

Food Science & Technology

Undergraduate Student Handbook 2014 - 2015



NUTRITION & FOOD SCIENCE TEXAS A&M UNIVERSITY

TAMU 2253 • 126 Cater Matil
College Station, TX 77843 • 979-845-2142 • <http://nfs.tamu.edu>

USE OF THIS HANDBOOK

This handbook provides information about course requirements, scheduling, and recommendations for two degree options in food science. For up-to-date information on additional courses, admission, B.S. degree requirements, scholastic deficiency, financial aid and other topics not addressed in full detail in this handbook, refer to the Texas A&M University Undergraduate Catalog and Texas A&M University Rules and Regulations. Students are expected to comply with all policies and procedures set forth by Texas A&M University, and all affiliating institutions. Access to the Texas A&M University Undergraduate Catalog may be obtained at:

http://catalog.tamu.edu/pdfs/14-15_UG_Catalog.pdf

FOOD SCIENCE & TECHNOLOGY

Welcome to Food Science and Technology! You are entering an exciting field that allows you to build a strong background for many career opportunities such as food safety and microbiology, quality assurance, processing and operating management, technical service, research and development, sales and public relations. Advisors to assist you in Food Science:

For advising in Food Science and Technology, contact:

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SUBSCRIPTION TO FOOD SCIENCE LISTSERV

This email distribution list is used by advisors to communicate job opportunities, scholarships, internships, and other relevant information.

You can join the list by sending an e-mail to listserv@listserv.tamu.edu and in the BODY put SUBSCRIBE food-science firstname lastname

Example: SUBSCRIBE food-science Rock T Aggie

You can remove your name from the list by sending an e-mail to listserv@listserv.tamu.edu and in the BODY put UNSUB food-science

ADVISING INFORMATION

Catalog Requirements

You are responsible for following the plan of study from the catalog in effect when you entered Food Science and Technology. For example, if you begin in Food Science and Technology as a freshman you will follow the catalog that is current at that time. If you change your major to Food Science and Technology, you will follow the catalog that was in effect when you started at TAMU. In order to prevent taking courses which do not meet current requirements, students should check with their advisors before selecting electives, including courses to meet requirements of the Core Curriculum.

Registration

Advising help sessions are scheduled by appointment the month before pre-registration begins. This is a good opportunity to visit with an advisor to discuss your schedule. If you are a continuing student in good standing, you are expected to pre-register. **If you are on scholastic probation you will be blocked from registration until you meet with an advisor.** Please call 845-2142 for more information. Registration is completed by going to howdy.tamu.edu and following the instructions.

Add/Drop, Withdrawal

The schedule for adding and dropping is listed online at howdy.tamu.edu. The policy for add/drop and withdrawal is in the current Undergraduate Catalog. The withdrawal process is done in the Dean's Office of the College of Agriculture and Life Sciences in Kleberg Room 109.

Scholastic Deficiency

You are responsible for knowing and abiding by probation and block procedures and requirements:

- ❖ Should your GPR drop below 2.000 you will be notified of:
 - placement on scholastic probation, and
 - placement of block from registration – must meet with major advisor to have block removed.
- ❖ A probation agreement will be signed with an advisor that describes the terms of your probation.
- ❖ Failure to meet this agreement will result in being blocked from registration and notification of procedures for withdrawal from Texas A&M University.

Texas A&M University, Department of Nutrition and Food Science
Scholastic Probation Agreement

Student Name: _____ UIN: _____

Major _____ Concentration: _____

Email Address: _____ Phone: _____

Students placed on scholastic probation (GPR below 2.0) in the Department of Nutrition and Food Science must agree to the following conditions and expectations outlined in this document.

I understand that while on scholastic probation, I:

- Have been granted two semesters to clear probation, and I must meet the conditions of my first probation agreement to be allowed to continue to the second semester.
Current GPR: _____ Current Grade Point Deficiency: _____
Must make up _____ points during the _____ semester.
- Must be a full time student and take courses recommended by my advisor.
- Must complete Success Program through the Academic Success Center by the end of the semester of probation. Certification will need to be presented to an academic advisor.
Date of *mandatory* Success Program meeting:
_____.
- Must commit to attend every class as scheduled. If I am absent for school activities and/or personal issues, I am to meet with my course instructors to make up any missed work.
- Will change the habits that prevented me from being unsuccessful last semester (ie. work hours, social activities, attendance, study skills, etc.).
- Will contact a NFSC Advisor immediately if extenuating circumstances arise which may affect my final grades, course registration, or enrollment status.
- Understand that while on probation, my future course registrations will be blocked until I meet with a NFSC Advisor to review my progress and update the Scholastic Probation Agreement.

I understand that failure to meet the terms of this agreement will result in dismissal. The Department of Nutrition and Food Science does not readmit students once dismissed or those who transfer to another program while on probation. I agree to these terms of probation.

Student Signature

Date

Advisor Signature

Date

Department Head or Academic Designate

Date

1. Student Registration

1.5 Curriculum Violation: Degree-Seeking Graduate and Undergraduate Students

1.5.1 A student is expected to register for a schedule of courses that follows the program of study for a degree in his or her college. A student who elects not to follow the program of study must obtain approval from his or her academic advisor, department head or college Dean or designee, and the Dean or designee of the college offering the courses. A student who fails to obtain approval may be, by his or her Dean or designee, blocked from registration, removed from the inappropriate course(s) and/or required to register for a prescribed schedule of courses.

How to Register (Add/Drop) Classes

1. On the My Record tab, click the **Registration Status** link in the **Registration** channel.

2. Highlight your term and campus and click **Submit**.

3. Confirm that all boxes are checked to proceed with registration.

You may register during the following times

From	Begin Time To	End Time
Mar-13, 2009 08:00 am	Apr 05, 2009 07:59 am	

- ☒ You have no Holds which prevent registration.
- ☒ Your Academic Standing permits registration.
- ☒ Your Student Status permits registration.

Your Class for registration purposes is Freshman 0-29 Hours.

4. Scroll to the bottom of the screen and click **Add or Drop Classes**. If the top box is unchecked, click **View Holds** inside the yellow box. If any of the other two boxes are unchecked, call the **Registration Help Desk**.

5. Read the **Terms of Use** and click **I Agree**.

Note: You must do this once for every term that you register.

6. Choose one of two options:

- If you know the Course Reference Numbers (CRNs) of the classes you wish to take, enter them into the **Add Classes Worksheet** and then click **Submit Changes**. The classes will be added to your schedule unless they are full or you are not allowed to take them.
- If you do not know the CRNs of the classes you want, click **New Search**.

Registration

- ☒ Search Class Schedule
- ☒ Add or Drop Classes
- ☒ Registration Status
- ☒ Book Prices

Note: These links can be used out of the sequence listed in order to add or drop classes.

Select a Term:

Fall 2009 - College Station
 Fall 2009 - College Station
 Fall 2009 - Galveston
 Fall 2009 - Qatar

Terms of Use:

By registering for classes at [Student Rules](#) and other Uni

Warning: If you click **Add to Worksheet**, the class is **NOT** added to your schedule, but is added to a temporary worksheet. Once you are finished adding to the worksheet, you can add the classes to your schedule; however, the worksheet will not be saved once you log out. Please write down the CRNs before logging out.

How to Register (Add/Drop) Classes Continued

7. To conduct a search choose one of the options below:

A. Conducting A Basic Search

To conduct a basic search, choose the subject of the class for which you are looking and click **Course Search**.

Note: This will display all the courses for the selected **Subject**. From here you can view all the sections for a specific course by clicking **View Sections**.

ACCT	
209	SURVEY OF ACCT PRIN
View Sections	
210	MGR & COST ACCT PRIN
View Sections	

B. Conducting An Advanced Search

To narrow the search results further, click on **Advanced Search** and enter more information into the search fields. Then, click **Section Search**.

QUICK TIP: You *must* always choose a **subject before you can search**. You can quickly find an item in a scroll box by typing the name of the subject for which you are searching. For example, if you want to find a marketing course, start typing "MKTG" while you have a word selected inside the subject box. It will quickly take you to that subject so you do not have to scroll through all of the other subjects. This works in all of the scroll boxes. For more tips, click **Search Tips** found under **Advanced Search**.

Subject:

ACCT - Accounting
AERO - Aerospace Engineering
AGSM - Agricultural Systems Mgmt
ALEC - Ag Leadership, Ed. & Comm

Advanced Search

Course Search

Subject:

ACCT - Accounting
AERO - Aerospace Engineering
AGSM - Agricultural Systems Mgmt
ALEC - Ag Leadership, Ed. & Comm

Basic Search

Search Tips

Course Number: 210

Title:

Schedule Type:

Instructional Method:

All
Distance Education
Independent Study

Start Time: Hour 00 Minute 00

End Time: Hour 00 Minute 00

Days: ☐ Mon ☐ Tue ☐ Wed

Section Search **Reset**

10. Check the ☐ box to the left of the class you want to add. Then, click **Register**. The class will be added to your schedule unless it is full or you are restricted from taking it.

- **Time conflict with CRN ###** – The course overlaps with another course on your schedule.

If you have questions during the registration process, please contact the **Registration Help Desk**, Monday through Friday, 8 a.m. to 5 p.m. at **979.845.7117**.

New Search

REQUIREMENTS FOR A B.S. DEGREE IN FOOD SCIENCE & TECHNOLOGY

A minimum of 120 semester hours including the required physical education courses (KINE 199 and KINE 198) must be completed. All courses on your individual degree plan must be completed. A minimum of 36 semester hours of 300 and/or 400 level coursework must be successfully completed in residence at Texas A&M University to obtain a baccalaureate degree. A minimum of 12 of those 36 hours must be in the major. See the current Undergraduate Catalog for more information.

Food Science and Technology is an exciting multidisciplinary field that prepares majors with a comprehensive knowledge of the biological, physical and engineering sciences to develop new food products, design innovative processing technologies, improve food quality and nutritive value, enhance the safety of foods and ensure the wholesomeness of our food supply. Food Science majors apply the principles learned in the basic sciences such as food chemistry, biochemistry, genetics, microbiology, food engineering and nutrition to provide consumers with safe, wholesome and attractive food products that contribute to their health and well-being.

The undergraduate curriculum is approved by the Institute of Food Technologists (IFT) and offers two tracks, a Food Science Option and an Industry Option. These tracks provide promising career opportunities in areas such as food product/ process design, technical service, research and development, quality assurance, food safety, food law, regulatory oversight, technological innovation, marketing, corporate sales, sensory evaluation, and operations management. There are numerous opportunities available for corporate internships, scholarships and study abroad programs that provide real-world experience and enhance opportunities for employment after completing a baccalaureate degree. The major also provides an excellent background for those interested in professional schools, graduate studies, medicine, veterinary medicine, dentistry, pharmacy, physical therapy, nursing, occupational therapy and public health.

Food Science Option

The Food Science option provides a strong knowledge base and fundamental understanding of chemistry, biology, engineering, physics, statistics, genetics, biochemistry, microbiology, and nutrition that is applied toward the preservation, processing, packaging and distribution on foods that are wholesome, affordable and safe. The goal of the curriculum is to prepare Food Scientists for career opportunities in the food and allied industries or for further studies in graduate or professional schools. See an academic advisor for specific course listings.

Food Industry Option

The Food Industry option integrates knowledge from the basic disciplines of chemistry, microbiology, physics and biology and applies scientific principles from food engineering, food processing operations, sensory evaluation, food safety, HACCP, quality assurance and management to produce foods that are wholesome, affordable and safe. The goal of the curriculum is the prepare Food Technologists for careers in the food and related industries. These careers may involve food processing, manufacturing, technical service, food product development, operations management, regulatory oversight and other technology based opportunities.

Curriculum in Food Science and Technology
Option: Science
Catalog No. 137 (2014-2015)¹

FRESHMAN YEAR

<u>First Semester</u>		<u>Second Semester</u>	
ENGL 103 or 104	3	American History Elective ²	3
Math Elective	3	Math Elective	3
CHEM 101/111	4	CHEM 102/112	4
FSTC 201	3	BIOL 111	4
FSTC 210	<u>2</u>	Free Elective ⁷	<u>1</u>
	15		15

SOPHOMORE YEAR

<u>First Semester</u>		<u>Second Semester</u>	
NUTR 202	3	CHEM 228/238	4
CHEM 227/237	4	American History Elective ²	3
Economics Elective ⁶	3	ACCT 209 ³	3
POLS 206	3	Creative Arts Elective ²	3
Lang., Phil. & Culture Elective ²	<u>3</u>	PHYS 201	<u>4</u>
	16		17

JUNIOR YEAR

<u>First Semester</u>		<u>Second Semester</u>	
FSTC 311 or HORT 311	3	FSTC 312/313	4
ENGL 210	3	FSTC Elective ⁴	3
POLS 207	3	STAT 302	3
CHEM 316/318	3	MGMT 309	3
Free Elective ⁷	<u>3</u>	Free Elective ⁷	<u>1</u>
	15		14

SENIOR YEAR

<u>First Semester</u>		<u>Second Semester</u>	
FSTC 326/327 or DASC 326/327	4	FSTC 315 or AGSM 315	3
FSTC 314 or DASC 314	3	FSTC 401	3
FSTC Elective ⁴	3	BICH 303 or 410	3
FSTC 481 Seminar	1	Free Elective ⁷	2
Free Elective ⁷	<u>3</u>	FSTC Elective ⁴	<u>3</u>
	14		14

A total of 120 hours is required for graduation; 36 hours of 300/400 level courses are required to meet the TAMU residency requirement.

1. Catalog should correspond with your first semester.
2. University Core Curriculum. Six hours of international and cultural diversity are required. Selection must be from courses on the approved list. Selection can be courses that also satisfy the requirement for social and behavioral sciences, visual and performing arts, humanities, or electives.
3. Students may take ACCT 229 Principles of Accounting.
4. Students may choose from ANSC 307, ANSC 457, FSTC 305, FSTC 307, FSTC 315, FSTC 406, FSTC 410, FSTC 440, FSTC 446, FSTC 457, FSTC 469, FSTC 471, FSTC 485, FSTC 489, FSTC 491, HORT 419, HORT 420, HORT 421, HORT 446, NUTR 211, POSC 406.
5. KINE 199 must be taken Pass/Fail.
6. Students may choose from AGECE 105, ECON 202 or ECON 203.
7. Students may earn a chemistry minor by taking 6 hours of additional chemistry courses from an approved list as free electives. See the Department of Chemistry for more details. Students seeking a minor in chemistry must complete the Declaration of Minor in Chemistry form and have it approved by the undergraduate advisor in Chemistry (Room 104 Chemistry) and their NFSC advisor.

CURRICULUM IN FOOD SCIENCE AND TECHNOLOGY
FOOD SCIENCE OPTION
CATALOG NO. 137 (2014-2015)*

University Core Curriculum**

Citizenship

- _____ History Elective (3) (TCCN: HIST 1301)
 _____ History Elective (3) (TCCN: HIST 1302)
 _____ POLS 206 (3) (TCCN: GOVT 2305)
 _____ POLS 207 (3) (TCCN: GOVT 2306)

Communication

- _____ ENGL 103 or 104 (3) (TCCN: 1301)
 _____ ENGL 210 (3)

Natural Sciences

- _____ CHEM 101/111 (4) (TCCN: 1411)
 _____ CHEM 102/112 (4) (TCCN: 1412)

Language, Philosophy and Culture

- _____ Language, Philosophy, and Culture Elective (3)

Mathematics and Statistics

- _____ MATH Elective (3) (TCCN: 1324)
 _____ MATH Elective (3) (TCCN: 1325)
 _____ STAT 302 (3)

Social and Behavioral Sciences

- _____ AGECE 105 or ECON 202 or 203 (3)

Creative Arts

- _____ Creative Arts Elective (3)

International & Cultural Diversity

- _____ 3 hours (can be used to satisfy
 _____ 3 hours other requirements)

Writing Intensive Credits (must be FSTC)

- (1) FSTC 481
 (2) FSTC 313

Science Courses (Credit hours)

Physics

- _____ PHYS 201 (4) (TCCN: PHYS 1401)

Biochemistry

- _____ BICH 303 or 410 (3)

Biology

- _____ BIOL 111 (4) (TCCN: 1406)

Nutrition

- _____ NUTR 202 (3) (TCCN: BIOL 1322)

Chemistry

- _____ CHEM 227 (3) (TCCN: 2423)
 _____ CHEM 237 (1) (TCCN: 2423)
 _____ CHEM 228 (3) (TCCN: 2425)
 _____ CHEM 238 (3) (TCCN: 2425)
 _____ CHEM 316 (2)
 _____ CHEM 318 (1)

Required Food Science Courses

- _____ FSTC 201 (3)
 _____ FSTC 210 (2)
 _____ FSTC 311 (3)
 _____ FSTC 312/313 "W" (4)
 _____ FSTC 314 (3)
 _____ FSTC 315 (3)
 _____ FSTC 326/327 (4)
 _____ FSTC 401 (3)
 _____ FSTC 481 "C" (1)
 _____ FSTC Electives (3)***
 _____ FSTC Electives (3)***
 _____ FSTC Electives (3)***

Business Requirement

- _____ ACCT 209 or 229 (3)
 _____ MGMT 309 (3)

Free Electives (10 total)****

- _____ Free Electives
 _____ Free Electives
 _____ Free Electives

A total of 120 hours is required for graduation; 36 hours of 300/400 level courses are required at TAMU.

* Catalog should correspond with your first semester.

** University Core Curriculum.

*** Students may choose from ANSC 307, ANSC 457, FSTC 305, FSTC 307, FSTC 315, FSTC 406, FSTC 410, FSTC 440, FSTC 446, FSTC 457, FSTC 469, FSTC 471, FSTC 485, FSTC 489, FSTC 491, HORT 419, HORT 420, HORT 421, HORT 446, NUTR 211, POSC 406.

**** Students may earn a chemistry minor by taking 6 hours of additional chemistry courses from an approved list as free electives. See the Department of Chemistry for more details. Students seeking a minor in chemistry must complete the Declaration of Minor in Chemistry form and have it approved by the undergraduate advisor in Chemistry (Room 104 Chemistry) and their NFSC advisor.

Curriculum in Food Science and Technology
Option: Industry
Catalog No. 137 (2014-2015)¹

FRESHMAN YEAR

<u>First Semester</u>		<u>Second Semester</u>	
ENGL 103 or 104	3	American History Elective ²	3
NUTR 202 or 203	3	Math Elective	3
CHEM 101/111	4	CHEM 102/112	4
FSTC 201	3	Economics Elective ⁵	3
FSTC 210	<u>2</u>	Lang., Phil. & Culture Elective ²	<u>3</u>
	15		16

SOPHOMORE YEAR

<u>First Semester</u>		<u>Second Semester</u>	
BIOL 111	4	ACCT 209	3
CHEM 227/237	4	American History Elective ²	3
POLS 206	3	Creative Arts Elective ²	3
Math Elective	<u>3</u>	PHYS 201	4
	14	Free Elective ⁶	<u>3</u>
			16

JUNIOR YEAR

<u>First Semester</u>		<u>Second Semester</u>	
FSTC 311 or HORT 311	3	AGEC 314	3
ENGL 210	3	FSTC 312/313	4
POLS 207	3	STAT 302	3
Free Elective ⁶	3	MGMT 309	3
FSTC Elective ³	<u>3</u>	Free Elective ⁶	<u>1</u>
	15		14

SENIOR YEAR

<u>First Semester</u>		<u>Second Semester</u>	
FSTC 326/327 or DASC 326/327	4	FSTC 481 Seminar	1
FSTC 314 or DASC 314	3	FSTC 401	3
FSTC 315 or AGSM 315	3	BICH 303 or 410	3
FSTC Elective ³	3	FSTC Elective ³	3
Free Elective ⁶	<u>1</u>	Free Elective ⁶	<u>6</u>
	14		16

A total of 120 hours is required for graduation; 36 hours of 300/400 level courses are required to meet the TAMU residency requirement.

1. Catalog should correspond with your first semester.
2. University Core Curriculum. Six hours of international and cultural diversity are required. Selection must be from courses on the approved list. Selection can be courses that also satisfy the requirement for social and behavioral sciences, visual and performing arts, humanities, or electives.
3. Students may choose from ANSC 307, ANSC 457; FSTC 300, FSTC 305, FSTC 307, FSTC 406, FSTC 407, FSTC 410, FSTC 440, FSTC 446, FSTC 457, FSTC 469, FSTC 471, FSTC 485, FSTC 489, FSTC 491; HORT 419, HORT 420, HORT 421, HORT 446; NUTR 211; POSC 406.
4. KINE 199 must be taken Pass/Fail.
5. Students may choose from AGECE 105, ECON 202 or ECON 203.
6. Students may achieve a business minor by taking the following courses as free electives: ISYS 209, MGMT 209, FINC 409, MKTG 409.

**CURRICULUM IN FOOD SCIENCE AND TECHNOLOGY
INDUSTRY OPTION
CATALOG NO. 137 (2014- 2015)***

University Core Curriculum**

Citizenship

- _____ History Elective (3) (TCCN: HIST 1301)
 _____ History Elective (3) (TCCN: HIST 1302)
 _____ POLS 206 (3) (TCCN: GOVT 2305)
 _____ POLS 207 (3) (TCCN: GOVT 2306)

Communication

- _____ ENGL 103 or 104 (3) (TCCN: 1301)
 _____ ENGL 210 (3)

Natural Sciences

- _____ CHEM 101/111 (4) (TCCN: 1411)
 _____ CHEM 102/112 (4) (TCCN: 1412)

Languages, Philosophy, and Culture

- _____ Languages, Philosophy, and Culture Elective (3)

Mathematics and Statistics

- _____ Math Elective (3) (TCCN: 1324)
 _____ Math Elective (3) (TCCN: 1325)
 _____ STAT 302 (3)

Social and Behavioral Sciences

- _____ AGECE 105 or ECON 202 or 203 (3)

Creative Arts

- _____ Creative Arts Elective (3)

International & Cultural Diversity

- _____ 3 hours (can be used to satisfy other
 _____ 3 hours requirements)

Writing Intensive Credits (must be FSTC)

- (1) FSTC 481
 (2) FSTC 313

Science Courses (Credit hours)

Physics

- _____ PHYS 201 (4) (TCCN: PHYS 1401)

Biochemistry

- _____ BICH 303 or 410 (3)

Biology

- _____ BIOL 111 (4) (TCCN:1406)

Nutrition/VTPH

- _____ NUTR 202 (3) (TCCN: BIOL 1322)

Chemistry

- _____ CHEM 227(3) (TCCN: 2423)
 _____ CHEM 237 (1) (TCCN: 2423)

Required Food Science Courses

- _____ FSTC 201 (3)
 _____ FSTC 210 (2)
 _____ FSTC 311 (3)
 _____ FSTC 312/313 "W" (4)
 _____ FSTC 314 (3)
 _____ FSTC 315 (3)
 _____ FSTC 326/327 (4)
 _____ FSTC 401 (3)
 _____ FSTC 481 "C" (1)
 _____ FSTC Electives (3)***
 _____ FSTC Electives (3)***
 _____ FSTC Electives (3)***

Business Requirement

- _____ ACCT 209 (3)
 _____ MGMT 309 (3)
 _____ AGECE 314 (3)

Free Electives (14 total)****

- _____ Free Electives
 _____ Free Electives
 _____ Free Electives
 _____ Free Electives

A total of 120 hours is required for graduation; 36 hours of 300/400 level courses are required at TAMU.

* Catalog should correspond with your first semester.

** University Core Curriculum.

*** Students may choose from ANSC 307, ANSC 457, FSTC 305, FSTC 307, FSTC 315, FSTC 406, FSTC 410, FSTC 440, FSTC 446, FSTC 457, FSTC 469, FSTC 471, FSTC 485, FSTC 489, FSTC 491, HORT 419, HORT 420, HORT 421, HORT 446, NUTR 211, POSC 406.

**** Students may achieve a business minor by taking the following courses as free electives: ISYS 209, MGMT 209, FINC 409, MKTG 409.

FOOD SCIENCE COURSE DESCRIPTIONS

FSTC 201 Food Science (3 credits)

The fundamental biological, chemical and physical scientific principles associated with the study of foods; topics include food composition and nutrition, food additives and regulations, food safety and toxicology, food processing, food engineering, food biotechnology, product development and sensory evaluation.

FSTC 210 Horizons in Nutrition and Food Science (2 credits)

Introduction to nutrition and food science career opportunities through presentations by nutrition and food science researchers and industry professionals; addresses issues of professionalism including portfolio development, teamwork, and critical thinking skills. Cross-listed with NUTR 210.

FSTC 300 Religious and Ethnic Foods (3 credits)

Understanding religious and ethnic foods with application to product development, production, and nutritional practices; emphasis on different food rules and priorities with attention given to different religious and ethnic groups within the US and around the world.

Prerequisites: Junior or senior classification or approval of instructor; basic knowledge of food science and nutrition helpful. Cross-listed with NUTR 300.

FSTC 305 Fundamental Baking (3 credits)

Fundamentals of baking; chemical and physical properties of ingredients, methods of baking all products, fundamental reactions of dough, fermentation, and oven baking.

Prerequisite: CHEM 222 or 227 or approval of instructor.

FSTC 307 Meats (3 credits)

Integrated studies of the meat animal processing sequence regarding the production of meat-type animals and the science and technology of their conversion to human food.

Prerequisites: ANSC 107 and 108 or approval of department head. Cross-listed with ANSC 307.

FSTC 311 Principles of Food Processing (3 credits)

Principles and practices of canning, freezing, dehydration, pickling and specialty food manufacture; fundamental concepts of various techniques of preparation, processing, packaging, and use of additives; processing plants visited. (*Only offered in the Fall semester*)

Prerequisite: FSTC 201; junior or senior classification or approval of department head or instructor. Cross-listed with HORT 311.

FSTC 312 Food Chemistry (3 credits)

The fundamental and relevant chemistry and functionality of the major food constituents (water, carbohydrates, lipids, proteins, phytochemical nutraceuticals) and study of food emulsion systems, acids, enzymes, gels, colors, flavors and toxins. (Only offered in the Spring semester)

Prerequisite: FSTC 201; CHEM 227; CHEM 237 or approval of department head or instructor. Cross-listed with DASC 312

- FSTC 313 Food Chemistry Laboratory (1 credit), **Approved “W” Course**
Laboratory exercises investigating specific molecules, such as food acids, enzymes, pigments and flavors, and chemical interactions in foods, such as oxidation reactions, emulsion systems, and functional properties from a fundamental chemistry rather than an analytical perspective. (*Only offered in the Spring semester*)
Prerequisite: FSTC 201; CHEM 227; CHEM 237 or approval of department head or instructor. Cross-listed with DASC 313.
- FSTC 314 Food Analysis (3 credits)**
Selected standard methods for assay of food components; principles and methodology of both classical and instrumental techniques in food analysis (*Only offered in the Fall semester*)
Prerequisite: FSTC 201; FSTC 311; CHEM 227; CHEM 237 or approval of department head or instructor. Cross-listed with DASC 314.
- FSTC 315 Food Processing Engineering Technologies (3 credits)**
Elementary mechanics, power transmission, steam and steam boilers, pipes and pipe fitting, refrigeration and insulation, temperature measurement and control, electric motors, disposal of waste products, and mechanical problems as applied to foods and food processing. (*Only offered in the Spring semester*)
Prerequisite: FSTC 201; PHYS 201; junior or senior classification or instructor approval. Cross-listed with AGSM 315.
- FSTC 326 Food Bacteriology (3 credits)**
Microbiology of human foods and accessory substances. Raw and processed foods; physical, chemical and biological phases of spoilage. Standard industry techniques of inspection and control.
Prerequisite: BIOL 206 or approval of instructor; junior or senior classification. Cross-listed with DASC 326.
- FSTC 327 Food Bacteriology (1 credit)**
Laboratory to accompany FSTC 326. Cross-listed with DASC 327.
- FSTC 330 Dairy and Food Technology. (4 Credits)**
Principles and practices involved in processing of milk into market milk, butter, cheese and cheese foods; fundamental principles of these processes as related to their design and control. Cross-listed with DASC 330.
- FSTC 331 Dairy and Food Technology. (4 Credits)**
Manufacture of frozen, freeze-dehydrated, concentrated and dehydrated dairy foods; fundamental aspects of freezing, concentration and dehydration of foods.
Prerequisite: FSTC 330 or approval of department head. Cross-listed with DASC 331.
- FSTC 401 Food Product Development (3 credits)**
Design and develop food products using principles of food chemistry, food processing, nutrition, sensory analysis and statistics; team collaborates to improve food product characteristics to meet the needs of a changing society.
Prerequisite: FSTC 201, FSTC 311, FSTC 312, FSTC 313, FSTC 314, FSTC 315, FSTC 326 or registration therein; senior classification or approval of instructor.
NOTE: TAKE THIS COURSE YOUR LAST SPRING SEMESTER.

- FSTC 406 Poultry Processing and Products (4 credits) **Approved “W” Course**
The science and practice of processing and products of poultry and eggs; physical, chemical, microbiological and functional characteristics of value-added poultry products as they affect consumer acceptance, efficiency of production, and regulatory approval.
Prerequisite: DASC 326/FSTC 326; CHEM 222; POSC 309; junior or senior classification or approval of instructor. Cross-listed with POSC 406.
- FSTC 410 Nutritional Pharmacometrics of Food Compounds (3 Credits)**
Nutritional pharmacokinetics and pharmacodynamics of food compounds; specific examples of toxicological and pharmacological effects of food compounds.
Prerequisites: NUTR 202 or NUTR 203 or FSTC 201 or CHEM 222 or CHEM 227 or approval of instructor; junior or senior classification. Cross-listed with NUTR 410.
- FSTC 440 Therapeutic Microbiology: Probiotics and Related Strategies (3 credits)**
Topics relevant to alimentary (gastrointestinal) microbiology including: (i) the “normal” intestinal microbiota; (ii) probiotic and prebiotic nutritional supplements; (iii) recombinant pharmabiotics; (iv) gut-associated lymphoid tissue and mucosal immunity; (v) foodborne gastrointestinal pathogens; and (vi) fermented products as functional foods.
Prerequisites: Undergraduate survey course in microbiology or approval of instructor; junior or senior classification. Cross-listed with NUTR 440.
- FSTC 444 Fundamentals of Food Law (3 credits)**
History, development of, and fundamental principles behind current food regulations, including food labeling, adulteration, food safety, food additives, dietary supplements, and import and export laws; overview of government agency jurisdiction, international law and ethics.
Prerequisite: FSTC 201; junior or senior classification.
- FSTC 446 Commercial Fruit and Vegetable Processing (3 credits)**
Pilot plant and laboratory operations pertaining to processed fruits, vegetables and beverages; new product development emphasized via individual laboratory projects.
Prerequisite: FSTC 311. Cross-listed with HORT 446. (Offered in even numbered years.)
- FSTC 457 Hazard Analysis and Critical Control Point System (3 credits)**
Hazard Analysis and Critical Control Point (HACCP) principles specifically related to meat and poultry; microbiological and process overviews; good manufacturing practices and standard operating procedures development. (Only offered in the Fall semester)
Prerequisite: FSTC 326 or approval of instructor. Cross-listed with ANSC 457.
- FSTC 469 Experimental Nutrition and Food Science Laboratory. (4 credits)**
Investigation of nutritional intervention in animal models of metabolic and psychological disorders (e.g. obesity and depression); investigational approaches: behavioral analyses; RNA and protein analyses; reverse transcription PCR.
Prerequisites: CHEM 227; CHEM 237; junior or senior classification or approval of instructor. Cross-listed with NUTR 369.

- FSTC 471 Critical Evaluation of Nutrition and Food Science Literature (3 credits)**
Evaluation of scientific literature, research methods within in the literature, and the quality of scientific studies to produce an evidence-based review in areas specific to nutrition and food science.
Prerequisites: NUTR 202 or 203 and STAT 302; Junior or Senior classification; knowledge of technical writing helpful. Cross-listed with NUTR 471.
- FSTC 481 Seminar (1 credit) ** *Approved “C” Course***
Guidelines and practice in journal article review and making effective technical presentations; strategies for conducting a job search; development of resumes and letters and interviewing targeted for careers in the food industry or graduate school.
Prerequisite: Senior classification in food science and technology.
NOTE: TAKE THIS COURSE YOUR LAST FALL SEMESTER.
- FSTC 487 Sensory Evaluation of Foods. (3 Credits)**
Application of sensory science principles and practices to food systems including an understanding of discriminative, descriptive and consumer sensory techniques;
Prerequisites: CHEM 222 or CHEM 228; junior or senior classification. Cross-listed with ANSC 487.
- FSTC 497 Applied Microbiology for Foods of Animal Origin: Processing, Sanitation and Sanitary Design. (3 Credits)**
Application of basic food microbiology knowledge and principles to food production processes and products; sources of microbiological contamination and their impact on food safety and spoilage; application of sanitary design and validation; testing and auditing to monitor and trouble-shoot the process.
Prerequisite: DASC 326 or FSTC 326 or FSTC 606 or equivalent. Cross-listed with ANSC 497.

UNDERGRADUATE SUPPORTING COURSES

ACCT 209 Survey of Accounting Principles (3 credits)

Accounting survey for non-business majors; non-technical accounting procedures, preparation and interpretation of financial statements and internal control. May not be used to satisfy degree requirements for majors in business. Business majors who choose to take this course must do so on a satisfactory/unsatisfactory basis.

ACCT 229 Introductory Accounting. (3 Credits)

Analysis, recording and reporting of business transactions; partnership and corporation accounting; analysis and use of financial statements.

Prerequisite: Sophomore classification.

AGEC 105 Introduction to Agricultural Economics (3 credits) Characteristics of our economic system and basic economic concepts; survey of the farm and ranch firm and its organization and management; structure and operation of the marketing system; functional and institutional aspects of agricultural finance; government farm programs.

AGEC 314 Marketing Agricultural and Food Products (3 credits)

Operations involved in movement of agricultural commodities from farmer to consumer via several intermediaries; functions involve buying, selling, transportation, storage, financing, grading, pricing and risk bearing; agricultural supply chain or value chain is studied in detail; marketing aspects of commodities and differentiated goods.

Prerequisites: AGEC 105 or 3 hours of economics; and junior or senior classification.

AGLS 101 Modern Agricultural Systems and Renewable Natural Resources (1 credit)

An introduction to modern agriculture and the natural, human and scientific resources upon which it depends. Freshman or sophomore classification.

BIOL 111 Introductory Biology (4 credits)

First half of an introductory two-semester survey of contemporary biology that covers the chemical basis of life, structure and biology of the cell, molecular biology and genetics; includes laboratory that reinforces and provides supplemental information related to the lecture topics..

BICH 303 Elements of Biological Chemistry (3 credits)

Survey of the biochemical sciences designed for the non-biochemistry major; introduction to the chemistry and metabolism of biologically important molecules, the biochemical basis of life processes, cellular metabolism and regulation. Students requiring biochemistry in greater depth should register for BICH 410 and BICH 411. Not open to biochemistry majors.

Prerequisite: CHEM 222 or equivalent.

BICH 303 Comprehensive Biochemistry I (3 credits)

Structure, function and chemistry of proteins and carbohydrates; kinetics, mechanisms and regulation of enzymes; metabolism of carbohydrates. Not open to biochemistry or genetics majors.

Prerequisite: CHEM 228 or approval of instructor.

- CHEM 101 Fundamentals of Chemistry I (3 credits)**
Introduction to modern theories of atomic structure and chemical bonding; chemical reactions; stoichiometry; states of matter; solutions; equilibrium; acids and bases; coordination chemistry.
- CHEM 111 Fundamentals of Chemistry I Laboratory (1 credit):** introduction to methods and techniques of chemical experimentation; qualitative and semi-quantitative procedures applied to investigative situations.
Prerequisite: CHEM 101 or registration therein.
- CHEM 102 Fundamentals of Chemistry (3 credits)**
Theory and applications of oxidation-reductions systems; thermodynamics and kinetics; complex equilibria and solubility product; nuclear chemistry; descriptive inorganic and organic chemistry.
Prerequisites: CHEM 101 or CHEM 107 or their equivalent. . Concurrent registration in CHEM 112 suggested.
- CHEM 112 Fundamentals of Chemistry II Laboratory (1 credit):** introduction to analytical and synthetic methods and to quantitative techniques to both inorganic and organic compounds.
Prerequisites: CHEM 101 and 111 or equivalent; CHEM 102 or registration therein.
- CHEM 222 Elements of Organic and Biological Chemistry (3 credits)**
Organic chemistry and its applications to biological and agricultural chemistry including chemistry of functional groups, acid-base and redox chemistry, stereochemistry and chemistry of important biological compounds. Not to be used as the basis for further study in organic chemistry or biochemistry. *Prerequisite:* CHEM 101 or 103.
- CHEM 227 Organic Chemistry I (3 credits)**
Introduction to chemistry of compounds of carbon. General principles and their application to various industrial and biological processes.
Prerequisite: CHEM 102 or 104. Concurrent registration in CHEM 237 is suggested.
- CHEM 228 Organic Chemistry II (3 credits)**
Continuation of CHEM 227.
Prerequisite: CHEM 227. Concurrent registration in CHEM 238 is suggested.
- CHEM 237 Organic Chemistry Laboratory (1 credit)**
Operations and techniques of elementary organic chemistry laboratory; preparation, reactions and properties of representative organic compounds.
Prerequisites: CHEM 102 or 114; CHEM 227 or registration therein.
- CHEM 238 Organic Chemistry Laboratory (1 credit)**
Continuation of CHEM 237. *Prerequisites:* CHEM 237; CHEM 228 or registration therein.
- CHEM 242 Elementary Organic Chemistry Laboratory (1 credit)**
Operations and techniques of elementary organic chemistry laboratory with emphasis on experiments for students of agriculture. *Prerequisite:* CHEM 222 or registration therein.

- CHEM 316 Quantitative Analysis (Credit 2)**
 An introduction to quantitative methods of analysis with emphasis on chemical equilibria of analytical useful reactions and processes important in advanced analytical methods, including electrochemistry.
Prerequisite: CHEM 102 or 104
- CHEM 318 Quantitative Analysis Laboratory (1 credit)**
 Laboratory work consists of selected experiments in quantitative analysis designed to typify operations of general application; work is primarily volumetric with limited gravimetric experiments.
Prerequisites: CHEM 102 or 114; CHEM 315 or 316 or registration therein.
- COMM 203 Public Speaking (3 credits)**
 Training in speeches of social and technical interest designed to teach students to develop and illustrate ideas and information and to inform, stimulate, and persuade their audiences.
- ENGL 104 Composition and Rhetoric (3 credits)**
 Focus on referential and persuasive researched essays through the development of analytical reading ability, critical thinking and library research skills; **for U1 and U2 students only.**
- ENGL 301 Technical Writing (3 credits)**
 Processes of developing field-specific technical information related to the major, including researching, drafting, editing, revising, and designing technical reports, proposals, manuals, resumes and professional correspondence for specific audiences. Special topics, computer and distance sections available.
Prerequisites: ENGL 104; Junior classification
- KINE 198 Health and Fitness Activity (1 credit) *Can be taken s/u or for a grade.***
 Half lecture; half activity; student choice of designated fitness or strength related activities; lecture portion covers current health topics.
- KINE 199 Required Physical Activity (1 credit) *At least one KINE 199 must be taken s/u.***
 Selection from a wide variety of activities designed to increase fitness and/or encourage the pursuit of lifetime activity
- MATH 141 Business Mathematics I (3 credits)**
 Linear equations and applications, linear forms and systems of linear equations, matrix algebra and applications, linear programming (graphical and simplex methods), probability and applications, statistics.
Prerequisites: High school algebra I and II and geometry. Credit will not be given for more than one of MATH 141 or 166.
- MATH 142 Business Mathematics II (3 credits)**
 Derivatives, curve sketching and optimization, techniques of derivatives, logarithms and exponential functions with applications, integrals, techniques and applications of integrals, multivariate calculus.
Prerequisites: High school algebra I and II and geometry or satisfactory performance on a qualifying examination. Credit will not be given for more than one of MATH 131, 142, 151 and 171.

- MGMT 209 Business, Government and Society. (3 Credits)**
 Impact of the external environment-legal, political, economic and international-on business behavior; market and non-market solutions to contemporary public policies confronting business persons examined including antitrust law, employment and discrimination law, product safety regulation, consumer protection and ethics. May not be used to satisfy degree requirements for majors in business.
Prerequisites: Sophomore classification; for students other than business and agribusiness majors.
- MGMT 309 Survey of Management (3 credits)**
 Survey of the basic functions and responsibilities of managers; includes the environmental context of management, planning and decision making, organization, structure and design, leading and managing people, and the controlling process; issues of globalization, ethics, quality and diversity integrated throughout the course
Prerequisites: Junior classification; for students other than business and agribusiness majors.
- NUTR 202 Fundamentals of Human Nutrition (3 credits)**
 Understand the basic chemistry and function of carbohydrates, lipids, proteins, vitamins, minerals and water Learn how these nutrients are digested, absorbed, and metabolized
 Apply knowledge gained for personal dietary adequacy and optimal health
- NUTR 211 Scientific Principles of Foods (4 credits)**
 Basic principles underlying selection, preparation and preservation of food in relation to quality standards, acceptability and aesthetics. Introduction to composition, nutritive value, chemical and physical properties of foods; introduction to experimental study of foods.
Prerequisites: Completion of NUTR 202 or 203, CHEM 101/111 or instructor approval.
- PHYS 201 College Physics (4 credits)**
 Fundamentals of classical mechanics, heat, and sound. Primarily for architecture, premedical, pre-dental, and pre-veterinary medical students.
Prerequisite: MATH 103 or equivalent.
- POLS 206 American National Government (3 credits)**
 Survey of American national government, politics, and constitutional development.
- POLS 207 State and Local Government (3 credits)**
 Survey of state and local government and politics with special reference to the constitution and politics of Texas.
- STAT 302 Statistical Methods (3 credits)**
 Intended for undergraduate students in the biological sciences and agriculture (except for agricultural economics). Introduction to concepts of random sampling and statistical inference; estimation and testing hypotheses of means and variances; Analysis of variance; regression analysis; chi-square test. Credit will not be allowed for more than one of STAT 301, 302 or 303. Prerequisite: MATH 141 or 166 or equivalent.

FINANCIAL AID, SCHOLARSHIPS AND TUITION REBATES

Financial Aid

Financial aid consists of scholarships and grants, loans and part-time employment. To determine your eligibility to receive financial assistance, you must submit the Free Application for Federal Student Aid (FAFSA) each academic year. You may access the electronic version of the FAFSA online at www.fafsa.ed.gov. To contact a financial aid counselor call (979) 845-3236.

Information concerning tuition, fees, and financial aid is published in the Texas A&M University Undergraduate Catalog or online at <http://financialaid.tamu.edu/>.

Scholarships:

- **Department of Nutrition & Food Science (for continuing students)**
 - Deadline: Check with the Advising Office....usually around the end of February.
 - Students are recognized at the Department Banquet during Parent's Weekend.
 - Amounts vary depending upon scholarship
 - Scholarship application will be posted at <http://nfs.tamu.edu>
- **Department of Nutrition & Food Science for New Students (if available)**
 - Deadline: Check with the Advising Office. Usually around June.
 - For "new" students in Nutrition or Food Science. (transfers or freshmen)
 - Students are recognized at the Department Banquet during Parent's Weekend.
 - Amounts vary.
 - Scholarship application will be posted at <http://nfs.tamu.edu>
- **Institute of Food Technologists**
 - Deadline: Check Website www.ift.org *dependent upon classification*
 - Amounts vary
 - IFT has scholarships for incoming freshmen in Food Science.
- **Texas Food Processors Association**
 - Deadline: Usually in October.
 - Applications available in the advising office and online at <http://nfs.tamu.edu>
 - Amounts vary.
- **Alamo and Longhorn IFT**
 - Deadline: Usually in October.
 - Applications available in the advising office and online at <http://nfs.tamu.edu>
 - Amounts vary.

Refund of Tuition and Fees: A student may drop courses during the first four days of a fall or spring semester. Refunds will not be issued for classes dropped after the 12th class day of a full semester. Please see the TAMU official academic calendar for specific dates.

Tuition Rebate: Certain undergraduate students who attempt not more than three hours in excess of the minimum number of semester credit hours required to complete the degree in the catalog under which they will graduate may be entitled to a \$1,000 rebate if they meet the criteria. Students must apply PRIOR to commencement during their last term. Several conditions apply and students must meet all specified criteria.

HELPFUL WEBSITES

- TAMU homepage: <http://www.tamu.edu/>
- Department of Nutrition and Food Science: <http://nfs.tamu.edu>
- Office of Admissions and Records: <http://www.tamu.edu/admissions/>
- Student Financial Aid: <http://financialaid.tamu.edu>
- TAMU Student Organizations: <http://getinvolved.tamu.edu/>
- Institute of Food Technologists: www.ift.org

STUDENT ORGANIZATIONS

A broad education involves not only course work to develop professional expertise and knowledge, but also learning and developing social and leadership skills. Students are encouraged to become actively involved in on-campus and off-campus organizations. Food Science students often choose to participate in one or more of these groups:

Institute of Food Technologists Student Association - Texas A&M Chapter

- Supports and encourages both undergraduate and graduate students enrolled in the Food Science and Technology program. Members may attend presentations by food industry representatives, participate in fundraising and social activities, visit local food production facilities, and travel to regional and/or state professional conferences and events.

IFT National Student Association

- Food Science and Technology majors may apply for student membership in the Institute of Food Technologists (IFT), thus automatically becoming members of the IFT Student Association. The IFT Student Association offers special services and activities, including area meetings, Food Product Development team competition, special programs at the IFT Annual Meeting, research paper competitions, Student Chapter of the Year competition, and Food Technology College Bowl. The IFT Student Association, which is run by and for the students, also provides students a voice in IFT affairs and committees.

Links to Some of the Largest Food Companies

- | | |
|--|--|
| • Phillip Morris Co., Inc. / www.kraftfoods.com | • Campbell Soup Co. / www.campbellsoups.com |
| • Pepsico, Inc. / www.pepsico.com | • Seagram Co. / www.seagram.com |
| • Coca-Cola, Inc. / www.cocacola.com | • Kellogg Co. / www.kelloggs.com |
| • ConAgra, Inc. / www.healthychoice.com | • Tyson Foods, Inc. / www.tyson.com |
| • Del Monte, Inc / http://www.delmonte.com/Company | • General Mills / www.general-mills.com |
| • Heinz / http://www.heinz.com | • Quaker Oats Co. / www.quakeroats.com |
| • IBP, Inc. / www.ibpinc.com | • Proctor & Gamble / www.pg.com |
| • Anheuser-Busch Co., Inc. / www.budweiser.com | • Hershey Foods / www.hersheys.com |

Outstanding Career Opportunities!

- ✓ **Research and Development** – Investigating scientific principles of food products.
- ✓ **Product Development** – Developing new food products or improving the quality and/or safety of existing products; recipe development.
- ✓ **Technical Sales**- Serving the food industry with technical knowledge of raw materials, ingredients, and technology for the manufacture of specific food products.
- ✓ **Quality Assurance**- Analyzing components of food products and monitoring the finished product for conformity with company and government standards.
- ✓ **International**- Helping citizens of developing nations improve their food handling and storage procedures through various agencies such as the World Health Organization.
- ✓ **Regulation**- Developing policy and enforcing food sanitation and labeling regulations as part of federal and state regulatory agencies.
- ✓ **Management** - Organizing and operating small to medium size food processing companies; food & beverage management or foodservice management.
- ✓ **Marketing** – Public relations and advertising for food and restaurant companies.
- ✓ **Governmental** – Regulatory agencies such as USDA, FDA and local health departments inspecting restaurants or commercial food operations.
- ✓ **Food Broker** – Buying/selling for large grocery chains or independent food brokerages.
- ✓ **Culinary** – Opportunities to work as an executive chef in many culinary specialty areas.
- ✓ **Agricultural Commodity Groups** – Networking for larger associations such as the Snack Food Association, National Dairy Council, Pork Producers, etc.
- ✓ **Creative Consultant** – Food Stylist photography or writing as a restaurant critic or food columnist for newspapers and related publications.

Start with food science degree, then move to a related profession:

- Business (MBA)
- Chiropractor (DC)
- Dentist (DDS)
- Law (JD)
- Physician (MD or DO)
- Veterinarian (DVM)

Language, Philosophy, and Culture (Catalog 137: 2014-2015)

AFST 201	ARTS 150	ENGL 329	ENGL 394	MUSC 201
AFST 204	ARTS 329	ENGL 330	ENGL 396	MUSC 311
AFST 205	ARTS 330	ENGL 333	ENGL 401	MUSC 312
AFST 300	ARTS 335	ENGL 334	ENGL 412	MUSC 315
AFST 301	ARTS 349	ENGL 335	ENGL 414	MUSC 319
AFST 302	ARTS 350	ENGL 336	ENGL 415	MUSC 321
AFST 329	ARTS 445	ENGL 337	ENGL 431	MUSC 324
AFST 339	CLAS 351	ENGL 338	ENGL 474	PHIL (any course except PHIL 240, PHIL 341, PHIL 342)
AFST 344	COMM 301	ENGL 339	ENGL 481	
AFST 345	COMM 327	ENGL 340	ENGR 482	
AFST 346	COMM 425	ENGL 345	GEOG 202	
AFST 357	DCED 301	ENGL 346	GEOG 301	
AFST 393	ENGL 203	ENGL 347	GEOG 305	RELS 211
AFST 401	ENGL 204	ENGL 348	GEOG 320	RELS 213
ANTH 202	ENGL 205	ENGL 350	GEOG 321	RELS 303
ANTH 205	ENGL 212	ENGL 351	GEOG 323	RELS 304
ANTH 301	ENGL 221	ENGL 352	GEOG 325	RELS 317
ANTH 302	ENGL 222	ENGL 353	GEOG 327	RELS 351
ANTH 303	ENGL 227	ENGL 354	HIST (any course)	RELS 360
ANTH 308	ENGL 228	ENGL 355		RELS 392
ANTH 313	ENGL 231	ENGL 356	HORT 203	THAR 101
ANTH 316	ENGL 232	ENGL 360	HUMA 211	THAR 155
ANTH 317	ENGL 235	ENGL 361	HUMA 213	THAR 201
ANTH 318	ENGL 251	ENGL 362	HUMA 303	THAR 280
ANTH 324	ENGL 308	ENGL 365	HUMA 304	THAR 281
ANTH 350	ENGL 310	ENGL 374	LAND 240	WGST 200
ANTH 353	ENGL 312	ENGL 375	LAND 340	WGST 333
ANTH 354	ENGL 313	ENGL 376	LBAR 203	WGST 374
ARCH 249	ENGL 314	ENGL 377	LBAR 331	WGST 401
ARCH 250	ENGL 315	ENGL 378	LBAR 332	WGST 409
ARCH 345	ENGL 316	ENGL 379	LBAR 333	WGST 461
ARCH 350	ENGL 317	ENGL 385	LING 307	WGST 473
ARCH 430	ENGL 321	ENGL 390	LING 310	WGST 474
ARCH 434	ENGL 322	ENGL 392	MODL	WGST 477
ARTS 149	ENGL 323	ENGL 393	MUSC 200	

***Courses in bold also count as International and Cultural Diversity**

**** Always check the course catalog at <http://catalog.tamu.edu> for any changes**



**NUTRITION &
FOOD SCIENCE**
TEXAS A&M UNIVERSITY

Creative Arts (Catalog 137: 2014-2015)

ANTH 324	ARTS 350	ENGL 356	ITAL 455	MUSC 324
ARCH 249	ARTS 445	ENGL 385	KINE 160	PERF 301
ARCH 250	CARC 335	ENGL 412	KINE 161	PHIL 330
ARCH 350	CLAS 352	EURO 405	KINE 167	PHIL 375
ARCH 430	CLAS 415	EURO 406	KINE 169	RUSS 446
ARCH 434	DCED 161	EURO 432	KINE 171	RUSS 447
ARCH 437	DCED 162	EURO 446	KINE 172	SPAN 410
ARTS 103	DCED 168	EURO 447	KINE 175	SPAN 413
ARTS 111	DCED 172	FILM 251	KINE 311	THAR 101
ARTS 112	DCED 173	FILM 301	LAND 240	THAR 110
ARTS 149	ENDS 101	FILM 394	MUSC 200	THAR 155
ARTS 150	ENDS 115	FILM 406	MUSC 201	THAR 201
ARTS 212	ENGL 212	FILM 415	MUSC 280	THAR 210
ARTS 305	ENGL 219	FREN 425	MUSC 302	THAR 280
ARTS 311	ENGL 251	GERM 334	MUSC 311	THAR 281
ARTS 329	ENGL 312	GERM 432	MUSC 312	THAR 407
ARTS 330	ENGL 317	GERM 435	MUSC 315	
ARTS 335	ENGL 340	HISP 352	MUSC 319	
ARTS 349	ENGL 351	HORT 203	MUSC 321	

Social and Behavioral Science (Catalog 137: 2014-2015)

AFST 317	ANTH 403	EPSY 321	LING 209	SPMT 319
AFST 323	ANTH 404	GEOG 201	LING 311	SPMT 336
AGEC 105	ANTH 410	GEOG 304	LING 402	SPMT 337
AGEC 350	ANTH 439	GEOG 306	MGMT 475	VTPB 221
AGEC 429	ARCH 212	GEOG 311	POLS (any	WGST 207
AGEC 430	COMM 315	GEOG 330	course)	WGST 300
AGEC 452	COMM 320	GEOG 401	PSYC (any course except PSYC 203, PSYC 204)	WGST 310
AGEC 453	COMM 325	GEOG 420		WGST 316
ALED 340	COMM 335	GEOG 440		WGST 317
ALED 400	ECON (any	HLTH 236		WGST 332
ALED 440	course)	HORT 335	RELS 403	WGST 367
ANTH 201	ENGL 209	INST 310	SOC (any course except SOC 220, SOC 420)	WGST 404
ANTH 210	ENGL 311	INST 322		WGST 424
ANTH 225	ENGL 403	JOUR 102		WGST 439
ANTH 300	ENGR 400	JOUR 301		WGST 462
ANTH 314	EPSY 320	LBAR 204	SPMT 304	WGST 463

***Courses in bold also count as International and Cultural Diversity**

**** Always check the course catalog at <http://catalog.tamu.edu> for any changes**



Appendix B

Texas Common Course Numbering System

The Texas Common Course Numbering System (TCCNS) has been designed for the purpose of aiding students in the transfer of general academic courses between colleges and universities throughout Texas. Common courses are freshman and sophomore academic credit courses that have been identified as common by institutions that are members of the common course numbering system. The system ensures that if the student takes the courses the receiving institution designates as common, then the courses will be accepted in transfer and the credit will be treated as if the courses had actually been taken on the receiving institution's campus.

The table below lists the courses Texas A&M University has identified as common and their TCCNS equivalents. Before using this table students should be sure that the institution they attend employs the TCCNS.

This table is revised quarterly in January, March, June and September. The most recent version may be obtained from the Office of Admissions.

The current version of this document may be found on the Office of Admissions website at admissions.tamu.edu.

Texas A&M Course			TCCNS Equivalent Course	
ACCT	229	Intro. Accounting	ACCT	2301
ACCT	229	Intro. Accounting	ACCT	2401
ACCT	230	Intro. Accounting	ACCT	2302
ACCT	230	Intro. Accounting	ACCT	2402
AGEC	105	Intro. to Agri. Economics	AGRI	2317
AGLS	101	Mod. Agri. Systems and Ren. Nat. Res.	AGRI	1131
AGLS	101	Mod. Agri. Systems and Ren. Nat. Res.	AGRI	1231
AGLS	201	Computer Applications in Agri.	AGRI	1309
AGSM	201	Farm Tractors and Power Units	AGRI	2301
ANSC	107	General Animal Science	AGRI	1319
ANSC	107 and 108	General Animal Science	AGRI	1419
ANTH	201	Intro. to Anthropology	ANTH	2346
ANTH	201	Intro. to Anthropology	HUMA	2323
ANTH	202	Intro. to Archaeology	ANTH	2302
ANTH	210	Social and Cultural Anthropology	ANTH	2351
ARAB	101	Beginning Arabic I	ARAB	1411
ARAB	101	Beginning Arabic I	ARAB	1511
ARAB	102	Beginning Arabic II	ARAB	1412
ARAB	102	Beginning Arabic II	ARAB	1512
ARAB	201	Intermediate Arabic I	ARAB	2311
ARAB	202	Intermediate Arabic II	ARAB	2312
ARCH	249	Survey of Architectural History I	ARCH	1301
ARCH	250	Survey of Architectural History II	ARCH	1302
ARTS	103	Design I	ARTS	1311
ARTS	111	Drawing I	ARTS	1316
ARTS	112	Drawing II	ARTS	1317
ARTS	149	Art History Survey I	ARTS	1303
ARTS	150	Art History Survey II	ARTS	1304
ASTR	101	Basic Astronomy	ASTR	1303
ASTR	101	Basic Astronomy	PHYS	1311
ASTR	101 and 102	Basic Astronomy and Observational Astronomy	ASTR	1404
ASTR	101 and 102	Basic Astronomy and Observational Astronomy	PHYS	1411

Texas A&M Course			TCCNS Equivalent Course	
ASTR	111	Overview of Modern Astronomy	ASTR	1303 and 1103
ASTR	111	Overview of Modern Astronomy	ASTR	1403
BIOL	101	Botany	BIOL	1311 and 1111
BIOL	101	Botany	BIOL	1411
BIOL	107	Zoology	BIOL	1313 and 1113
BIOL	107	Zoology	BIOL	1413
BIOL	111	Intro. Biology I	BIOL	1306 and 1106
BIOL	111	Intro. Biology I	BIOL	1406
BIOL	112	Intro. Biology II	BIOL	1307 and 1107
BIOL	112	Intro. Biology II	BIOL	1407
BIOL	206	Intro. Microbiology	BIOL	2321 and 2121
BIOL	206	Intro. Microbiology	BIOL	2421
CHEM	101	Fund. of Chemistry I	CHEM	1311
CHEM	101 and 111	Fund. of Chemistry I	CHEM	1411
CHEM	102	Fund. of Chemistry II	CHEM	1312
CHEM	102 and 112	Fund. of Chemistry II	CHEM	1412
CHEM	106	Molecular Science for Citizens	CHEM	1305
CHEM	106 and 116	Molecular Science for Citizens and Lab.	CHEM	1405
CHEM	111	Fund. of Chemistry I Lab	CHEM	1111
CHEM	112	Fund. of Chemistry II Lab	CHEM	1112
CHEM	116	Molecular Science for Citizens Lab.	CHEM	1105
CHEM	227	Organic Chemistry I	CHEM	2323
CHEM	227 and 237	Organic Chemistry I and Organic Chemistry Lab.	CHEM	2423
CHEM	228	Organic Chemistry II	CHEM	2325
CHEM	228 and 238	Organic Chemistry II and Organic Chemistry Lab.	CHEM	2425
CHEM	237	Organic Chemistry I Lab.	CHEM	2123
CHEM	237	Organic Chemistry I Lab.	CHEM	2223
CHEM	238	Organic Chemistry II Lab.	CHEM	2125
CHEM	238	Organic Chemistry II Lab.	CHEM	2225
CHIN	101	Beginning Chinese I	CHIN	1411
CHIN	101	Beginning Chinese I	CHIN	1511
CHIN	102	Beginning Chinese II	CHIN	1412
CHIN	102	Beginning Chinese II	CHIN	1512
CHIN	201	Intermediate Chinese I	CHIN	2311
CHIN	202	Intermediate Chinese II	CHIN	2312
CLAS	101	Beginning Classical Greek I	GREE	1411
CLAS	101	Beginning Classical Greek I	GREE	1511
CLAS	102	Beginning Classical Greek II	GREE	1412
CLAS	102	Beginning Classical Greek II	GREE	1512
CLAS	121	Beginning Latin I	LATI	1411
CLAS	121	Beginning Latin I	LATI	1511
CLAS	122	Beginning Latin II	LATI	1412
CLAS	122	Beginning Latin II	LATI	1512
CLAS	211	Intermediate Greek	GREE	2311
CLAS	221	Intermediate Latin	LATI	2311
COMM	101	Intro. to Speech Communication	SPCH	1311
COMM	203	Public Speaking	SPCH	1315
COMM	210	Group Communication and Discussion	SPCH	2333
COMM	215	Interviewing: Principles and Practice	COMM	2316
COMM	215	Interviewing: Principles and Practice	SPCH	2316
COMM	243	Argumentation and Debate	SPCH	2335
COMM	290	Speech Practicum	SPCH	1144
COMM	290	Speech Practicum	SPCH	1145
COMM	290	Speech Practicum	SPCH	1146
COMM	290	Speech Practicum	SPCH	2144
COMM	290	Speech Practicum	SPCH	2145
COSC	253	Const. Materials and Methods I	ARCH	2312
COSC	254	Const. Materials and Methods II	ARCH	2313

Texas A&M Course			TCCNS Equivalent Course
CSCE	206	Structured Prog. in C	BCIS 1420
CSCE	206	Structured Prog. in C	COSC 1420*
CVEN	201	Plane Surveying	ENGR 1307
CVEN	201	Plane Surveying	ENGR 1407
DASC	202	Dairying	AGRI 1311
DCED	160	Ballet I	DANC 1241
DCED	161	Ballet II	DANC 1242
DCED	162	Ballet III	DANC 2241
DCED	168	Jazz Dance III	DANC 2247
DCED	171	Modern Dance I	DANC 1245
DCED	172	Modern Dance II	DANC 1246
DCED	173	Modern Dance III	DANC 2245
ECON	202	Principles of Microeconomics	ECON 2302
ECON	203	Principles of Macroeconomics	ECON 2301
ENDG	105	Engineering Graphics	ENGR 1204
ENDG	105	Engineering Graphics	ENGR 1304
ENDS	101	Design Process	ARCH 1311
ENDS	105	Design Foundations I	ARCH 1403
ENDS	106	Design Foundations II	ARCH 1404
ENDS	115	Design Communication Foundations	ARCH 1307
ENDS	115	Design Communication Foundations	ARCH 1407
ENDS	116	Design Communication Foundations II	ARCH 1308
ENDS	116	Design Communication Foundations II	ARCH 1408
ENGL	104	Composition and Rhetoric	ENGL 1301
ENGL	203	Intro. to Literature	ENGL 1302
ENGL	210	Scientific and Technical Writing	ENGL 2311
ENGL	221	World Literature	ENGL 2332
ENGL	222	World Literature	ENGL 2333
ENGL	227	American Literature: Colonial to Amer. Renaissance	ENGL 2327
ENGL	228	American Literature: Civil War to Present	ENGL 2328
ENGL	231	Survey of English Literature I	ENGL 2322
ENGL	232	Survey of English Literature II	ENGL 2323
ENGL	235	Intro. to Creative Writing: Prose	ENGL 2307
FILM	251	Intro. to Film Analysis	COMM 2366
FINC	201	Personal Finance	BUSI 1307
FINC	201	Personal Finance	HECO 1307
FREN	101	Beginning French I	FREN 1411
FREN	101	Beginning French I	FREN 1511
FREN	102	Beginning French II	FREN 1412
FREN	102	Beginning French II	FREN 1512
FREN	201	Intermediate French I	FREN 2311
FREN	202	Intermediate French II	FREN 2312
FRSC	203	Forest Trees of North America	FORE 1314
FSTC	201	Food Science	AGRI 1329
GEOG	201	Intro. to Human Geography	GEOG 1302
GEOG	202	Geography of the Global Village	GEOG 1303
GEOL	101	Principles of Geology	GEOL 1303 and 1103
GEOL	101	Principles of Geology	GEOL 1403
GEOL	106	Historical Geology	GEOL 1304 and 1104
GEOL	106	Historical Geology	GEOL 1404
GERM	101	Beginning German I	GERM 1411
GERM	101	Beginning German I	GERM 1511
GERM	102	Beginning German II	GERM 1412
GERM	102	Beginning German II	GERM 1512
GERM	201	Intermediate German I	GERM 2311
GERM	202	Intermediate German II	GERM 2312
HIST	101	Western Civilization to 1660	HIST 2311
HIST	102	Western Civilization since 1660	HIST 2312
HIST	103	World History to 1500	HIST 2321

954 Appendix B/Texas Common Course Numbering System

Texas A&M Course			TCCNS Equivalent Course	
HIST	104	World History since 1500	HIST	2322
HIST	105	History of the United States	HIST	1301
HIST	106	History of the United States	HIST	1302
HIST	213	History of England	HIST	2313
HIST	214	History of England	HIST	2314
HIST	226	History of Texas	HIST	2301
HLTH	216	First Aid	PHED	1206
HLTH	216	First Aid	PHED	1306
HLTH	231	Healthy Lifestyles	PHED	1304
HORT	201	General Horticulture	AGRI	1315
HORT	201	General Horticulture	AGRI	1415
HORT	201	General Horticulture	HORT	1301
HORT	201	General Horticulture	HORT	1401
ITAL	101	Beginning Italian I	ITAL	1411
ITAL	101	Beginning Italian I	ITAL	1511
ITAL	102	Beginning Italian II	ITAL	1412
ITAL	102	Beginning Italian II	ITAL	1512
ITAL	201	Intermediate Italian I	ITAL	2311
ITAL	202	Intermediate Italian II	ITAL	2312
JAPN	101	Beginning Japanese I	JAPN	1411
JAPN	101	Beginning Japanese I	JAPN	1511
JAPN	102	Beginning Japanese II	JAPN	1412
JAPN	102	Beginning Japanese II	JAPN	1512
JAPN	201	Intermediate Japanese I	JAPN	2311
JAPN	202	Intermediate Japanese II	JAPN	2312
JOUR	102	American Mass Media	COMM	1307
JOUR	203	Media Writing I	COMM	2311
KINE	160	Ballet I	DANC	1141
KINE	161	Ballet II	DANC	1142
KINE	999	Ballet III	DANC	2141
KINE	999	Jazz Dance I	DANC	1147
KINE	167	Jazz Dance II	DANC	1148
KINE	999	Jazz Dance III	DANC	2147
KINE	169	Tap I	DANC	1110
KINE	170	Tap II	DANC	1111
KINE	171	Modern Dance I	DANC	1145
KINE	172	Modern Dance II	DANC	1146
KINE	999	Modern Dance III	DANC	2145
KINE	198	Health & Fitness Activity	PHED	1164
KINE	198	Health & Fitness Activity	PHED	1238
KINE	199	Required Physical Activity	PHED	Any 1-hour activity course
KINE	213	Foundations of Kinesiology	PHED	1301
KINE	214	Health & Physical Activity for Children	PHED	1331
KINE	215	Fundamentals of Coaching	PHED	1321
KINE	215	Fundamentals of Coaching	PHED	1322
MATH	102	Algebra	MATH	1314
MATH	102	Algebra	MATH	1414
MATH	103	Plane Trigonometry	MATH	1316
MATH	141	Business Math. I	MATH	1324
MATH	142	Business Math. II	MATH	1325
MATH	150	Functions, Trigonometry and Linear Systems	MATH	2412
MATH	151	Engineering Math. I	MATH	2413
MATH	151	Engineering Math. I	MATH	2513
MATH	152	Engineering Math. II	MATH	2414
MATH	251	Engineering Math. III	MATH	2316
MATH	253	Engineering Math. III	MATH	2415
MGMT	105	Intro. to Business	BUSI	1301
MGMT	212	Business Law	BUSI	2301
MUSC	102	Fundamentals of Music	MUSI	1300

Texas A&M Course			TCCNS Equivalent Course	
MUSC	102	Fundamentals of Music	MUSI	1301
MUSC	102	Fundamentals of Music	MUSI	1303
MUSC	102	Fundamentals of Music	MUSI	1304
MUSC	201	Music and the Human Experience	MUSI	1306
MUSC	204	Music Theory I	MUSI	1211
MUSC	205	Music Theory II	MUSI	1212
MUSC	206	Music Theory III	MUSI	2211
MUSC	206	Music Theory III	MUSI	2212
MUSC	206	Music Theory III	MUSI	2311
MUSC	206	Music Theory III	MUSI	2312
MUSC	208	Musicianship I	MUSI	1116
MUSC	208	Musicianship I	MUSI	1216
MUSC	210	Musicianship II	MUSI	1117
MUSC	210	Musicianship II	MUSI	1217
MUSC	245	Composition I	MUSI	1386
MUSC	250	Individual Performance—Piano I	MUSI	1114
MUSC	250	Individual Performance—Piano I	MUSI	1115
MUSC	250	Individual Performance—Piano I	MUSI	1181
MUSC	250	Individual Performance—Piano I	MUSI	1182
MUSC	250	Individual Performance—Piano I	MUSI	2115
MUSC	250	Individual Performance—Piano I	MUSI	2181
MUSC	250	Individual Performance—Piano I	MUSI	2182
MUSC	251	Individual Performance—Voice I	MUSI	1183
MUSC	251	Individual Performance—Voice I	MUSI	1184
MUSC	251	Individual Performance—Voice I	MUSI	2183
MUSC	251	Individual Performance—Voice I	MUSI	2184
NUTR	202	Fundamentals of Human Nutrition	BIOL	1322
NUTR	202	Fundamentals of Human Nutrition	HECO	1322
PHIL	111	Contemporary Moral Issues	PHIL	2306
PHIL	240	Intro. to Logic	PHIL	2303
PHIL	251	Intro. to Philosophy	PHIL	1301
PHYS	201	College Physics	PHYS	1301 and 1101
PHYS	201	College Physics	PHYS	1401
PHYS	202	College Physics	PHYS	1302 and 1102
PHYS	202	College Physics	PHYS	1402
PHYS	208	Electricity	PHYS	2326 and 2126
PHYS	208	Electricity	PHYS	2426*
PHYS	218	Mechanics	PHYS	2325 and 2125
PHYS	218	Mechanics	PHYS	2425*
POLS	206	American National Government	GOVT	2305
POLS	207	State and Local Government	GOVT	2306
POLS	209	Intro. to Political Science Research	GOVT	2304
PORT	101	Beginning Portuguese I	PORT	1411
PORT	101	Beginning Portuguese I	PORT	1511
PORT	102	Beginning Portuguese II	PORT	1412
PORT	102	Beginning Portuguese II	PORT	1512
PORT	201	Intermediate Portuguese I	PORT	2311
PORT	202	Intermediate Portuguese II	PORT	2312
POSC	201	General Avian Science	AGRI	1327
PSYC	107	Intro. to Psychology	PSYC	2301
RPTS	201	Foundations of Recreation and Parks	PHED	1336
RUSS	101	Beginning Russian I	RUSS	1411
RUSS	101	Beginning Russian I	RUSS	1511
RUSS	102	Beginning Russian II	RUSS	1412
RUSS	102	Beginning Russian II	RUSS	1512
RUSS	201	Intermediate Russian I	RUSS	2311
RUSS	202	Intermediate Russian II	RUSS	2312
SCSC	105	World Food and Fiber Crops	AGRI	1307
SCSC	105	World Food and Fiber Crops	AGRI	1407

Texas A&M Course			TCCNS Equivalent Course
SOCI	205	Intro. to Sociology	SOCI 1301
SPAN	101	Beginning Spanish I	SPAN 1411
SPAN	101	Beginning Spanish I	SPAN 1511
SPAN	102	Beginning Spanish II	SPAN 1412
SPAN	102	Beginning Spanish II	SPAN 1512
SPAN	201	Intermediate Spanish I	SPAN 2311
SPAN	202	Intermediate Spanish II	SPAN 2312
STAT	201	Elementary Statistical Inference	MATH 1342
STAT	201	Elementary Statistical Inference	MATH 1442
THAR	101	Intro. to Western Theatre	DRAM 1310
THAR	110	Acting I: Fundamentals	DRAM 1351
THAR	115	Voice and Articulation	SPCH 1342
THAR	115	Voice and Articulation	DRAM 2336
THAR	135	Technical Theatre	DRAM 1330
THAR	210	Acting II: Characterization	DRAM 1352
THAR	250	Theatrical Makeup	DRAM 1341
THAR	255	Costume Construction	DRAM 1342
THAR	280	History of the Theatre I	DRAM 2361
THAR	281	History of the Theatre II	DRAM 2362
THAR	290	Theatre Practicum	DRAM 1120
THAR	290	Theatre Practicum	DRAM 1121
THAR	290	Theatre Practicum	DRAM 1220
THAR	290	Theatre Practicum	DRAM 1221
THAR	290	Theatre Practicum	DRAM 1320
THAR	290	Theatre Practicum	DRAM 1321
THAR	290	Theatre Practicum	DRAM 2120
THAR	290	Theatre Practicum	DRAM 2121
THAR	290	Theatre Practicum	DRAM 2220

* Must include a lab.

TRIAL SCHEDULE

MWF	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TR
8:00						8:00
9:10						9:35
10:20						
11:30						11:10
12:40						12:45
1:50						
3:00						2:20
4:10						3:55
5:45						
						5:30

TRIAL SCHEDULE

MWF	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TR
8:00						8:00
9:10						9:35
10:20						
11:30						11:10
12:40						12:45
1:50						
3:00						2:20
4:10						3:55
5:45						
						5:30

TRIAL SCHEDULE

MWF	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TR
8:00						8:00
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3:00						2:20
4:10						3:55
5:45						
						5:30

TRIAL SCHEDULE

MWF	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TR
8:00						8:00
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10:20						
11:30						11:10
12:40						12:45
1:50						
3:00						2:20
4:10						3:55
5:45						
						5:30