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CONDITIONS OF ACCURACY

The information within this handbook is accurate as of the time of publication. Students are responsible for informing themselves of and satisfactorily meeting all requirements pertinent to their relationship with the University. Students and others who use this handbook should be aware that the information changes from time to time at the sole discretion of Chapman University and that these changes may alter information contained in this handbook. More current and complete information may be obtained in the appropriate department, school, or administrative offices. The University reserves the right, at any time and without notice, to make any changes to all rules, policies, procedures, and any other information that pertains to students or to the institution including, but not limited to, admission, registration, tuition and fees, attendance, curriculum requirements, conduct, academic standing, candidacy, and graduation. This handbook does not constitute a contract or terms or conditions of a contract between the student and Chapman University.

IN CASES OF CONFLICT BETWEEN THE HANDBOOK AND GRADUATE CATALOG
The Graduate Catalog is considered the official representation of program requirements for all graduate programs at Chapman University. If a conflict between the information in this handbook and the Graduate Catalog arises, the information in the Graduate Catalog prevails.
FOOD SCIENCE DIRECTORY

FACULTY

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Food Chemistry Laboratory: Keck 281
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FOOD SCIENCE FACULTY AND STAFF

Anuradha Prakash, Ph.D.
Professor and Program Director

Anuradha Prakash (B.S., University of Mumbai; M.S., Ph.D., Ohio State University) is Professor and Director of the Food Science Program at Chapman University. She has expertise in the areas of food processing and preservation, specifically microwave processing and food irradiation. Her current research focus is on the use of various technologies to enhance the safety and shelf-life of fresh-cut fruits and vegetables and ready-to-eat meals. Anuradha has a keen interest in issues of food security and sustainability.

Fredric Caporaso, Ph.D.
Professor

Fredric Caporaso, Ph.D. (B.S., M.S., Rutgers, State University of New Jersey; Ph.D., Pennsylvania State University) is a Professor of Food Science in the Schmid College of Science and Technology. He teaches a variety of courses including: Introduction to Food Science, Sensory Evaluation of Foods, Darwin and the Galápagos, Darwin’s Theory of Evolution: The Science and the Controversy (Honors), and Research Methodology. His professional memberships include The Institute of Food Technologists, International Union for the Conservation of Nature- Species Survival, Commission- Tortoise and Freshwater Turtle of Specialist Group, and The Turtle Survival Alliance.

Lilian Were, Ph.D.
Associate Professor

Lilian Were (B.S., M.S., University of Arkansas at Fayetteville; Ph.D., Purdue University) teaches courses in Food Analysis, Food Chemistry, Food Ingredients, International Nutrition, and Research Methods. Dr. Were’s current research is focused on determining the preservative properties of phenolic and melanoidin coffee compounds, with the overall goal of enhancing the shelf life of food. Dr. Were recently received the Outstanding Food Science Award from her alma mater, Purdue University.

Rosalee Hellberg, Ph.D.
Assistant Professor

Rosalee Hellberg is an Assistant Professor in the Food Science Program at Chapman University. She teaches courses on Food Fraud, Food Microbiology, and General Microbiology. Dr. Hellberg received an M.S. and Ph.D. in Food Science and Technology at Oregon State University, where she studied seafood safety and fish mislabeling. She completed a post-doctoral fellowship at the FDA working on the development and optimization of DNA-based methods for the detection of food pathogens and food mislabeling. Dr. Hellberg received the 2015-2017 Wang-Fradkin Assistant Professorship Award for exceptional merit in scholarly and creative activity at Chapman University.
2017, Dr. Hellberg was selected as a recipient of the Emerging Leaders Network Award by the Institute of Food Technologists. Most recently, Dr. Hellberg received the 2018-19 Award in Mentorship of Undergraduate Research & Creative Activity at Chapman University and is currently Program Chair for the 2020 Pacific Fisheries Technologists Meeting to be held in Long Beach, CA (http://pffish.net/). She has published over 30 peer-reviewed articles and book chapters.

**John Miklavcic, Ph.D.**  
*Assistant Professor*

Dr. Miklavcic has a translational research program in human nutrition that focuses on understanding the therapeutic applications of functional foods and nutraceuticals in human health. He is particularly interested in how dietary lipids interact with and regulate gene function in neonatal health & development and in chronic conditions. Dr. Miklavcic uses quantitative and qualitative methods as well as applied and implementation research in studies with clinical populations of infants, adolescents and older adults. Dr. Miklavcic recently received the Mentor Award for Summer Undergraduate Research at Chapman University and the Health and Nutrition Division New Investigator Award from the American Oil Chemists Society.

**Robyne Kelly, MPA**  
*Program Coordinator*

Robyne has served as Food Science Program Coordinator since 2015. She received a Bachelor’s degree in Organizational Management from Ashford University in Clinton, IA and Masters of Public Administration from California State Polytechnic University, Pomona in 2015. Robyne is the student point of contact for career information & support, room reservations, keycard access, secondary academic advising, registration help, and general support for our students. A native of Ohio, she has lived in Southern California since 1982. Robyne is the proud mom to two grown sons.
HISTORY AND MISSION OF CHAPMAN UNIVERSITY

Chapman University is an independent institution founded in 1861, whose mission is to "provide personalized education of distinction that leads to inquiring, ethical, and productive lives as global citizens."

Nationally, Chapman is recognized for its selectivity and value among the top comprehensive universities in the Western United States. Chapman University has numerous nationally recognized and accredited academic programs and is well known for its unwavering commitment to academic excellence through personalized education and low student-to-faculty ratios. Chapman University has achieved another milestone in its growth as a research institution in 2019 with the announcement that it has been elevated to R2 status in the update of the Carnegie Classification of Institutions of Higher Education. This higher ranking is an indication of the university's growth in research, doctoral and professional practice degree programs.

Graduate study offers students the opportunity to pursue a broader and deeper knowledge of their disciplines as part of Chapman’s commitment to encouraging a lifelong passion for learning. Graduate students are invited to join faculty as co-learners in study and research that stimulate the individual and expand the boundaries of knowledge. Graduate students are expected to show persistence, maturity, the capacity for growth, and a commitment to the life of the mind. Chapman’s distinctive graduate studies programs are designed to facilitate a high-quality education built on student access to faculty, resources, internships, and classes. Small classes guarantee accessibility and personal guidance of faculty members, who are well respected teachers, researchers, and professionals in their fields of endeavor. By working side-by-side with faculty on research and other projects, student learning increases.
THE FOOD SCIENCE PROGRAM

The Chapman University Food Science and Nutrition (FSN) Department was founded in 1979 and offered its first B.S. and M.S. degree classes in 1980. It was supported at first by a large local food industry (Hunt-Wesson, Carnation, Kelco/Merck, etc.) that was in need of locally trained professionals. In 1983 FSN achieved Institute of Food Technologists (IFT) program approval and was the only science program to be nationally accredited at Chapman until 2005. In 2005, we decided to close out the B.S. program and focus our efforts on the Master’s program. In 2011, we began offering a joint M.S./M.B.A. program in conjunction with the Argyros School of Business and Economics. This program allows students to simultaneously earn an M.S. in Food Science and an MBA.

The mission of the Food Science program is to be internationally recognized as a program that delivers an education of excellence, conducts impactful research, and develops innovative collaborations across disciplines, with the food science industry and community that contribute positively to our educational mission and also have a beneficial impact on society. The Food Science program is housed in the Schmid College of Science and Technology. It has five full time faculty members, and we are fortunate to have available industry experts who teach for us on a regular basis. In summer 2018, Food Science made the move to the brand new Keck Center for Science and Engineering. Spacious food science teaching and research labs in food processing, food chemistry and food microbiology with state-of-the-art equipment provide vital hands-on experiences for our students.

Our job placement is close to 100% due to a strong food sector in the region and continued need for food scientists to ensure safety and quality of our food supply. Our students have various opportunities for professional exposure through our connections with the local industry, and our engaged alumni network that participates in our annual networking night, and leadership panels. Our students are also encouraged to be active participants in Southern California Institute of Food Technologists (SCIFTS), seeking volunteer opportunities and leadership roles within SCIFTS and IFT. The Food Science program also offers a number of short courses and continuing education activities. The Better Process Control School is offered twice a year with attendees from all over the country, and overseas. Other short courses such as Food Labeling, Introduction to Lean, Statistical Process Control and Food Entrepreneurship have also been offered. As a student of the Food Science program, you will apply scientific principles to study the properties of food and to develop innovative ways to process and package foods resulting in safe, sustainable and nutritious food choices. The Food Science program at Chapman University prepares students for a variety of careers in the food, nutritional, pharmaceutical and related industries, in government and regulatory agencies, for service organizations and academic institutions.
Degrees offered

- MS in Food Science (34 units)
- MS in Food Science with emphasis in Food Safety and Regulatory (40 units)
- MS in Food Science with emphasis in Product Development and Sensory Evaluation (40 units)
- MS in Food Science/MBA Joint program (69 units)
- 4 + 1 Integrated Undergraduate/Master of Science in Food Science
ADMISSION REQUIREMENTS

An undergraduate degree in food science is not required for admission; because of its basic orientation, the program encourages applicants from a broad range of disciplinary interests. Recently admitted applicants have degrees in chemistry, biology, pharmacy, business, chemical and mechanical engineering as well as food science and nutrition. Admission to the program may be achieved by completing the following requirements:

1. Hold a baccalaureate degree from a regionally accredited institution. Students with a B.A. or B.S. degree in any of the physical or biological sciences will generally have the necessary prerequisites in chemistry, biology and mathematics. Students with an inadequate background will be required to take prerequisite courses without credit toward their graduate degree. Prerequisite courses must be completed within the first year of enrollment.

2. Have achieved a minimum required admission grade point average of 3.000. Graduate Record Exam (GRE) scores are required. (GMAT scores may be accepted in lieu of GRE.) Applicants must achieve a minimum score of 680 or 153 (revised test) on the quantitative section, 500 or 153 (revised test) on the verbal section and a score of 3.5 on the analytical writing section of the general test.

3. Applicants who have completed their undergraduate degree outside of the United States are required to achieve an acceptable score on the Test of English as a Foreign Language (TOEFL), minimum of 550 (paper–based) or 80 (Internet–based).

Transfer policy
Students admitted to the Master of Science in Food Science degree program with an earned master’s degree may transfer up to six credits of graduate coursework upon approval of a petition by the program coordinator and the dean of the school. (See the academic policies and procedures section for transfer policies.)

Prerequisites*

1. General chemistry with laboratory (two semesters)
2. Organic chemistry with laboratory (two semesters or one semester organic and one semester biochemistry)
3. Microbiology with laboratory
4. Statistics
5. Human nutrition

*Note: In order for your application to be considered for review, you are required to have successfully completed one year (two semesters) of General Chemistry with Laboratory. All other prerequisites must be met by the end of the first academic year.
DEGREES AND REQUIREMENTS

Requirements for the Master of Science in Food Science degree

Students pursuing the Master of Science in Food Science are held to the University’s Academic Policies and Procedures. In addition, these specific degree standards apply:

- Minimum grade 2.300 "C+" is acceptable towards the degree (although the food science program will allow a 2.000 or "C" in a single class to count towards the degree).
- Maintain 3.000 GPA in the degree.
- Complete the thesis or non-thesis option.

Coursework

Students entering the program without a degree in food science or a food science background will be required to take the food science core courses (12 credits) as part of their 34–credit degree requirements. If the core courses have been taken as an undergraduate at Chapman University or at an Institute of Food Technologists approved academic institution, they may be waived. The student would then build a program by selecting courses from the approved list of electives for graduate students in consultation with their advisor. Essentials of Food Science (FSN 500), Research Methods (FSN 660), and Statistics for Food Scientists (FSN 508) are required of all graduate students. Thus, a typical student will take the 12–credit core, one credit for Essentials of Food Science, three credits for Research Methods, three credits for Statistics for Food Scientists and 15 elective credits.

Core courses (12 credits)

- **FSN 501 - Food Chemistry** 3 credits
- **FSN 502 - Food Chemistry Lab** 1 credit
- **FSN 520 - Food Processing and Preservation** 3 credits
- **FSN 521 - Food Processing and Preservation Laboratory** 1 credit
- **FSN 530 - Food Microbiology** 3 credits
- **FSN 530L - Food Microbiology Lab** 1 credit

Requirements (7 credits)

- **FSN 500 - Essentials of Food Science** 1 credit
- **FSN 660 - Research Methods** 3 credits
- **FSN 508 - Statistics for Food Scientists** 3 credits
Electives (15 credits)

- **FSN 503 - Government Regulation of Foods** 3 credits
- **FSN 505 - Food Safety and Quality Assurance** 3 credits
- **FSN 506 - Effective Communications for the Real World Scientist** 3 credits
- **FSN 510 - Food Industry Study Tour** 3 credits
- **FSN 512 - Sensory Evaluation of Foods** 3 credits
- **FSN 515 - Food Ingredients** 3 credits
- **FSN 517 - Food Analysis** 3 credits
- **FSN 519 - Travel Course to Crete and Athens: Exploring the Original Mediterranean Diet** 3 credits
- **FSN 522 - Community Nutrition** 3 credits
- **FSN 529 - Experimental Course** 3 credits
- **FSN 531 - Special Topics in Nutrition** 3 credits
- **FSN 538 - Nutrition and Human Performance** 3 credits
- **FSN 539 - Life Cycle Nutrition** 3 credits
- **FSN 540 - Food Engineering** 3 credits
- **FSN 543 - Medical Nutrition Therapy** 3 credits
- **FSN 551 - Food Fraud** 3 credits
- **FSN 560 - Current Topics in Food Science and Nutrition** 3 credits
- **FSN 580 - Managing and Marketing Fundamentals for Food Scientists** 3 credits
- **FSN 587 - Nutrigenomics** 3 credits
- **FSN 594 - Food Product Development** 3 credits
- **FSN 600 - Advanced Food Science: Selected Topics** 3-12 credits
- **FSN 601 - Food Packaging** 3 credits
- **FSN 602 - Food Flavors** 3 credits
- **FSN 606 - Dietary Supplements and Functional Foods** 3 credits
- **FSN 668 - Curricular Practical Training** 0 credits
- **FSN 690 - Internship for Graduate Students** ½-3 credits
- **FSN 691 - Student-Faculty Research** 1-3 credits
- **FSN 695 - Thesis** 1-6 credits
- **FSN 696 - Thesis II** 1-3 credits
- **FSN 697 - Continuous Enrollment** 1 credit
- **FSN 699 - Independent Research** 1-3 credits
- **BUS 605 - Marketing Management** 3 credits
- **BUS 606 - Operations and Technology Management** 3 credits

**Total Credits (excluding prerequisites): 34**
Thesis and non-thesis options

Students must choose either a non-thesis coursework option or a thesis/research project option and have a cumulative GPA of 3.000 "B" to earn a M.S. in food science.

Thesis option: Students must be accepted by a faculty member as a research advisee to enroll in the thesis option. Students in the thesis option must complete 34 credits to graduate, including 28 credits of coursework and six thesis credits (FSN 695). On average, thesis projects take 3-4 semesters to complete. Students should consult with their advisor before embarking on thesis projects to map out how the 6 thesis units will be distributed over the time frame needed to complete the project and set clear expectations for each term. If additional time is required to complete the thesis beyond the 6 units of FSN 695, students must register for one unit of FSN 697 in each semester the thesis remains outstanding. Successful completion of a thesis project includes passing the thesis defense with their thesis committee, submission of the finished and signed thesis to the library, and preparation of a manuscript for publication.

Non-thesis option: Students pursuing the non-thesis option need to complete one semester of either Product Development (FSN 594) or an independent study research project (FSN 682). In addition, students must complete Research Methods (FSN 660) in which they will develop a research proposal or comprehensive review of the literature on a food science topic pre-approved by the instructor prior to the start of the semester. Students must also successfully pass an oral comprehensive exam with a faculty panel (see details below).

Comprehensive exam for NON-THESIS students
- The oral comprehensive exam with a panel of food science faculty should be taken towards the end of your program. The exam will gauge your ability to coherently and analytically integrate knowledge gained from course work to solve problems.
- Oral comprehensive exams will be held in early January and June. The application form below must be submitted to the program coordinator by the stated deadlines.
- Prior to taking the exam, students must have completed at least 21 credits, including all three core food science classes (Food Chemistry, Food Microbiology, and Food Processing). Students must have earned at least a C+ grade in each class, with the exception that the food science program will allow a "C" in a single class to count towards the degree.
- Students must have a cumulative GPA of at least 3.000.
- Students have one opportunity to pass the oral comprehensive exam. Students who fail the oral exam will be required to take a written comprehensive exam after a minimum interval of three months.
MS in Food Science with emphasis in Food Safety and Regulatory

Following the passage of the Food Safety Modernization Act (FSMA) in 2011, there has been an increased focus on food safety and regulations within the food industry. Learning outcomes of the emphasis:

- Identify specific hazards associated with a range of food matrices and assess how each hazard can be prevented, controlled, and/or mitigated in the food production system.
- Apply knowledge of hazards to develop and audit food quality and safety assurance systems. Understand regulatory compliance of food product development, manufacturing, labeling, and marketing of food products and apply them to real world situations.

Requirements for the MS in Food Science with emphasis in Food Safety and Regulatory (40 units)

Required courses (19 credits)

- **FSN 500 - Essentials of Food Science** 1 credit
- **FSN 501 - Food Chemistry** 3 credits
- **FSN 502 - Food Chemistry Lab** 1 credit
- **FSN 508 - Statistics for Food Scientists** 3 credits
- **FSN 520 - Food Processing and Preservation** 3 credits
- **FSN 521 - Food Processing and Preservation Laboratory** 1 credit
- **FSN 530 - Food Microbiology** 3 credits
- **FSN 530L - Food Microbiology Lab** 1 credit
- **FSN 660 - Research Methods** 3 credits

Emphasis requirements (12 credits)

- **FSN 503 - Government Regulation of Foods** 3 credits
- **FSN 505 - Food Safety and Quality Assurance** 3 credits
- **FSN 506 - Effective Communications for the Real World Scientist** 3 credits
- **FSN 551 - Food Fraud** 3 credits

Food science electives (9 credits)

Choose three of the following

- **FSN 510 - Food Industry Study Tour** 3 credits
- **FSN 512 - Sensory Evaluation of Foods** 3 credits
- **FSN 515 - Food Ingredients** 3 credits
- **FSN 517 - Food Analysis** 3 credits
- **FSN 519 - Travel Course to Crete and Athens: Exploring the Original Mediterranean Diet** 3 credits
- **FSN 522 - Community Nutrition** 3 credits
- **FSN 529 - Experimental Course** 3 credits
- **FSN 531 - Special Topics in Nutrition** 3 credits
- **FSN 538 - Nutrition and Human Performance** 3 credits
- **FSN 539 - Life Cycle Nutrition** 3 credits
- **FSN 540 - Food Engineering** 3 credits
- **FSN 543 - Medical Nutrition Therapy** 3 credits
- **FSN 560 - Current Topics in Food Science and Nutrition** 3 credits
- **FSN 580 - Managing and Marketing Fundamentals for Food Scientists** 3 credits
- **FSN 587 - Nutrigenomics** 3 credits
- **FSN 594 - Food Product Development** 3 credits
- **FSN 600 - Advanced Food Science: Selected Topics** 3-12 credits
- **FSN 601 - Food Packaging** 3 credits
- **FSN 602 - Food Flavors** 3 credits
- **FSN 606 - Dietary Supplements and Functional Foods** 3 credits
- **FSN 668 - Curricular Practical Training** 0 credits
- **FSN 690 - Internship for Graduate Students** ½-3 credits
- **FSN 691 - Student-Faculty Research** 1-3 credits
- **FSN 695 - Thesis** 1-6 credits
- **FSN 696 - Thesis II** 1-3 credits
- **FSN 697 - Continuous Enrollment** 1 credit
- **FSN 699 - Independent Research** 1-3 credits
- **BUS 605 - Marketing Management** 3 credits
- **BUS 606 - Operations and Technology Management** 3 credits

**Total Credits (excluding prerequisites): 40**
MS in Food Science with emphasis in Product Development and Sensory Evaluation

In order to develop new food products for consumers, companies rely on project teams that include experts in product development, sensory evaluation, and marketing. Individuals working in these areas are also expected to have expertise in food ingredients and functional foods.

Learning outcomes of the emphasis:

- Apply core food science knowledge to develop new products and solve food industry problems.
- Enable students to function as key members of multifunctional product development teams in the workplace.
- Apply knowledge of sensory evaluation to the establishment and management of sensory evaluation panels, projects and programs.

Requirements for the MS in Food Science with emphasis in Product Development and Sensory Evaluation (40 units)

Required courses (19 credits)

- FSN 500 - Essentials of Food Science 1 credit
- FSN 501 - Food Chemistry 3 credits
- FSN 502 - Food Chemistry Lab 1 credit
- FSN 508 - Statistics for Food Scientists 3 credits
- FSN 520 - Food Processing and Preservation 3 credits
- FSN 521 - Food Processing and Preservation Laboratory 1 credit
- FSN 530 - Food Microbiology 3 credits
- FSN 530L - Food Microbiology Lab 1 credit
- FSN 660 - Research Methods 3 credits

Emphasis requirements (6 credits)

- FSN 594 - Food Product Development 3 credits
- FSN 512 - Sensory Evaluation of Foods 3 credits

Emphasis electives (6 credits)

Choose two of the following

- FSN 515 - Food Ingredients 3 credits
- BUS 605 - Marketing Management 3 credits
- FSN 606 - Dietary Supplements and Functional Foods 3 credits
Food science electives (9 credits)

Choose three of the following

- **FSN 503 - Government Regulation of Foods** 3 credits
- **FSN 505 - Food Safety and Quality Assurance** 3 credits
- **FSN 506 - Effective Communications for the Real World Scientist** 3 credits
- **FSN 510 - Food Industry Study Tour** 3 credits
- **FSN 517 - Food Analysis** 3 credits
- **FSN 519 - Travel Course to Crete and Athens: Exploring the Original Mediterranean Diet** 3 credits
- **FSN 522 - Community Nutrition** 3 credits
- **FSN 529 - Experimental Course** 3 credits
- **FSN 531 - Special Topics in Nutrition** 3 credits
- **FSN 538 - Nutrition and Human Performance** 3 credits
- **FSN 539 - Life Cycle Nutrition** 3 credits
- **FSN 540 - Food Engineering** 3 credits
- **FSN 543 - Medical Nutrition Therapy** 3 credits
- **FSN 551 - Food Fraud** 3 credits
- **FSN 560 - Current Topics in Food Science and Nutrition** 3 credits
- **FSN 580 - Managing and Marketing Fundamentals for Food Scientists** 3 credits
- **FSN 587 - Nutrigenomics** 3 credits
- **FSN 600 - Advanced Food Science: Selected Topics** 3-12 credits
- **FSN 601 - Food Packaging** 3 credits
- **FSN 602 - Food Flavors** 3 credits
- **FSN 668 - Curricular Practical Training** 0 credits
- **FSN 690 - Internship for Graduate Students** ½-3 credits
- **FSN 691 - Student-Faculty Research** 1-3 credits
- **FSN 695 - Thesis** 1-6 credits
- **FSN 696 - Thesis II** 1-3 credits
- **FSN 697 - Continuous Enrollment** 1 credit
- **FSN 699 - Independent Research** 1-3 credits
- **BUS 606 - Operations and Technology Management** 3 credits

Total Credits (excluding prerequisites): 40
Joint Master of Science in Food Science/MBA degrees

In conjunction with the Argyros School of Business and Economics, the Schmid College of Science and Technology offers a joint program leading to both the Master of Business Administration and Master of Science in Food Science degrees. Offered to full-time and part-time students, the program requires acceptance into the Professional Master of Business Administration program at the Argyros School of Business and Economics and the Master of Science in Food Science program in the Schmid College of Science and Technology.

Students may apply to the joint program, alternatively, students may also apply to the MBA program during their first year in the food science program, and students may apply to the M.S. in food science program during their first year of study in the MBA program. 

Requirements for the Joint Master of Science in Food Science/MBA degrees

Students must satisfy the minimum requirements for each degree program including course requirements, residency and other requirements listed in the Graduate Catalog. Students must maintain a cumulative grade point average of 3.000 "B" or higher in each program. A non-thesis coursework option or thesis project in food science must be completed.

The joint degree program requires the completion of 69 total credits (as opposed to 84 credits if the two degrees are sought separately and outside the joint program). The Argyros School of Business and Economics will accept up to nine of the M.S. in food science credits toward completion of its 50-credit requirement; thus, students must complete 41 MBA credits in the MBA program.

The Schmid College of Science and Technology will accept six of the MBA credits toward completion of its 34-credit requirement, thus students must complete 28 credits in the M.S. in food science program (19 credits of required courses and nine credits of electives).

Food science courses eligible for credit towards the MBA degree (limit of nine credits applied towards the MBA):

- **FSN 503 - Government Regulation of Foods** 3 credits
- **FSN 510 - Food Industry Study Tour** 3 credits
- **FSN 560 - Current Topics in Food Science and Nutrition** 3 credits
- **FSN 594 - Food Product Development** 3 credits
- **FSN 600 - Advanced Food Science: Selected Topics** 3-12 credits
- **FSN 699 - Independent Research** 1-3 credits

Business courses eligible for credit towards the M.S. in Food Science degree (offered in the Argyros School of Business and Economics)

- **BUS 605 - Marketing Management** 3 credits
- **BUS 606 - Operations and Technology Management** 3 credits
The food science program offers an accelerated program that enables undergraduate students to begin taking M.S. coursework in their junior or senior year and receive a Master of Science in Food Science within one year of finishing their undergraduate degree. The program is open to all undergraduate majors as long as they have satisfied the prerequisites for the program and meet admission requirements.

Chapman students can apply to a graduate program in their junior or senior year. Students will receive conditional admission to the program, pending completion of their bachelor's degree as stipulated in the graduate catalog (see explanation of conditional admission in the graduate catalog). If accepted into a graduate program, undergraduate students may take up to 12 graduate credits once they have completed 90 undergraduate credits. These 12 credits may also count towards their undergraduate degree credit requirement. Students would complete the remaining credit hours of graduate coursework beginning in the semester after receiving the undergraduate degree. The application process, prerequisites, GPA and graduate program requirements are as specified for the M.S. in Food Science; however, GRE and letters of recommendation are waived.

Please see Appendix B for Biology, Chemistry, Biochemistry and Health Sciences curriculum plans.
**ADVISING**

*Your Faculty Advisor*

The student is responsible for his or her program, including meeting the published requirements and deadlines. The University assists the student in making appropriate decisions by providing academic advising. A faculty advisor will be assigned to each student upon acceptance into the Food Science Program. The advisor assists the student in planning a program of study to meet degree requirements. Students typically initiate contact with the advisor, preferably during FSN 500. Students should meet with their faculty advisor at least once each semester, preferably in the first two weeks of April and/or October (prior to registration window) to review their course schedule for the upcoming semester. Early planning and development of the student’s program is very important. Courses are not always offered each year and early identification of courses makes it possible to plan the program to best serve the students goals.

*Individual Development Plan*

Each student, in collaboration with their faculty advisor, will work on an Individual Development Plan (IDP) to take ownership of their education and professional development, think intentionally of their short and long term goals, establish clear expectations, and develop a path for success in the program. Students should complete the IDP Form (Appendix E) and schedule a meeting with their advisor in the first two weeks of their first semester in the program. Open and direct dialogue between the student and advisor will help establish clear steps that the student should take during their program. In two weeks after that meeting, the modified IDP should be submitted on the FSN 500 site on Blackboard. In subsequent semesters, students should meet with their faculty advisors at least once, preferably in the first two weeks of April and/or October (prior to registration window) to review their course schedule and IDP.

*Monitor your Progress*

During the semester, students should monitor their grades for assignments on Blackboard. If a student questions a grade they have earned in an assignment, they should contact the instructor soon after the grade has been posted (within a week). At the end of the semester, grades are posted on my.chapman.edu. Students should monitor their grades and contact the instructor within a week if there is a clerical error or if they need to discuss the final grade they have earned.

The [My Chapman Student Center](https://my.chapman.edu) is a web interface that allows students to access information to Chapman University’s administrative database. Its function is to provide students direct web access to portions of their academic and financial records, as well as the ability to register through the internet. Information available to students includes their personal course schedule, unofficial transcripts, grades, financial aid award information, biographical data, and academic program evaluation information for purposes of graduation. Students are issued a password into the my.chapman.edu
system prior to the beginning of their first semester. Access to my.chapman.edu Student Center is provided through the Student Self Service link at my.chapman.edu. Enter your regular Chapman User ID and Password. Click on the Student Self Service Link. Continue to click on the Student Center link until your Student Center opens. If a student encounters difficulty accessing my.chapman.edu, he or she may contact the Service Desk at (714) 997-6600 or servicedesk@chapman.edu.

Students are encouraged to check the status of their degree program on the Program Evaluation screen in my.chapman.edu. The official record of student progress in the program is the Program Evaluation. The Program Evaluation serves as a reference for degree conferral only and students are encouraged to seek advisement from their Faculty Advisor for course sequence requirements. Students and their Advisors can view their academic record at any time using my.chapman.edu. The Program Evaluation is the student’s agreement with the Food Science Program and with the university.

Students should verify that the courses for which he or she has registered match the courses appearing in the program evaluation as “In Progress” coursework. In addition, students should verify that courses appearing in the program evaluation contain accurate information as to credits earned, including the area in which credits are awarded. In order to do this, students may need to cross-check their program evaluation with relevant course matrices, schedules, or transcripts. If a student notices a discrepancy, the Office of the Registrar will need to be contacted in order to make necessary changes and avoid delays in degree conferral. The Coordinator for the Food Science Program can help you in this process if you notice a discrepancy.
ACADEMIC POLICIES AND STUDENT PERFORMANCE EXPECTATIONS

Academic Policies & Procedures

Policies regarding enrollment, attendance, grade requirements, time limitations, leave of absence, re-enrollment, withdrawal, audit, probation & dismissal, petition & appeal, academic integrity and more can be found in this section of the graduate catalog.

Grade Point Average

A grade point average of 3.000 based on all coursework taken at Chapman and applicable to the graduate degree or credential is required, excluding prerequisites. A cumulative grade-point average of 3.000 based on all coursework applicable to the graduate degree or credential is required, excluding prerequisite courses (although the food science program will allow a 2.000 "C" in a single class to count towards the degree). Students who are struggling to maintain a GPA of 3.0 are encouraged to meet with their advisor during the semester.

Probation

The Food Science program follows the Chapman policies regarding probation. Students are expected to keep track of their grades. If they expect to be below the minimum 3.0 GPA requirement, or are placed on probation, students should complete a Contract for Academic Success form (Appendix H) and make an appointment with Dr. Lilian Were to assure that they have a plan to get off probation.

Policies regarding enrollment, attendance, grade requirements, time limitations, leave of absence, re-enrollment, withdrawal, audit, probation & dismissal, petition & appeal, academic integrity and more can be found in the graduate catalog.
LABORATORY SAFETY AND TRAINING

Safety Training

Prior to being allowed to participate in any laboratory work, students must complete laboratory safety training. Basic and intermediate laboratory safety training is done online through the Learn Upon management system. New students or their faculty adviser will contact the Director of Laboratory Operations and Safety so that they can be signed up to start using the Learn Upon system. More lab specific advanced safety training is to be completed on a small group or one on one basis by the students and their advisor.

Laboratory Access

Once a student completed the online portion of their safety training, they will be allowed to have access to the labs. Once safety training is completed and has been confirmed, the student’s advisor is to contact the Schmid Facilities Coordinator to request access for the student.

Graduate students are permitted to work in labs outside of normal (8 am – 5pm) working hours. However, working alone on dangerous or potentially dangerous experiments outside of normal hours is not permitted.

Laboratory Attire and PPE

In general, students must wear closed toed shoes, long pants, and safety glasses or goggles at all times when in labs. In many cases, additional Personal Protection equipment (PPE) such as gloves and lab coats will be required.

For Instructional Laboratories, PPE will be provided for courses where lab work is performed. It is mandatory that students follow the lab instructor’s directions and standards regarding lab attire at all times. Instructors are allowed to apply penalty for students that do not follow these guidelines if the instructor feels such action is necessary.

For Research laboratories, students shall adhere to the above attire requirements at all times. In cases where work requires PPE, students are required to use PPE in accordance with best practices.
CHAPMAN UNIVERSITY ACADEMIC RESOURCES

**Academic Calendar**

Chapman's academic year is based upon a traditional calendar. Fall classes generally begin in late August and conclude mid-December. An interterm session is held in January for the university. Food Science courses are sometimes offered during interterm. The spring semester begins in late January or early February and concludes in May. Summer sessions are scheduled from the end of May through mid-August. On the academic calendar page students can find the registration timelines.

**Academic Policies & Procedures**

Policies regarding enrollment, attendance, grade requirements, time limitations, leave of absence, re-enrollment, withdrawal, audit, probation & dismissal, petition & appeal, academic integrity and more can be found in this section of the graduate catalog.

**Blackboard**

Blackboard serves as an online course component and virtual portal for program information-including important announcements on the FSNSA page regarding events, internships, jobs & more. Students receive log-in data upon admission to the university. For log-on assistance, please contact the Service Desk at (714) 997-6600, or servicedesk@chapman.edu.

**Computer Services**

At the Chapman University Orange campus there are a variety of computer classrooms and computer labs, all of which are available to students. See the individual computer lab web pages for schedules, equipment configurations, and software. Additionally, laptops can be borrowed, free of charge with your student id, from the laptop station on the first floor of Argyros Forum.

**Final Exam Calendar**

Please review this calendar carefully to know when final exams are scheduled.

**Graduate Studies Resources**

Please review this website carefully as it will answer many of your questions in regard to academic expectations and resources.

**Leatherby Libraries**

The Chapman University Leatherby Libraries contains approximately 384,000 titles including DVDs, videos, CDs and other media, 260 print journal titles, access to 69,000 plus full text electronic journals, 280 online databases and 17,000 electronic books, supporting the research and curricular needs of the campus community. The library’s website is the starting point for accessing the book holdings and journal indexes, including
full text databases and extensive online reference sources. Students may also renew books online via the library website. An effective interlibrary loan program enhances the hard-copy and electronic holdings, enabling the library staff to support the research needs of students and faculty. The Leatherby Libraries facility contains group study rooms, multimedia preview rooms, computers for user access, workstations, wireless internet access, and exemplary library service for the Chapman community.

**Tutoring/Writing Assistance**

(714) 997-6828 DeMille Hall 130

The TLT is dedicated to providing tutoring services in a wide range of subjects for any Chapman student interested in receiving help outside of class. Peer tutors are available in several general education subjects and higher level courses within the different areas of study we offer at Chapman.

A variety of tutoring opportunities are available to students in both a one-on-one and group setting. These include:

- Individual Tutors
- Supplemental Instruction
- Writing Tutors

*Tutoring services are FREE OF CHARGE to every Chapman student.*

**Graduate Writing Assistants**

- GWAs are available to graduate students to assist with tutoring in research and writing, focusing on both the rhetorical and technical conventions of scholarly and creative writing in specific disciplines, from the physical and health sciences to screenwriting. The tutors will be specifically trained to help graduate students during their completion of substantial graduate program writing requirements, such as research papers, articles for publication, theses, and dissertations. They can also help you with style guide formatting, issues related to English as a secondary language, and utilizing the library’s resources for research.

- The GWAs will be available for either 30-minute or 50-minute sessions on a walk-in basis. Sessions will be available starting Tuesday, September 2. Their tentative schedule will be Monday through Thursdays, 4-9 p.m. GWAs will be located in the Writing Center in DeMille Hall.


**STUDENT RESOURCES**

*To find a location on campus: Use the [Interactive map](#)!*

**ATMs**

- Bank of America- located in front Hutton Sports Center
- School's First Federal Credit Union- at 633 W. Palm

**Campus Ministry**

The Office of Church Relations, in partnership with the Fish Interfaith Center, serves the Chapman community by providing students and staff the opportunity to grow in their faith through spiritual groups and worship opportunities, but also by ministering to students and staff on a one-on-one basis. Visit the [Office of Church Relations webpage](#) for more information.

**Center for Global Education & International Student and Scholar Services (ISSS)**

At 576 N. Glassell, ISSS serves the special needs of international students and scholars on the Chapman University campus. The office acts primarily as a source of information and assistance with the goal of helping to make the international student and scholar experience at Chapman as productive and meaningful as possible. The office provides the following services: issuance of required immigration documents, student and scholar tracking and reporting as required by SEVP and Department or State, fall and spring orientation programs, assistance with personal matters, assistance with health insurance, internships, on-campus employment, tax and immigration matters, certificates of enrollment and official letters for foreign administration offices, information on social and cultural events, and liaison with campus and community programs.

**Chapman Cross-Cultural Center**

- Designed to be used by – and to enhance the development of – all Chapman students, so they can gain greater insights into their own identity, develop a stronger sense of empathy for others' identities, and to use their learning to help create a more positive and inclusive Chapman community. To facilitate this student learning, the Cross Cultural Center designs programs and experiences intended to expose all students to diverse ideas and perspectives, affirm the value of our students from underrepresented identities, and support students who are in need of additional help. They are located in Argyros Forum 304 and can be reached at (714) 997-6735.

- One of the central features of the Cross-Cultural Center is its four meeting rooms, each of which is equipped with a flat screen television and Apple TV system. Each room has been assigned a theme that highlights an under-represented identity within the Chapman student body. [Book through Org Sync](#).
Disability Services

Chapman University is committed to making its educational opportunities accessible to qualified individuals with disabilities in accordance with applicable state and federal laws. By providing access to qualified students with disabilities, the University demonstrates its belief that the community will benefit from their skills and talents. They can be reached at (714) 744-7971.

Eateries on Campus

Chapman Dining information.

Email

All students are provided a Chapman email address, which should be checked regularly. If students prefer, they may forward their Chapman email to a personal address. To do this, students must visit the Chapman homepage, click on "Email" in the Quick Links dropdown, then click on "Forward Your Email" and follow the directions. For assistance, students may contact the Service Desk at (714) 997-6600 or visit the Information Systems and Technologies webpage.

Fitness Center and Pool

- There is a fitness center located near the football field in Hutton Sports Center
- There is a pool located near the Argyros Global Citizens Plaza
- The Chapman University fitness center and pool are open to all Chapman students and employees. A valid Chapman I.D. is necessary for entrance to the center. Fitness center users must adhere to the dress code. For hours and other information please visit the Fitness Center webpage.

Food Science Scholarship Opportunities

Chapman Food Science students are eligible to apply for the SCiftS Phil Bates Scholarship (up to $2000.00) each academic year, as well as the Custom Flavors Scholarship ($5000.00). Watch your emails for application rules and deadlines.

Housing

The Off Campus Housing page has a variety of resources and the contact information any student may use; there is also a Facebook group for those looking for roommates/shared housing. Anyone with a Chapman login can check out the off campus rental listings in the database. There is also a list of local apartment communities that the university has vetted.

Key Card Access

Each semester, the food science program coordinator will automatically request to activate your key card to food science labs approved by your faculty. You will need to
recode this card in the library EVERY SEMESTER. If your key card does not work during the term, you can reactivate your card in the Rotunda in Leatherby Library (first floor). Important note: You may be issued a special WIFI card (especially if you are conducting research in the Keck Science Center). Do not punch a hole in it, as it will render the Wi-Fi capability useless.

Parking & Transportation

- Keep in mind that you need to buy a parking permit to park anywhere on campus.
- Check with Parking & Transportation regarding permits: (714) 997-6763 Located at 418 N. Glassell St.
- Street parking is not reliable and if you park anywhere that is permit enforced you will get a ticket- guaranteed!
- Here’s a map.

Public Safety & Services

Public Safety & Services is located at 418 N. Glassell St. Their services include campus police, parking, night-time escort, registering your bike, free battery jumpstart, etc. They can be reached at 714-997-6763

Schmid College Graduate Student Lounge Keck 368

Schmid College graduate students (Food Science and Computational and Data Science) have exclusive access to the Keck Graduate Lounge (3rd floor-room 368). It is equipped with a refrigerator, microwave and white board for student use. Please contact the program coordinator if your keycard does not allow access to this space.

Social Media

Facebook- Chapman Food Science and Nutrition Student Association Chapman University’s Food Science Student & Alumni Association (closed group-request access) LGBTQIA+ Graduate Student Association (closed Chapman group-request access) Instagram: @cufoodscience Free food (sometimes): Facebook: Free Food at Chapman

Student Employment/Career Services

On Campus Jobs (714) 997-6674 Student Employment located in DeMille Hall 103

Professional Development

Schmid College Career Advisor: Elisa Hernandez (714)628-7346 Career Development Center located at 342 N. Glassell St. (near the Law school).
**Student Health Services**

Physical well-being has a tremendous impact on academic performance. The goal of medical services is to provide the opportunity for academic success, while the focus is to provide students with easy access to health care and disease prevention.

Chapman University Student Health (CUSH) is staffed with nurse practitioners, nurses and physicians to promote good health and to assess and treat a variety of physical ailments that typically affect college-age students. Services include first aid treatment and triage, primary medicine, gynecological services, immunizations and health screening. Some medications are provided for a modest fee and some prescriptions are called into the students’ pharmacy of choice. When a student’s condition is beyond the scope of CUSH, the student may be referred off-campus for health care to a physician or clinic in the community.

The Chapman Student Health Center is located at 402 North Glassell Street (corner of Glassell and Sycamore), Orange, CA, 92866. The phone number for the health center is (714) 997–6851. The center is available for walk-in visits Monday through Friday, 8:30 a.m. to noon during regular terms. It is recommended that appointments be made for afternoon hours. Please see the [Student Health Services website](#) for more information.

Please note: Graduate students are not automatically enrolled for health services on campus or in the Chapman medical plan. If you choose to use Chapman Health Services, you must request that the Health Services fee be applied to your account and submit a completed Health Record and Immunization forms.

**Health Insurance Information**

**Student Psychological Counseling Services**

A range of confidential, short-term psychological counseling services is provided to students on an as-available basis. Limited psychiatric evaluations are available to students who are seen at SPCS for therapy. Referrals to other off-campus psychiatrists and therapists are available for all students. Graduate students on the Orange Campus must opt to pay a health and counseling fee at the time of registration. Please visit the [Student Psychological Counseling Services webpage](#) for more information or contact (714) 997-6778 or spcs@chapman.edu.

**Student Services & Business Offices**

Located in Bhathal Student Services Building.

Here you will be able to access:

- University Registrar (714) 997-6701
- Graduate Financial Aid (714) 628-2730
- Student Business Center (714) 997-6617
- The Chapman Textbook Store (714) 997-6718
**Technology Services (IS&T)**

Information Systems & Technology department provides Chapman's on-campus community with many online services such as Skype for Business, Dropbox, Qualtrics, Lynda.com tutorials, as well as providing equipment, software (some for home-use through special license agreements), information security and network services. This website is your resource for the Service Desk, Media Services, printing, discount purchasing of computers & software-and so much more.

**Other Resources**

- Lactation station: **Wilkinson Hall (#41 on campus map, on the lower level on the northwest corner of the building)**. This is a single occupancy room which is located in a separate private space within the Women’s restroom area. This room does not require keycard access but has a lock for privacy that indicates when it is occupied. In addition, a changing table will be added to this Lactation Station and will be available soon.
- Amazon locker: Order from Amazon and have your package delivered to a secure locker. Argyros Forum, first floor.
- Laptops to go: Free four hour rental with student ID card: Argyros Forum, first floor.
- Microwave: First floor of Keck Center. Microwave & Refrigerator: Graduate Lounge-Keck 368
- Showers: Hutton Sports Center
INSTITUTIONAL POLICIES

• Graduate Catalog (must select “Graduate Catalog” from drop down menu)
• Discrimination and Title IX
• Religious Accommodations Policy
• Sexual Misconduct, Sex Based/Gender Discrimination and Title IX
• Student Code of Conduct
• Student Complaint Procedures
• Integrity in Research Policy
• Inventions and Patents Policy
• Accessibility Policy (Web and Electronic Resources)
• Administering Online Surveys Involving Students, Faculty, and Staff
• Computer and Acceptable Use Policy
• Copyrighted Works Policy
• Records Retention and Destruction Policy
• Reporting Misconduct
• Smoking Policy
• Student Privacy Policies (FERPA)
• Electronic Records Accessibility Policy
• Privacy Policy
• Personal Computer Support Policy
APPENDICES

APPENDIX A: Sample Plans of Study

Sample plans of study are available for the variety of degrees offered including MSFS with Thesis; MSFS with Comprehensive Exam; MSFS, Product Development and Sensory Emphasis; MSFS, Product Development and Sensory Emphasis with Thesis; MSFS, Food Safety and Regulatory Emphasis; MSFS, Food Safety and Regulatory Emphasis with Thesis; Joint MSFS and MBA, Full Time; Joint MSFS and MBA, Part Time. These plans should be used as suggestions, not as strict guidelines. Course availability is subject to change. For all non-thesis degree options, the comprehensive exam can be taken after completing 25 credits in the program. It is offered in January and June of each year.

APPENDIX B: Accelerated (4 +1) Program Planning Sheets

Program planning sheets are available for accelerated programs, including BS in Biochemistry and Molecular Biology/MSFS, BS in Biology/MSFS, and BS in Chemistry/MSFS. These plans reflect general degree requirements and course availability is subject to change. For non-thesis degree options, the comprehensive exam can be taken after completing 25 credits in the program. It is offered in January and June of each year.

BS Health Sciences to MS Food Science Bridge Program

This program guarantees excellent Health Sciences students a seat in Chapman University’s Master of Science in Food Science. Early, guaranteed admission is a three-step process. This outline reflects general degree requirements and course availability is subject to change. For the non-thesis option, the comprehensive exam can be taken after completing 25 credits in the program. It is offered in January and June of each year.

STEP ONE: Academic Performance

Declare the Food Science track through the Office of the Registrar by the end of sophomore year.

By spring semester of the junior year, students seeking early, guaranteed admission must:

1. Complete the following courses and adhere to the criteria associated with the courses:
   1. BIO 204, HSK 210, HSK 365, HSK 366, CHEM 140, CHEM 150, CHEM 230, BCHM 335, BIO 417, FSN 200, and PSY 203 (or MATH 203)
   2. Must be taken at Chapman University
   3. May only be taken once;
   4. Must be taken for a letter grade;
   5. Must be completed by the end of spring semester junior year;
   6. Must have an accumulated GPA > 3.0 for the courses listed in item 1 (above).
STEP TWO: Early Admission Declaration and Plan
Before October 1 of the junior year, the student seeking guaranteed early admission must schedule an interview with Program Director Dr. Anu Prakash (prakash@chapman.edu) to review requirements and establish a plan to obtain early, guaranteed admission.

STEP THREE: Requirements to Convert from Conditional to a Fully Admitted Student:
1. Complete the GRE before the beginning of the senior year with the following minimum scores: Verbal 153, Quantitative 153, and Analytical Writing 3.5.
2. Complete B.S. Health Science degree with a cumulative GPA ≥3.00. The degree may be completed during any term of the senior year and must be verified by the Office of the Registrar.
3. Submit a deposit.

APPENDIX C: Food Science Two Year Course Schedule
A schedule of courses offered for the coming two years is available for students to use for planning out their individual plan of study.

APPENDIX D: Personal Plan of Study
Students are able to plan out their individual schedules using this form, which also contains prerequisite courses.

APPENDIX E: Individual Development Plan (IDP)
An IDP is a tool for students to outline their program responsibilities and goals and existing skills to create an action plan for success at the University.

APPENDIX F: Thesis Rubrics
Rubrics outlining thesis proposal, thesis defense, and written thesis scoring guidelines are available for review.

APPENDIX G: Comprehensive Exam Rubric
A rubric outlining comprehensive exam scoring guidelines is available for review.

APPENDIX H: Contract for Academic Success
The Contract for Academic Success is a tool used to promote student growth and learning. It is a useful resource to foster communication between the student and the advisor.

APPENDIX I: Registration Form
This registration form is primarily used for students who opt to audit a course. General course registration is done online using the My Chapman Student Center.

APPENDIX J: Graduate Petition
Generally, the Graduate Petition is used for registration changes outside of the prescribed enrollment period or requesting a leave of absence.
**APPENDIX K: Individual Study & Research Form**
Students are able to request an individual study or research opportunity with a faculty member outside of regular curriculum offerings using this form.

**APPENDIX L: Graduate Change of Program Form (for adding MBA, emphases, etc.)**
The Graduate Change of Program form is for current MSFS students to change their degree program or catalog year should they choose to.

**APPENDIX M: Professional Organizations and Student Membership Application**

The professional organization for food scientists is the **Institute of Food Technologists (IFT)**. Be connected to the largest community of food scientists in the world, as well as have access to a number of invaluable resources to help keep you up to date on industry news, trends, and more. The **student application** can be found online.

The **Southern California section of IFT (SCiftS)**, offers tremendous networking opportunities with industry professionals at monthly dinner meetings and the annual conference and Supplier’s Night expo. SCiftS also provides scholarships and travel grants to the annual IFT Event & Food Expo. Students have opportunities to volunteer, as well as compete in Product Development and College Bowl competitions. Membership can be purchased at the same time as the IFT membership for an additional $15.00.