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BY CAROL AGAIN

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**FOOD**  
**SCIENTIST**  
**NOURISHES**  
**YOUNG**  
**MINDS**

**IT ONLY COSTS** 22 cents a dose, but Dr. Robert T. Marshall's antidote for pre-college flutters has proven effective time and again. A summer letter from the food science and nutrition professor welcomes incoming freshmen he will advise, inviting them to drop by and get acquainted during their first two weeks of school.

In the initial advising session, Marshall points to the file he keeps on each student. "I tell them I want the page for club memberships and activities to be full when they leave so I can write a letter of recommendation," says Marshall, winner of a 1985 Amoco Foundation Teaching Award of \$1,500. "I also let them know that I'm busy, but I'll always have time for their problems."

Teaching, Marshall says, is more than just presenting the latest facts and figures. "I have to relate to individuals. In the classroom, getting that personal touch to 75 students communicating as individuals is really difficult, especially when you team teach. I like those courses where you have 30 students and can really get to know them."

But even in large classes, "I try to blend in a little philosophy as I go along that may say something to students about who I am." A favorite method is displaying a quote or cartoon from the overhead projector as students enter class.

**"IT'S A 30-SECOND SHOT** before the bell rings to tell students there is more to me than just the subject matter. It's a subtle way to say I think there is more to life than what I'm telling you about, and I really think you should be doing some things to broaden your mind and make you think in depth about the purpose and real meaning of life."

A faculty member since 1960, Marshall holds bachelor's, master's and doctoral degrees from UMC. His wife, Shirley, and all of their four children attended or currently are enrolled at UMC.

Dr. Joseph Edmondson, professor of food science and nutrition, was Marshall's teacher and adviser during the 1950s. The wiry young man from a dairy farm near Springfield, Mo., was Edmondson's best student. "When someone had a question and couldn't find a faculty member, if Bob Marshall said this is the way it is, no one questioned him. There are not many you find like that, and when you do find one, you want to keep him." Edmondson hired Marshall as a dairy instructor when he completed his doctoral studies.

"I made that decision about him way back and never regretted it," Edmondson says. "The potential I saw has been proven."

In addition to the Amoco award, Marshall received a 1968 Faculty-Alumni Award, a Milk Industry Foundation Teaching Award

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## **CLASSROOM material is as fresh as the dairy products Marshall judges. 'You make students want to know.'**

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and a Dairy Research Foundation Research Award.

His expertise as a researcher proves valuable to students, says Edmondson, who uses Marshall's data in his own teaching. "He's always up to date, so students are working on things that are current, which also makes them more marketable."

**MARSHALL'S PRIMARY** research is in microbiology and food sanitation, with emphasis on enzymes. A current project focuses on enzymes that occur in dairy foods, breaking down protein and fat. "Our aim is to decrease the amount that's present and avoid any damage that those enzymes might do to the product."

He's also studying cheese yields, the incorporation of soy protein with milk proteins in cheese and yogurt, and treatments to clean and sanitize fresh meat. "I wouldn't be nearly so well qualified to teach if I didn't have this tie with research."

In addition to discussing his own research, Marshall supplements lectures with handouts and references on new subjects. As a reviewer for professional manuals and contributor to *Standard Methods for the Examination of Dairy Products*, "I feel like I have exposure to the most recent material."

In an ever-changing field, Marshall is not satisfied unless his classroom material is as fresh as the premium dairy products he judges at state fairs. "He never was one to use last year's notes or rest on an outline," recalls David B. Weddle, BS Agr '64, MS '66, PhD '69, manager of product development for Mid-America Farms in Springfield, Mo. "He also had a way of conveying things very clearly."

Teaching a topic on the dry side—say characteristics of micro-organisms—requires special effort, Marshall says. "You have to find ways to make them want to know and give them techniques for remembering. I try to mix in applications of the information. It's not too difficult then to tie information onto something already in their knowledge bank."

Still, A's don't come easy in Marshall's courses, which include Food Processing; Milk and Dairy Products, and team teaching

in Attributes of Food Quality, Food Quality and Sanitation, Food Microbiology, Advanced Microbiology of Foods and graduate seminars.

To earn a top grade, students have to study two hours a day for every hour spent in lecture, he says. "I feel that most students don't take college quite that seriously, so I try to emphasize that, to get the most out of class, there has to be outside study."

Marshall also warns of pop quizzes, "particularly if I sense students are not keeping their end of the bargain." His expectations are high, Weddle says. "His classes were difficult but he was fair. He was not sympathetic in the sense of students not being able to give their best."

As a teacher, "I hope I tell students I have high standards for myself," Marshall says. "I can't expect more out of them than I do out of myself."

Such expectations of excellence have led to national championships for Mizou's dairy products evaluation team, which Marshall coaches with Dean Shelley, assistant professor of food science and nutrition. Team members prepare for competition in the fall, spending two hours a day, six days a week, tasting, touching and smelling dairy foods.

In forming the team, "I try to get students who are really smart and quick to learn, and with a good taster. Brains come first," Marshall says.

Visits to industry are especially beneficial to team members, he says. To provide a similar experience in the classroom, Marshall plans to use a teaching-improvement grant to make a videotape in a cheese plant. Another project will provide computers to help students solve a food-plant management problem. "Many of our students go into management but don't have a concept of what's involved until they can tie management into the food industry," Marshall explains. "Once it's put in the context of the food industry it becomes much more interesting to them." Consequently, students rate the assignment most useful.

**EDUCATION** is a dynamic process, Marshall says. "You have to keep watching for new ways to improve courses. Students are different. You have to keep watching for what turns the student on."

His interest continues long after students graduate, says Dr. William Stringer, professor and chairman of food science and nutrition. "He knows where they are and what they are doing." The close ties are mutually beneficial: At one faculty meeting, Stringer said he'd like to offer five new freshman scholarships. With calls to former students, Marshall soon secured four. □