

Second Semester

| | | |
|--------------|----------------------------------|-----------|
| LA 1060 | Introduction to the Arts | 3 |
| EN 2028 | Introduction to Literature | 3 |
| ES 4222 | Equine Business Mgt. | 3 |
| ES 2032- | | |
| ES 2043 | Riding Skills | 2 |
| | Electives | 5 |
| Total | ..... | 16 |

** To be declared a Training Track major, the student must have successfully completed the Riding Skills classes ES 2035 Basic Schooling and ES 2037 Principles of Jumping.*

Free Elective Courses

(13 credits required)

May be used to select a minor from outside the department or to strengthen professional background with courses from within the department.

Food Science and Management (FS)

Faculty:

- Robert Pierson, Chairperson
- Richard M. Dommel, Emeritus
- Kathleen D'Ovidio

The curriculum in Food Science and Management is designed to prepare students for careers in the food production and food service industries. Science and business are emphasized to different extents in the three specializations within the major. Communications skills and a broad background in liberal arts are important components of the programs. An important objective for our program is the education of students to meet the career needs of the industry which will employ them. Industry advisors review our programs periodically to help us accomplish this.

The food and allied industries employ large numbers of people with widely varying skills and talents. Graduates are employed in many sectors of the food-service industry, such as quality assurance, production management, industrial food management, food marketing, food and pharmaceutical packaging, food purchasing, product development, research, technical sales, restaurant or foodservice management. Graduates often work as sales representatives or market development coordinators. Placement of graduates is excellent.

The curriculum is designed to permit the student to pursue an interest in either food science and tech-

nology or foodservice management. It is ideal for the student interested in opening their own business in the food industry (restaurant or food production). The total number of credits required for graduation with a degree in Food Science and Management is 124 plus 4 credits earned for successful completion of the Employment Program.

RECOMMENDED COURSE SEQUENCE

Food Science and Food Technology Specializations

Graduates of these specializations are prepared to enter food ingredient or food processing industries such as baking, confections, dairy products, meats, flavors, convenience foods, and packaging. They may also be employed in government regulations, commercial testing laboratories, or in technical sales for companies which supply the food industry. University and government laboratories also employ food scientists and technologists. Close association with area food processors and government laboratories enables our students to gain first-hand knowledge of the industry through field trips and summer employment. Students have access to excellent paid internship opportunities with major foodservice corporations.

Food Science Specialization

The Food Science specialization contains the courses specified by the Institute of Food Technologists and is recommended for students interested in graduate studies in food science, research, and applications in the foodservice industry.

FRESHMAN YEAR

First Semester

| Course No. | Course Title | Credits |
|--------------|----------------------------------|-----------|
| CH 1103 | General Chemistry I..... | 4 |
| BY 1116 | Biological Science I | 3 |
| EN 1101 | English I or | |
| EN 1111 | Advanced English I..... | 3 |
| FS 1130 | Food, Culture and Cuisine | 3 |
| PE 1109 | Physical Education I | 1 |
| LA 1020 | Skills for College Success | 1 |
| Total | ..... | 15 |

Second Semester

| | | |
|--------------|----------------------------------|-----------|
| MP 1204 | Calculus I..... | 4 |
| CH 1203 | General Chemistry II..... | 4 |
| BY 1217 | Biological Science II | 3 |
| EN 1201 | English II or | |
| EN 1211 | Advanced English II..... | 3 |
| FS 1203 | Technology and Food Systems..... | 3 |
| PE 1209 | Physical Education II | 1 |
| Total | ..... | 18 |

Programs

Employment Program

FS 2370 Employment Program.....1-2

SOPHOMORE YEAR

First Semester

| Course No. | Course Title | Credits |
|--------------|---------------------------------------|-----------|
| CH 2003 | Principles of Organic Chemistry | 4 |
| FS 2212 | Sanitation Mgmt | 3 |
| MP 2119 | Physics I..... | 4 |
| MP 2121 | Calculus II..... | 4 |
| Total | ..... | 15 |

Second Semester

| | | |
|--------------|--------------------------------------|-----------|
| CH 2203 | Biochemistry..... | 4 |
| FS 2116 | Physical Science and Food..... | 3 |
| EN 2028 | Introduction to Literature | 3 |
| IT 1011 | Information Technology Concepts | 1.5 |
| IT 1012 | Computer Applications | 1.5 |
| LA 2005 | Speech..... | 3 |
| Total | ..... | 16 |

Employment Program

FS 2370 Employment Program.....1-2

JUNIOR YEAR

First Semester

| Course No. | Course Title | Credits |
|--------------|---------------------------------|-----------|
| BY 3002 | General Microbiology | 4 |
| FS 3120 | Introduction to Nutrition | 3 |
| FS 3122 | Food Engineering I..... | 3 |
| FS 3211 | Food Chemistry | 4 |
| | Elective..... | 3 |
| Total | ..... | 17 |

Second Semester

| | | |
|--------------|---|-----------|
| FS 3218 | Food Microbiology..... | 4 |
| | Free Elective | 2 |
| FS 4126 | Food Analysis | 3 |
| LA 2040 | Modern History of Western Societies ... | 3 |
| | Elective..... | 3 |
| Total | ..... | 15 |

Employment Program

FS 2370 Employment Program.....1-2

SENIOR YEAR

First Semester

| Course No. | Course Title | Credits |
|--------------|---|-----------|
| FS 4112 | Food Preservation | 3 |
| BA 2028 | Macroeconomics | 3 |
| LA 1060 | Introduction to the Arts..... | 3 |
| LA 3032 | American History and Govt Since 1877 | 3 |
| LA 4038 | Cultural Enrichment..... | 1 |
| | Elective..... | 2 |
| Total | ..... | 15 |

Second Semester

| | | |
|--------------|--|-----------|
| FS 4224 | Food Product Development..... | 3 |
| MP 3231 | Statistics for Research | 3 |
| FS 4223 | Seminar | 1 |
| LA 4037 | Non-Western Societies | 3 |
| | Philosophy/Psychology/ Sociology Area | 3 |
| Total | ..... | 13 |

Food Technology Specialization

The Food Technology specialization is similar to Food Science, but is less oriented to science and mathematics and more to management. It is ideal for the student who does not plan to study food science at the graduate level.

FRESHMAN YEAR

First Semester

| Course No. | Course Title | Credits |
|--------------|----------------------------------|-----------|
| MP 1102 | College Algebra or | |
| MP 1203 | Elementary Functions | 3 |
| CH 1103 | General Chemistry I..... | 4 |
| BY 1116 | Biological Science I | 3 |
| EN 1101 | English I or | |
| EN 1111 | Advanced English I..... | 3 |
| FS 1130 | Food, Culture and Cuisine | 3 |
| LA 1020 | Skills for College Success | 1 |
| Total | ..... | 17 |

Second Semester

| | | |
|--------------|----------------------------------|--------------|
| MP 1203 | Elementary Functions or | |
| MP 1204 | Calculus I..... | 3-4 |
| CH 1203 | General Chemistry II..... | 4 |
| BY 1217 | Biological Science II | 3 |
| EN 1201 | English II or | |
| EN 1211 | Advanced English II..... | 3 |
| FS 1203 | Technology and Food Systems..... | 3 |
| PE 1209 | Physical Education II | 1 |
| Total | ..... | 17-18 |

Employment Program

FS 2370 Employment Program.....1-2

SOPHOMORE YEAR

First Semester

| Course No. | Course Title | Credits |
|--------------------|---------------------------------------|----------------|
| CH 2003 | Principles of Organic Chemistry | 4 |
| FS 2212 | Sanitation Mgmt | 3 |
| IT 1011 | Information Technology Concepts | 1.5 |
| IT 1012 | Computer Applications | 1.5 |
| LA 2005 | Speech..... | 3 |
| | Restricted Elective* | 3 |
| Total | | 16 |

Second Semester

| | | |
|--------------------|----------------------------------|-----------|
| CH 2203 | Biochemistry..... | 4 |
| FS 2116 | Physical Science and Food..... | 3 |
| EN 2028 | Introduction to Literature | 3 |
| BA 2028 | Macroeconomics | 3 |
| | Elective..... | 3 |
| Total | | 16 |

Employment Program

FS 2370 Employment Program.....1-2

** Restricted elective, to be taken from the following courses: FS 3000, FS 3223, FS 4004, FS 4015, FS 4041, FS 4042, FS 4119, FS 4212, FS 4228 or others with approval of the department chair.*

JUNIOR YEAR

First Semester

| Course No. | Course Title | Credits |
|--------------------|---------------------------------|----------------|
| BY 3002 | General Microbiology | 4 |
| FS 3120 | Introduction to Nutrition | 3 |
| FS 3122 | Food Engineering I..... | 3 |
| FS 3211 | Food Chemistry | 4 |
| PE 1109 | Physical Education I | 1 |
| Total | | 15 |

Second Semester

| | | |
|--------------------|---|-----------|
| FS 3218 | Food Microbiology..... | 4 |
| FS 3224 | Food Engineering II..... | 3 |
| FS 4126 | Food Analysis..... | 3 |
| LA 2040 | Modern History of Western Societies ... | 3 |
| | Elective..... | 2 |
| Total | | 15 |

Employment Program

FS 2370 Employment Program.....1-2

SENIOR YEAR

First Semester

| Course No. | Course Title | Credits |
|--------------------|---|----------------|
| FS 4112 | Food Preservation | 3 |
| FS 4149 | Quality Assurance and Regulation..... | 3 |
| LA 1060 | Intro to the Arts..... | 3 |
| LA 3032 | American History and Govt Since 1877 | 3 |
| LA 4038 | Cultural Enrichment..... | 1 |
| | Elective..... | 2 |
| Total | | 15 |

Second Semester

| | | |
|--------------------|--|-----------|
| FS 4224 | Food Product Development..... | 3 |
| FS 4223 | Seminar | 1 |
| LA 4037 | Non-Western Societies | 3 |
| | Philosophy/Psychology/ Sociology Area | 3 |
| | Elective..... | 3 |
| Total | | 13 |

Restaurant & Foodservice Management Major

The Restaurant and Foodservice Management major prepares the graduate to assume a management position in the rapidly growing foodservice industry. Restaurants, hotels, health care facilities, schools, airlines, institutional dining rooms, and catering operations are among the employers of graduates in this field. This program provides a background in food purchasing, quantity food preparation, business law, human resource management, marketing and finance. This is ideal for the business-minded student interested in the food industry. Many courses are taught from an entrepreneurial perspective, and are ideal for students planning to open their own businesses in the food industry (restaurant or food production). Only 1 hour from Philadelphia and 2 hours from New York City, Delaware Valley College is easily accessible to all major components of the hospitality industry. Opportunities for internships and practical work experience are readily available as part of the program.

FRESHMAN YEAR

First Semester

| Course No. | Course Title | Credits |
|--------------------|---|----------------|
| MP 1102 | College Algebra or | |
| MP 1203 | Elementary Functions | 3 |
| CH 1001 | Chemistry Fundamentals | 4 |
| EN 1101 | English I or | |
| EN 1111 | Advanced English I..... | 3 |
| FS 1123 | Introduction to Foodservice Systems ... | 3 |
| FS 1130 | Food, Culture and Cuisine | 3 |
| LA 1020 | Skills for College Success | 1 |
| Total | | 17 |

Programs

Second Semester

| | | |
|--------------------|---|--------------|
| MP 1203 | Elementary Functions or | |
| MP 1204 | Calculus I..... | 3-4 |
| EN 1201 | English II or | |
| EN 1211 | Advanced English II..... | 3 |
| BA 1005 | Introduction to Business | 3 |
| FS 1205 | Principles of Professional Cooking..... | 3 |
| IT 1011 | Information Technology Concepts | 1.5 |
| IT 1012 | Computer Applications..... | 1.5 |
| PE 1209 | Physical Education II..... | 1 |
| Total | | 16-17 |

Employment Program

| | | |
|---------|-------------------------|-----|
| FS 2370 | Employment Program..... | 1-2 |
|---------|-------------------------|-----|

SOPHOMORE YEAR

First Semester

| Course No. | Course Title | Credits |
|--------------------|---------------------------------|-----------|
| BY 1115 | Natural Science I..... | 3 |
| BA 2008 | Macroeconomics | 3 |
| FS 2212 | Sanitation Mgmt | 3 |
| BA 2161 | Business Law I | 3 |
| BA 2225 | Accounting Fundamentals or | |
| BA 2123 | Principles of Accounting I..... | 3 |
| PE 1109 | Physical Education I | 1 |
| Total | | 16 |

Second Semester

| | | |
|--------------------|--|-----------|
| IT 1031 | Intermediate Computer Applications.... | 3 |
| BA 2210 | Microeconomics | 3 |
| EN 2226 | Business Communications..... | 3 |
| BA 2017 | Principles of Marketing..... | 3 |
| EN 2028 | Introduction to Literature | 3 |
| Total | | 15 |

Employment Program

| | | |
|---------|-------------------------|-----|
| FS 2370 | Employment Program..... | 1-2 |
|---------|-------------------------|-----|

JUNIOR YEAR

First Semester

| Course No. | Course Title | Credits |
|--------------------|---|-----------|
| FS 3120 | Introduction to Nutrition | 3 |
| FS 4119 | Food Distribution Systems** | 3 |
| FS 3227 | Foodservice Accounting & Cost Control* | 3 |
| LA 3032 | American History and Govt Since 1933 | 3 |
| LA 2005 | Speech | |
| | Elective..... | 2 |
| Total | | 17 |

Second Semester

| | | |
|--------------------|--|-----------|
| FS 4229 | Foodservice Marketing Strategy** | 3 |
| FS 3226 | Service Systems Mgt* | 3 |
| LA 2040 | Modern History of Western Societies... Philosophy/Psychology/ Sociology Area | 3 |
| | Elective..... | 3 |
| Total | | 15 |

SENIOR YEAR

First Semester

| Course No. | Course Title | Credits |
|--------------------|---|-----------|
| BA 3208 | Supervision & Mgt or | |
| BA 3027 | Human Resource Mgt | 3 |
| FS 4131 | Foodservice Facilities & Equipment* | 3 |
| FS 3225 | Purchasing, Storage, & Handling of Foods** | 3 |
| LA 1060 | Intro to the Arts..... | 3 |
| LA 4038 | Cultural Enrichment..... | 1 |
| | Elective..... | 2 |
| Total | | 15 |

Second Semester

| | | |
|--------------------|--|-----------|
| FS 4222 | Quantity Food Production..... | 3 |
| FS 4223 | Seminar | 1 |
| FS 4232 | Legal Aspects of Foodservice Mgt** | 3 |
| LA 4037 | Non-Western Societies | 3 |
| | Elective..... | 3 |
| Total | | 13 |

* Offered in even numbered years only.

** Offered in odd numbered years only.

Biotechnology Minor

(for Food Science and Food Technology Specializations)

A biotechnology minor is available for students in the Food Science and Food Technology specializations. It consists of the following courses:

| Course No. | Course Title | Credits |
|--------------------|--|--------------|
| BY 2003 | Genetics* | 3 |
| BT 3000 | Introduction to Biotechnology* | 3 |
| FS 3000 | Selected Topics I and | 1 |
| FS 4000 | Selected Topics II or..... | 1 |
| CH 3001 | Introductory Biomedical Instrumental Methods* | 3 |
| FS 4004 | Industrial Fermentations*..... | 3 |
| BY 4155 | Molecular Biology* | 4 |
| Total | | 15-16 |

* Requires prerequisite.