

CULINOLOGY®

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The Land of 10,000 Opportunities

Photos: Jim Tate

By Martin Schultz

It wasn't so long ago that students looking for a career in the food industry could pursue only one of two general academic paths: culinary arts or food science. The problem is, by choosing either degree, students have effectively preselected their career paths. Typically, culinary arts produces chefs, and food science produces food scientists or technologists.

Luckily, Culinology® breaks new ground for commingled academic growth in this area, as we have seen since Michael Cheng participated in the first academic Culinology program as head of the Institute for the Culinary Arts at Metropolitan Community College, Omaha, NE, in 2001. In this "2+2" Culinology program—as developed by the Research Chefs Association (RCA)—students take two years of culinary arts at Metropolitan Community College. Then, to complete the -ology aspect of Culinology, they complete food-science courses at the University of Nebraska, Lincoln.

"In essence, a chef with an understanding of basic chemistry would have a solid grasp of how ingredients interact," notes Cheng. "On the other hand, a food scientist with culinary-arts tools would more-readily understand a chef's problems tackling a recipe with new ingredients."

DIVING INTO THE CONCEPT

The concept of a Culinology degree program soon attracted interest beyond Nebraska, and RCA quickly worked to help create other programs at select schools throughout the country.

Two Minnesota-based organizations, The Schwan Food Company in Marshall and the Agriculture Utilization Research Institute headquartered in Crookston, found that they both wanted to hire food technologists and food scientists who also might have culinary arts skills. Both companies also had R&D labs

CULINOLOGY building blocks

Although SMSU's program covers culinary basics like crafting baked goods, it also delves into the scientific principles necessary to help ensure peak consistency, quality and safety.

and representatives on the campus of Southwest Minnesota State University (SMSU), Marshall. This helped foster the genesis of a new Culinology program, and in 2005, Cheng was invited to set up shop at SMSU.

SMSU proposed that Cheng establish a fully integrated four-year Culinology program. "Interwoven into the entire Culinology curriculum are food science principles and culinary arts," says Cheng, associate professor and director of the Culinology program. "The students learn fundamental and advanced culinary skills, and also the scientific inquiry method, as well. As they progress, they study chemistry, food science and product development, and learn how to integrate their culinary-arts knowledge with food science. The result is that we are not just teaching student chefs how to cook, but also giving them the science behind the food."

One of the first steps was to properly equip the program with the requisite technology and resources. With a \$3.5 million capital campaign goal, Cheng will eventually oversee the renovation and construction of four kitchens—for basic skills, baking, demonstrations and product development, as well as a dining room—comprising a total of 7,200 square feet.

Food manufacturers are showing a keen interest in the Culinology program. "I think any food processor looking for a competitive edge would be interested in a Culinology graduate," says Tim Kline, director of education services, RCA, Atlanta. The ability to understand both the culinary and the scientific implications of food-product development is a powerful tool.

THE LAY OF THE LAND

SMSU's initial Culinology program curriculum was put together by the business faculty using examples from various other RCA-approved Culinology programs in the nation. "The role of the RCA is to provide guidance to educational institutions as they develop these programs and assist them in identifying the necessary competencies," says Cheng. RCA's Degree Program Subcommittee reviews curricula and makes recommendations regarding new Culinology programs.

SMSU submitted its first version of the curriculum for RCA approval sometime in early 2005, notes Cheng. "The RCA reviewed it and sent its suggestions for changes to SMSU sometime in the summer," he



says. "Since I joined them in Oct. 2005, I've made modifications to the curriculum before resubmitting it to RCA for final approval," which occurred in Dec. 2005. Recommended modifications included removal of about 15 hours of business courses and the addition of more science and culinary courses. The program's current curriculum includes:

Introduction to Culinology—the beginning course in Culinology designed to familiarize the student with the breadth and scope of the discipline;

Culinary Essentials I & II—in-depth studies of the basic and intermediate core components in the creative study of culinary arts and food production;

- Introduction to Baking & Pastry;
- Principles of Garde Manger & Buffet;
- International Cuisine—includes a technical approach to flavor profiles;
- Food Science—major food components and food preservation;
- Principles of Meat Identification, Fabrication and Evaluation;
- Aromatics and Flavors;
- Food Sensory Analysis;
- Food Products Research and Development Methodology—new-product development, from concept to store shelves;
- Food Chemistry and Analysis;
- Fundamentals of Food Processing;
- Food Trends, Legislation and Regulation;

Swimming in a Bigger Pond



Amy Blum is a 22-year-old student who heard about the Culinology® program at Southwest Minnesota State University (SMSU), Marshall, while she was in the culinary program at Kirkwood Community College, Cedar Rapids, IA. She transferred in the spring of 2006.

Blum says she has always been interested in culinary arts—and is now intrigued by food science. “I’m looking to work in a test kitchen,” she says. “The program here is perfect because it offers both elements.” She says that she also likes the student-to-teacher ratio at SMSU. “The program gives you more options—it’s more well-rounded.”

- Advanced Culinary Science—an examination of taste, cooking techniques, ingredients and flavoring techniques;
- Quality Assurance of Food Products;
- Product Development—students develop products for commercial or retail food manufacturers and foodservice operations; a hands-on, real-world course.

SMSU also recommends that students round-out their education with key classes in hotel & restaurant administration, chemistry, biology, economics, mathematics, business administration, marketing and Spanish, among other options. The program culminates with an internship that centers on practical culinary and R&D experience in an approved, supervised and structured environment.

SMSU also maintains an Advisory Board composed of key figures from the industry, some of whom are also RCA members. “The role of the advisory board at

SMSU is to provide guidance and feedback to the program’s faculty regarding curricular and program goals,” says Cheng.

FIELD GUIDES

In addition to Cheng, the faculty includes Kurt Struwe and Charles Ogbeide, both assistant professors in the program. Struwe—providing a highly culinary aspect—gained extensive experience from his years as a restaurant owner and executive chef. Ogbeide—with B.S. and M.S. degrees in food science—draws his experience from 24 years in the hospitality industry.

“I’m very interested in the physiology of taste and smell, how we perceive flavor and all its nuances,” Struwe says. “One of the biggest challenges for students is to enhance their vocabulary when describing food, and get away from just saying ‘good’ and ‘nasty’ and to learn how to replace them with more-specific descriptive terms.”

This is Ogbeide’s first semester at SMSU. With his background in

hotels and restaurants, he sees the advantages of the business strengths Culinology students can acquire. “This degree enables chefs to know exactly what they are giving the public every time they send a plate out,” he says. They’ll understand how to incorporate more-nutritious food into the recipe. They’ll know the underlying science of fresh food and how to appropriately employ extended-shelf-life products.”

Although the SMSU program is just getting its feet wet, Ogbeide has great hopes for its future. “In the following year, we hope to double the student intake,” he says. That goal should prove easily attainable considering the momentum behind this program. ●

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