

# Culinary Science (BPS) (NY)

## Degree Type

Bachelor of Professional Studies (BPS)

The **bachelor's degree program in culinary science** prepares graduates to pursue careers in research and development (chains and packaged goods); work for large foodservice operations such as hospitals, schools, and military organizations; serve as field representatives; use science for creative impetus as a restaurant chef; and more.

To qualify for the bachelor's degree in culinary science, students must be in good standing at the college and earn a total of 129 credits. Students also need to maintain a grade point average of at least 2.0 to complete the bachelor's degree program. Students may be eligible to receive up to 60 credits toward their degree for prior course work, certain examinations, military experience, and/or life achievement. Students must schedule a minimum of 33 upper-level culinary science credits at the CIA.

## Program Learning Outcomes

In this program, students will apply a science-based understanding of the culinary arts to improve food production systems, food delivery systems, and customer satisfaction. The program compares traditional food production techniques and food delivery systems to new methods using modern equipment technologies. Students will study how culinary science is used to enhance food quality and to advance understanding of food in every area of the foodservice and hospitality industry. The knowledge that students gain will help graduates of this program become leaders and innovators in the food industry.

- Students will analyze food using foundational physical, chemical, and biological scientific principles.
- Students will develop professional-quality products for small- and large-scale production systems using a science-based understanding.
- Students will compare and appraise food production techniques and food delivery systems.
- Students will develop interdisciplinary problem-solving skills applicable to real-world food production challenges.
- Students will apply sensory science principles to guide the food development and evaluation process.
- Students will explore and evaluate career tracks in foodservice, food manufacturing, and research and development.
- Students will develop advanced culinary and baking skills.

## Instructional Programs and Schedule

While enrolled in the junior and senior years of the bachelor's degree programs, students will attend class over a 15- week semester. The college's academic schedule ensures that students will progress from intermediate to advanced subject matter in proper sequence.

The CIA reserves the right to modify course sequence, content, and offerings.

## Graduation Requirements

Students enrolling in the Culinary Science major should work with their advisor to select the proper mix of in-person, online, or hybrid courses that both meet the graduation requirements of the degree and align with their academic goals and career aspirations. Students choose either the Culinary Arts focus or the Baking and Pastry Arts focus. The basic requirements follow.

**Please note:** Credits earned in the CIA's AOS and AAS degree programs apply towards the requirements of this program.

## Culinary Arts Focus

Course Number	Title	Credits
	Culinary Arts Requirements	51
	Liberal Arts Courses at the 100 and 200 Level	9
	Sub-Total Credits	60

## OR Baking and Pastry Arts Focus

Course Number	Title	Credits
	Baking and Pastry Arts Requirements	52.5
	Liberal Arts Courses at the 100 and 200 Level	7.5
	Sub-Total Credits	60

## Liberal Arts Requirements

Course Number	Title	Credits
	Social Science - Select one	3
	Math - Select one	3
	World Languages and Cultures - Select two	6
	World History - Select two	6
LITC-200	Literature and Composition	3
	Economics - Select one	3
MTSC-115	Science Fundamentals	3
MTSC-200	Introduction to Statistics	3
	Sub-Total Credits	30

## Business Management Courses at the 100 and 200 Level

Course Number	Title	Credits
FRSH-100	Professionalism and Life Skills	1.5
MGMT-100	Introduction to the Hospitality Industry	1.5
MGMT-250	Principles of Menus and Managing Profitability in Foodservice Operations	3
	Sub-Total Credits	6

## Culinary Science Requirements

Course Number	Title	Credits
CUSC-420	Advanced Concepts in Precision Temperature Cooking	3
CUSC-310	Culinary Chemistry	3
CUSC-410	Culinary Research and Development	3
CUSC-200	Culinary Science: Principles and Applications	3
CUSC-315	Dynamics of Heat Transfer and Physical Properties of Food	3
CUSC-320	Flavor Science and Perception	3
CUSC-415	Ingredient Functionality: Texture Development, Stability, and Flavor Release	3
CUSC-350	Microbial Ecology of Food Systems	3
CUSC-425	Modern and Industrial Cooking Tools, Techniques, and Ingredients	3
CUSC-325	Research Methods: Scientific Evaluation of Traditional Cooking Techniques	3
CUSC-450	Senior Thesis: Culinary Science Research Projects	3
	Sub-Total Credits	33
	<b>Total Credits</b>	<b>129</b>

## Culinary Arts Requirements

### Elective Credits

51

Course Number	Title	Credits
CULS-100	Culinary Fundamentals	6
CUSC-100A/105A	ServSafe Exam	
APFS-110	Introduction to Food Systems	1.5
CULS-115	Meat Identification, Fabrication, and Utilization	1.5
CULS-116	Seafood Identification and Fabrication	1.5
CULA-260	Modern Banquet Cookery	3
CULP-115	Introduction to À La Carte Cooking	3
CULP-135	Non-Commercial Foodservice and High-Volume Production	3
BAKE-241	Baking and Pastry Skill Development	3
EXTN-220	Externship (Culinary Arts)	3
CULP-225	Garde Manger	3
CULP-301	Cuisines and Cultures of the Americas	3
CULP-311	Cuisines and Cultures of the Mediterranean	3
CULP-321	Cuisines and Cultures of Asia	3
HOSP-355	Wine and Beverage Studies	1.5
	Complete One Back-of-House from Restaurant Operations	6
	Complete One Front-of-House from Hospitality and Service Management	6
	Sub-Total Credits	51

## Liberal Arts Courses at the 100 and 200 Level

### Elective Credits

## Culinary Arts Focus

Course Number	Title	Credits
CUSC-100	Food Safety	1.5
CUSC-110	Nutrition	1.5
APFS-150	Introduction to Gastronomy	1.5
LITC-100	College Writing	3
MTSC-100	Mathematical Foundations	1.5
	Sub-Total Credits	9

## Baking and Pastry Arts Requirements

### Elective Credits

52.5

Course Number	Title	Credits
CUSC-100	Food Safety	1.5
CUSC-100A/105A	ServSafe Exam	
BAKE-105	Baking and Pastry Techniques	6
BAKE-110	Baking Ingredients and Equipment Technology	1.5
EXTN-200	Externship Orientation	
BAKE-115	Café Savory Foods Production	1.5
BAKE-205	Basic and Classical Cakes	3
BAKE-215	Individual and Production Pastries	3
BAKE-210	Hearth Breads and Rolls	3
EXTN-225	Externship (Baking & Pastry)	3
BAKE-240	Confectionery Art and Special Occasion Cakes	3
BAKE-242	Chocolate and Confectionery Technology and Techniques	3
BAKE-245	Contemporary Cakes and Desserts	3
BAKE-254	Café Operations	3
BAKE-202	Specialty Breads	3
HMFB-210	Service and Beverage Management	3
BAKE-251	Advanced Baking Principles	3
BAKE-255	Beverages and Customer Service	3
HOSP-201	Restaurant Operations: Baking and Pastry	3
BAKE-300	Restaurant and Production Desserts	3
	Sub-Total Credits	52.5

## Liberal Arts Courses at the 100 and 200 Level

### Elective Credits

7.5

## Baking and Pastry Arts Focus

Course Number	Title	Credits
CUSC-110	Nutrition	1.5
APFS-150	Introduction to Gastronomy	1.5
	LITC-100 or LITC-100A	3
MTSC-100	Mathematical Foundations	1.5
	Sub-Total Credits	7.5

## Social Science - Select one

### Elective Credits

3

Course Number	Title	Credits
SOCS-200	Anthropology of Food	3
SOCS-205	The Archaeology of Food	3
SOCS-110	Psychology of Human Behavior	3
SOCS-115	Social Psychology	3
	Sub-Total Credits	12

## Math - Select one

### Elective Credits

3

Course Number	Title	Credits
MTSC-205	Calculus I	3
MTSC-110	College Algebra	3
	Sub-Total Credits	6

## World Languages and Cultures - Select two

### Elective Credits

6

Two in the same language, in sequence:

- French
- Italian
- Spanish

## World History - Select two

### Elective Credits

6

Course Number	Title	Credits
HIST-215	Origins to Empires	3
HIST-220	Medieval to Age of Revolution	3
HIST-225	The Modern World	3
	Sub-Total Credits	9

# Economics - Select one

## Elective Credits

3

Course Number	Title	Credits
SOCS-105	Principles of Macroeconomics	3
SOCS-100	Principles of Microeconomics	3
	Sub-Total Credits	6