing. It's going to mean a lot more work for us, too. Perhaps you should leave well enough alone.

**Angelica:** I am willing to do the extra work. I think it is necessary. I will talk to Professor Jacobs about my idea of having much more graded work.

The three students split up to go to their other classes. Angelica dropped by Professor Jacobs's office later that day with her plan. Professor Jacobs was on the phone when she knocked on his door, but he motioned her into the office to wait while he finished his conversation.

**Angelica:** Hello Professor Jacobs. Can I speak to you about Calculus?

**PJ:** Sure, Angelica. What's up?

**Angelica:** I want to ask you a question about Calc II, since you are the course coordinator.

**PJ:** OK.

**Angelica:** You see, Professor, my students didn't do very well on the first test, and –

**PJ:** (interrupting) I don't think they did any worse than the other sections, did they?

**Angelica:** No, about the same I think. But still, I was disappointed – so many of them seemed to miss problems which I know I explained in class. I wanted to ask you about a plan I have which might help.

**PJ:** What do you have in mind?

At this point, Professor Jacobs's phone rang, and he answered it. Angelica sat patiently while he discussed possible meeting times for a committee he was chairing. After a few minutes, he hung up and turned back to her.

**PJ:** Sorry about that. You were saying?

**Angelica:** I think the problem is that the students don't study enough. I think if I start a system of giving them frequent quizzes and also grading their homework assignments, I can make them keep up with the class.

**PJ:** You mean you want the quizzes to count on their final grade? I don't think that would be fair. I mean, for you to do this, but not the other sections.

**Angelica:** I think all the sections should do this. By having many more graded assignments, we will prevent the students from falling behind. They will learn the material better.

**PJ:** Angelica, I appreciate your concern for your students. But I see some practical problems with your proposal. For one thing, this will make an enormous amount of work for you and the other section leaders. You'll have to grade all of these extra assignments, after all.

**Angelica:** I am willing to do this, if it will make the students learn more.

**PJ:** I worry that spending so much time on grading will interfere with your progress in your own education.

**Angelica:** I am sure that I can find the time I need, and I think the other graduate students can too.

**PJ:** I don't know if your friends will agree with you, Angelica. We expect you to spend a reasonable amount of time on your teaching, but we don't want you to overdo it. There is another problem with your proposal. Do you think it is fair to change the grading scheme in the course in the middle? We told the students at the beginning of the semester how we would grade them, and we owe it to them to stick to what we said.

**Angelica:** But Professor Jacobs, I don't think it is working. If they aren't learning, shouldn't we do what is best to help them?

**PJ:** I have a suggestion. Why not talk to your students and see what they think?

**Angelica:** Aren't we supposed to know what is the best way to teach them? Is it really necessary to talk to them?

**PJ:** Angelica, I'm willing to consider your proposal, but I think you need to hear from the students first.

**Angelica:** All right, I will talk to them.

The next day, in class, Angelica nervously brought up the subject.

**Angelica:** Class, I wanted to speak to you today about the way we have been working. Many people in this section did poorly on the test and I have noticed in our class discussions that many of you do not seem to have read the book or done any homework in preparation for our sections. I think that your lack of preparation for class is a serious problem and I would like to do something about it. I have thought about my own experiences learning mathematics, and I know that I had to work hard at it. I have suggested to the course coordinator that we begin a regular system of brief quizzes, at least twice a week, and that your scores on these quizzes would count towards your final grade. The course coordinator wanted me to ask you what you thought of this idea. Do any of you have any comments?

There was a long silence, but finally Sam, one of Angelica's weaker students, spoke up.

**Sam:** I don't think that's fair. You shouldn't change the grading in the middle of the class.

**Angelica:** But we would be doing this to help you. And everyone would have the same quizzes, so it would still be fair; you would just have to try harder to keep up.

**Sam:** I don't have the time to do so much math every day. I have other courses, too.

**Angelica:** But that is what I am saying – you must spend more time on math if you want to learn it.

**Sam:** My goal is to get a C in this course. I need the math credits, but I don't care about anything else. These quizzes just make it harder for me.

At this point, Kim spoke up. Kim had performed well on the last test, and Angelica had always thought of her as one of the better students.

**Kim:** And what about if we miss a quiz? How would you count that?

**Angelica:** If you miss a quiz, you get a failing grade on that quiz. The whole point is to make you come to class and do the work.

**Kim:** I don't think that's fair. For one thing, I have to work, and sometimes I need to miss class for my job. And for another thing, none of my other courses do stuff like this to make me come to class. You shouldn't try to run our lives like this. This is supposed to be college. It's our responsibility to learn stuff.

Angelica felt a bit flustered. Kim seemed angry, as if Angelica had insulted her. Before she could think of what to say, Fred and Bill joined the discussion.

**Fred:** Angelica, I think having quizzes is a good idea. I don't like the way my grade is based on just a few things. It doesn't leave much room for me to mess up.

**Bill:** Would every class take the same quizzes? Because I worry that your quizzes would be harder than the other sections, and that would make our grades lower.

**Fred:** And besides, I like having lots of quizzes because then I see the kinds of problems you ask on tests. That helps me study for the tests, because I know which problems to study and which aren't important.

Angelica wasn't sure why Professor Jacobs wanted her to talk to the students – each of them seemed to have their own opinion on the subject, and none of them agreed.

**Angelica:** I see that people feel differently about this idea. Let us go on with class now. I will talk to Professor Jacobs again.

After class, as Angelica left the classroom, she overheard two of her students, John and Sally, talking in the hallway.

**John:** Maybe if she took the time to explain things so we could understand them, we'd do better on the tests. It's typical that she thinks it's our fault. Bad teachers always blame their students.

**Sally:** Oh, she's not so bad. I've had worse. Why, last semester....

Sally's voice trailed off as she walked away from Angelica down the hall. Angelica felt crushed, and kind of angry. Walking back to her office, she thought over her plan for quizzes. It was a good idea – she was sure of it – but why make extra work for herself, when her own students did not seem

to care anyway? And Professor Jacobs had seen only the obstacles to the problem. She stopped by his office later that day.

**Angelica:** Professor Jacobs, I have decided that my idea about quizzes and grades won't work. So don't worry about it anymore.

**PJ:** Angelica, I'm pleased that you've talked with your students. Be aware we've tried stuff like that before, and I've never noticed it to make much difference. But let's discuss your concerns more at another time. I have to go to class now.

As she walked down the hall, Angelica thought about the whole experience. No, there was no point in trying to make the students work harder, at least not now. She would do what Simon had suggested: cover the material, and try not to feel bad. Maybe someday she would have good students, and the freedom to teach the way she wanted to....