

For Academic Affairs and Research Use Only	
Proposal Number	BU15
CIP Code:	
Degree Code:	

## PROGRAM MODIFICATION FORM

Undergraduate Curriculum Council

Graduate Council

Modification Type:  Admissions,  Curricular Sequence, or  Other

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

<p style="text-align: center;">Kelly Fish <b>Department Curriculum Committee Chair</b></p>	<p>2/5/2021</p>	<div style="border: 1px solid gray; height: 20px; width: 100%;"></div> <p><b>COPE Chair (if applicable)</b></p>	<div style="border: 1px solid gray; padding: 2px;">ENTER DATE</div>
<p style="text-align: center;">James Doering <b>Department Chair</b></p>	<p>2/5/2021</p>	<div style="border: 1px solid gray; height: 20px; width: 100%;"></div> <p><b>Head of Unit (if applicable)</b></p>	<div style="border: 1px solid gray; padding: 2px;">ENTER DATE</div>
<p style="text-align: center;">Melodie Philhours <b>College Curriculum Committee Chair</b></p>	<p>2/22/2021</p>	<div style="border: 1px solid gray; height: 20px; width: 100%;"></div> <p><b>Undergraduate Curriculum Council Chair</b></p>	<div style="border: 1px solid gray; padding: 2px;">ENTER DATE</div>
<div style="border: 1px solid gray; height: 20px; width: 100%;"></div> <p><b>Director of Assessment</b> <i>(only for changes impacting assessment)</i></p>	<div style="border: 1px solid gray; padding: 2px;">ENTER DATE</div>	<div style="border: 1px solid gray; height: 20px; width: 100%;"></div> <p><b>Graduate Curriculum Committee Chair</b></p>	<div style="border: 1px solid gray; padding: 2px;">ENTER DATE</div>
<p style="text-align: center;">Melody Lo <b>College Dean</b></p>	<p>2/26/2021</p>	<div style="border: 1px solid gray; height: 20px; width: 100%; text-align: center;">Alan Utter</div> <p><b>Vice Chancellor for Academic Affairs</b></p>	<div style="border: 1px solid gray; padding: 2px;">4/12/21</div>
<div style="border: 1px solid gray; height: 20px; width: 100%;"></div> <p><b>General Education Committee Chair (if applicable)</b></p>	<div style="border: 1px solid gray; padding: 2px;">ENTER DATE</div>		

**1. Contact Person** (Name, Email Address, Phone Number)  
Kelly Fish, kfish@astate.edu, 870-972-3986

**2. Proposed Change** (for undergraduate curricular changes please provide an 8-semester plan (appendix A), if applicable)  
Change course prefix on all Information Systems & Business Analytics Dept. undergraduate courses from "CIT" to "ISBA"

**3. Effective Date**

Fall 2021 semester

**4. Justification** – *Please provide details as to why this change is necessary.*

The Computer & Information Technology Department changed its name to Information Systems & Business Analytics in the fall of 2020 and this name change was approved by AHECB at the January 29, 2021 meeting. Accordingly, undergraduate departmental courses should carry the ISBA prefix rather than CIT.

# Bulletin Changes

## Instructions

Please visit <http://www.astate.edu/a/registrar/students/bulletins/index.dot> and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Please include a before (with changed areas highlighted) and after of all affected sections.

\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.



Comprehensive  
ISBA pre-fix changes

History of U.S. I	58	S	HIST 2763	3
History of U.S. II	51	S	HIST 2773	3
Humanities	51	G	ART 2503, ENG 2003 & 2013	9
Intro. to Financial Accounting	50	S	ACCT 2033	3
Intro. to Psychology	47	S	PSY 2013	3
Intro. to Sociology	53	S	SOC 2213	3
Prin. of Macroeconomics	55	S	ECON 2313	3
Prin. of Management	50	S	MGMT 3123	3
Prin. of Marketing	50	S	MKTG 3013	3
Prin. of Microeconomics	55	S	ECON 2323	3
Spanish Language Level 1	50	S	SPAN 1013, 1023	6
Spanish Language Level 2	63	S	SPAN 1013, 1023, 2013 & 2023	12
United States Government	51	S	POSC 2103	3
Western Civilization I	44	S	HIST 1013	3
Western Civilization II	50	S	HIST 1023	3

### INFORMATION SYSTEM & BUSINESS ANALYTICS CREDIT BY EXAMINATION

Students can receive **Information Systems & Business Analytics (ISBA)** credit by examination after completing certifications for Microsoft, CompTia, etc. The student must complete a "Request for Credit by Examination" form and provide proof they passed the appropriate exam to the **ISBA** department.

**The student must pay a \$50 non-refundable fee prior to credit being awarded.**

#### CERTIFICATION CREDIT TABLE FOR **ISBA** COURSES

Course	Microsoft	CompTia	Other	Notes
<b>ISBA 1503</b>	MOS - 4 parts			Office 13 or 16
<b>ISBA 2523</b>		N10-006		
<b>ISBA 3033</b>	70-483			C# Master
<b>ISBA 3404</b>			Oracle 1Z0-062	
<b>ISBA 3413</b>			Oracle 1Z0-063	
<b>ISBA 3533</b>	MOS Expert 4 parts			Expert Level
<b>ISBA 4623</b>		SY0-401	CISSP	
<b>ISBA 4853</b>		PK0-003		

### DEPARTMENT CHALLENGE EXAMINATIONS

Various academic departments administer challenge examinations in specific courses or on certain subject matter areas upon the request of students enrolled at Arkansas State University. An official form, "Request for Credit by Examination," may be obtained from the Office of the Registrar. Students should contact appropriate deans and department chairs for additional information.

Credit by departmental examination is not awarded for courses the student has already completed, courses less advanced than those already completed, or courses for which a CLEP examination exists.

**The student who wishes to take a departmental challenge examination must pay a \$50 non-refundable fee prior to taking each examination.**

Challenge exams should be taken prior to the student's last semester of enrollment preceding graduation.

# GENERAL EDUCATION CURRICULUM

## FOR ASSOCIATE OF APPLIED SCIENCE DEGREES

<b>Composition:</b>	<b>Required Credit Hrs.</b>
ENG 1003, Composition I ENG 1013, Composition II	6
<b>Natural Sciences and Mathematics:</b> <i>MATH 1043 - Quantitative Reasoning will satisfy the math requirement unless otherwise noted in the "General Education Requirements" section of a degree plan.</i>	<b>Required Credit Hrs.</b>
MATH 1043, Quantitative Reasoning MATH 1023, College Algebra Any MATH course that requires MATH 1023 as a prerequisite.	3
<b>Select one of the following:</b> BIOL 1003 <b>AND</b> 1001, Biological Science and Laboratory BIOL 1033 <b>AND</b> 1001, Biology of Sex and Laboratory BIOL 1063 <b>AND</b> 1001, People & Environment and Laboratory BIO 1503 <b>AND</b> 1501, Biology of Plants and Laboratory BIO 2013 <b>AND</b> 2011, Biology of the Cell and Laboratory BIO 2103 <b>AND</b> 2101, Microbiology for Nursing and Allied Health and Laboratory BIO 2203 <b>AND</b> 2201, Human Anatomy and Physiology I and Laboratory CHEM 1013 <b>AND</b> 1011, General Chemistry I and Laboratory CHEM 1043 <b>AND</b> 1041, Fundamental Concepts of Chemistry and Laboratory GEOL 1003 <b>AND</b> 1001, Environmental Geology and Laboratory PHSC 1014, Energy and the Environment PHSC 1203 <b>AND</b> 1201, Physical Science and Laboratory PHYS 1103 <b>AND</b> 1101, Introduction to Space Science and Laboratory PHYS 2034, University Physics I PHYS 2054, General Physics I PHYS 2073 <b>AND</b> 2071, Fundamental Physics and Laboratory	4
<b>Social Sciences:</b>	<b>Required Credit Hrs.</b>
<b>Select one of the following:</b> HIST 2763, The United States To 1876 HIST 2773, The United States Since 1876 POSC 2103, Introduction to United States Government	3
<b>Computer Applications/Fundamentals:</b>	<b>Required Credit Hrs.</b>
<b>Select one of the following:</b> ISBA 1503, Microcomputer Applications CS 1013, Introduction to Computers	3
<b>Total Required Hours:</b>	<b>19</b>

# Major in Agricultural Business

## Bachelor of Science in Agriculture

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
AGRI 1213, Making Connections in Agriculture	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite CHEM 1013 <b>AND</b> 1011, General Chemistry I and Laboratory <b>OR</b> CHEM 1043 <b>AND</b> CHEM 1041, Fundamental Concepts of Chemistry and Laboratory ECON 2313, Principles of Macroeconomics COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)	
<b>Agriculture Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Agriculture Section)	24
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
ACCT 2033, Introduction to Financial Accounting	3
ACCT 2133, Introduction to Managerial Accounting	3
AGEC 3053, Commodity Futures Markets	3
AGEC 4033, Agricultural Law <b>OR</b> LAW 2023, Legal Environment of Business	3
AGEC 4053, Agricultural Finance <b>OR</b> FIN 3713, Business Finance	3
AGEC 4073, Agricultural Business Management	3
AGEC 4083, Agricultural Policy and Current Issues	3
ISBA 1503, Microcomputer Applications <b>OR</b> CS 1013, Introduction to Computers	3
ECON 2323, Principles of Microeconomics	3
MGMT 3123 Principles of Management <b>OR</b> MGMT 3153, Organizational Behavior	3
MKTG 3013, Marketing	3
<b>Sub-total</b>	<b>33</b>
<b>Program Electives:</b>	<b>Sem. Hrs.</b>
Students who do not select an emphasis area must work with an advisor to design a program to meet their educational and career goals.	
Choose 18 hours from the following approved Prefixes: AGEC, ACCT, AD, AGECE, AGED, AGRI, AGST, ANSC, BCOM, ISBA, CMAC, COMS, ECON, ENG, FIN, HORT, IB, LAW, MATH, MGMT, MKTG, POSC, PR, PSSC, REI, RET, SCOM, STAT, STCM, and TECH	18
<b>Sub-total</b>	<b>18</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	7
<b>Total Required Hours:</b>	<b>120</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>

# Major in Agricultural Business

## Bachelor of Science in Agriculture Emphasis in Agricultural Economics and Finance

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
AGRI 1213, Making Connections in Agriculture	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<p><b>Students with this major must take the following:</b>  <i>MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite</i>  <i>CHEM 1013 AND 1011, General Chemistry I and Laboratory OR</i>  <i>CHEM 1043 AND CHEM 1041, Fundamental Concepts of Chemistry and Laboratory</i>  <i>ECON 2313, Principles of Macroeconomics</i>  <i>COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)</i></p>	
<b>Agriculture Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Agriculture Section)	24
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
ACCT 2033, Introduction to Financial Accounting	3
ACCT 2133, Introduction to Managerial Accounting	3
AGEC 3053, Commodity Futures Markets	3
AGEC 4033, Agricultural Law <b>OR</b> LAW 2023, Legal Environment of Business	3
AGEC 4053, Agricultural Finance	3
AGEC 4073, Agricultural Business Management	3
AGEC 4083, Agricultural Policy and Current Issues	3
ISBA 1503, Microcomputer Applications <b>OR</b> CS 1013, Introduction to Computers	3
ECON 2323, Principles of Microeconomics	3
MGMT 3123 Principles of Management <b>OR</b> MGMT 3153, Organizational Behavior	3
MKTG 3013, Marketing	3
<b>Sub-total</b>	<b>33</b>
<b>Emphasis Area (Agricultural Economics and Finance):</b>	<b>Sem. Hrs.</b>
ISBA 3523, Operations Management	3
ECON 3313, Microeconomic Analysis	3
ECON 3323, Money and Banking	3
ECON 3353, Macroeconomic Analysis	3
FIN 3713, Business Finance	3
FIN 3763, Financial Institutions and Markets	3
MATH 2143, Business Calculus	3
<b>Sub-total</b>	<b>21</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	4
<b>Total Required Hours:</b>	<b>120</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>

# Major in Agricultural Business

## Bachelor of Science in Agriculture Emphasis in Agricultural Marketing and Management

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
AGRI 1213, Making Connections in Agriculture	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite CHEM 1013 AND 1011, General Chemistry I and Laboratory OR CHEM 1043 AND CHEM 1041, Fundamental Concepts of Chemistry and Laboratory ECON 2313, Principles of Macroeconomics COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)	
<b>Agriculture Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Agriculture Section)	24
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
ACCT 2033, Introduction to Financial Accounting	3
ACCT 2133, Introduction to Managerial Accounting	3
AGEC 3053, Commodity Futures Markets	3
AGEC 4033, Agricultural Law OR LAW 2023, Legal Environment of Business	3
AGEC 4053, Agricultural Finance OR FIN 3713, Business Finance	3
AGEC 4073, Agricultural Business Management	3
AGEC 4083, Agricultural Policy and Current Issues	3
ISBA 1503, Microcomputer Applications OR CS 1013, Introduction to Computers	3
ECON 2323, Principles of Microeconomics	3
MGMT 3123 Principles of Management OR MGMT 3153, Organizational Behavior	3
MKTG 3013, Marketing	3
<b>Sub-total</b>	<b>33</b>
<b>Emphasis Area (Agricultural Marketing and Management):</b>	<b>Sem. Hrs.</b>
AGEC 3003, Agricultural Marketing	3
AGEC 3013, Decision Tools for Agribusiness	3
AGEC 3063, Agricultural Sales and Services	3
AGEC 4023, Grain Merchandising and Commodity Marketing	3
AGEC 4113, Livestock and Poultry Economics	3
AGEC 4123, Land Economics and Farm Appraisal	3
<b>Sub-total</b>	<b>18</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	7
<b>Total Required Hours:</b>	<b>120</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>



# Major in Agricultural Studies

## Bachelor of Science in Agriculture Emphasis in Agricultural Systems Technology

<i>Select one of the following:</i> <b>ISBA</b> 1503, Microcomputer Applications <b>OR</b> CS 1013, Introduction to Computers	3
GEOG 2613, Introduction to Geography	3
MATH 1033, Plane Trigonometry OR MATH 1054, Precalculus Mathematics OR any MATH course that requires MATH 1023 or MATH 1054 as a prerequisite	3
<i>Select two of the following:</i> PSSC 3313, Plant Disease Management <b>OR</b> PSSC 3323, Weeds and Weed Control <b>OR</b> PSSC 4713, Soil Quality Assessment and Interpretation <b>OR</b> PSSC 4804, Principles of Crop Production <b>OR</b> PSSC 4813, Soil Fertility	6-7
TECH 3803, Electrical Systems	3
Upper-level elective in AGECE, AGED, AGST, AGRI, GEOG, HORT, or PSSC	8-9
<b>Sub-total</b>	<b>58</b>
<b>Total Required Hours:</b>	<b>120</b>

# Major in Plant and Soil Science

## Bachelor of Science in Agriculture Emphasis in Agronomy

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42)	
<b>First Year Making Connections Course</b>	<b>Sem. Hrs.</b>
AGRI 1213, Making Connections in Agriculture	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<p><b>Students with this major must take the following:</b>  <i>MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite</i>  <i>CHEM 1043 AND 1041, Fundamental Concepts of Chemistry and Lab</i>  <i>BIOL 1003 AND 1001, Biological Sciences and Laboratory</i>  <i>COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)</i></p>	
<b>Agriculture Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Agriculture Section)	24
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
AGEC 3013, Decision Tools for Agribusiness <b>OR</b> ISBA 1503, Microcomputer Applications	3
AGRI 2213, Genetic Improvement of Plants and Animals	3
AGRI 4223, Agriculture and the Environment	3
BIO 3303 <b>AND</b> 3301, General Entomology and Laboratory <b>OR</b> BIO 3313 <b>AND</b> 3311, Economic Entomology and Laboratory	4
PSSC 3313, Plant Disease Management	3
PSSC 2811, Soils Laboratory	1
PSSC 1301, Plant Science Laboratory	1
PSSC 4313, Plant Growth and Development	3
<b>Sub-total</b>	<b>21</b>
<b>Emphasis Area (Agronomy):</b>	<b>Sem. Hrs.</b>
AGST 3503, Geospatial Data Applications <b>OR</b> AGST 4003, Modern Irrigation Systems	3
AGST 3543, Fundamentals of GIS/GPS	3
CHEM 1052, Fundamental Concepts of Organic and Biochemistry	2
PSSC 3323, Weeds and Weed Control	3
PSSC 4804, Principles of Crop Production	4
PSSC 4813, Soil Fertility	3
AGRI, AGST, HORT or PSSC electives, or BIO 1503, Biology of Plants, or related area	14
<b>Sub-total</b>	<b>32</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	5
<b>Total Required Hours:</b>	<b>120</b>

# Major in Plant and Soil Science

## Bachelor of Science in Agriculture Emphasis in Environmental Horticulture

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42)	
<b>First Year Making Connections Course</b>	<b>Sem. Hrs.</b>
AGRI 1213, Making Connections in Agriculture	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> <i>MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite</i> <i>CHEM 1043 AND 1041, Fundamental Concepts of Chemistry and Lab</i> <i>BIOL 1003 AND 1001, Biological Sciences and Laboratory</i> <i>COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)</i>	
<b>Agriculture Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Agriculture Section)	24
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
AGEC 3013, Decision Tools for Agribusiness <b>OR</b> ISBA 1503, Microcomputer Applications	3
AGRI 2213, Genetic Improvement of Plants and Animals	3
AGRI 4223, Agriculture and the Environment	3
BIO 3303 <b>AND</b> 3301, General Entomology and Laboratory <b>OR</b> BIO 3313 <b>AND</b> 3311, Economic Entomology and Laboratory	4
PSSC 3313, Plant Disease Management	3
PSSC 2811, Soils Laboratory	1
PSSC 1301, Plant Science Laboratory	1
PSSC 4313, Plant Growth and Development	3
<b>Sub-total</b>	<b>21</b>
<b>Emphasis Area (Environmental Horticulture):</b>	<b>Sem. Hrs.</b>
CHEM 1052, Fundamental Concepts of Organic and Biochemistry	2
HORT 3293, Landscape Plant Materials	3
HORT 4333, Greenhouse and Nursery Production	3
PSSC 3323, Weeds and Weed Control	3
AGRI or AGST electives, or BIO 1503, Biology of Plants, or related area	3-9
HORT electives	12-18
<b>Sub-total</b>	<b>32</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	5
<b>Total Required Hours:</b>	<b>120</b>

1. Maintain a minimum GPA of 2.25 or a grade of at least a “C” for each course in the Neil Griffin College of Business core courses, based on the last grade earned in each course.
2. Maintain a minimum GPA of 2.25 or a grade of at least a “C” for each required course in the major, based on last grade earned in each course.
3. Maintain an overall GPA of 2.25.
4. Complete at least 30 of the last 36 semester hours in courses offered by A-State. At least 50 percent of the business credit hours required for a baccalaureate degree and 50 percent of business courses required for a major in business must be earned in the A-State Neil Griffin College of Business.

A Neil Griffin College of Business student may take a double major in business. She/he may also elect a business minor, in consultation with his/her advisor. Students majoring in the Neil Griffin College of Business may not minor in Business Administration.

**NOTE: Students not majoring in the Neil Griffin College of Business will receive credit for no more than 30 hours of course work offered by the Neil Griffin College of Business.**

### FOREIGN LANGUAGE REQUIREMENT

All students seeking the Bachelor of Arts in Economics must demonstrate a basic proficiency in a foreign language. This may be done in one of the following ways:

1. By completing two years of a single foreign language in high school.
2. By completing the fourth semester of a foreign language course at the college level. Students with previous language experience must consult with a faculty member in World Languages for course placement. Students must complete Intermediate Language II.
3. By passing an examination acceptable to the chair of the Department of Economics and Finance as proof of proficiency equivalent to successful completion of the second semester of the intermediate year of a foreign language at the college level

### NEIL GRIFFIN COLLEGE OF BUSINESS CORE COURSES

All candidates for baccalaureate degrees in the Neil Griffin College of Business are required to take the following Neil Griffin College of Business core courses.

<b>Neil Griffin College of Business Core Courses:</b> Grade of “C” or better or 2.25 overall core GPA required	<b>Sem. Hrs.</b>
ACCT 2033, Introduction to Financial Accounting	3
ACCT 2133, Introduction to Managerial Accounting	3
BCOM 2563, Business Communication	3
<b>ISBA</b> 1503, Microcomputer Applications <b>OR</b> CS 1013, Introduction to Computers <i>(Grade of “C” or better required for either course)</i>	3
<b>ISBA</b> 3013, Management Information Systems	3
<b>ISBA</b> 3523, Operations Management	3
STAT 3233, Applied Statistics	3
ECON 2323, Principles of Microeconomics	3
FIN 3713, Business Finance	3
LAW 2023, Legal Environment of Business	3
MGMT 3123, Principles of Management	3
MGMT 4813, Strategic Management	3
MKTG 3013, Marketing	3
<b>Total Required Hours:</b>	<b>39</b>

# Major in Accounting

## Bachelor of Science

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42) (For Neil Griffin College of Business requirements, see p. 125)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
BUSN 1003, First Year Experience Business	<b>3</b>
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	<b>35</b>
<b>Students with this major must take the following:</b> A "C" or better in MATH 2143, Business Calculus <b>OR</b> MATH 2194, Survey of Calculus <b>OR</b> MATH 2204, Calculus I ECON 2313, Principles of Macroeconomics COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)	
<b>Neil Griffin College of Business Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Business Section)	<b>39</b>
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
Students must maintain a minimum GPA of 2.5 <b>AND</b> a grade of at least a "C" for each course in the major.	
ISBA 2033, Programming Fundamentals	3
ISBA 3533, Microcomputer Applications II	3
ACCT 3003, Intermediate Accounting I	3
ACCT 3013, Intermediate Accounting II	3
ACCT 3053, Cost Accounting with a Managerial Emphasis	3
ACCT 4013, Tax Accounting I	3
ACCT 4023, Advanced Accounting and International Issues	3
ACCT 4033, Accounting Information Systems	3
ACCT 4053, Auditing I	3
ACCT 4113, Tax Accounting II	3
ACCT 4133, Accounting Statistics	3
ACCT 4123, Government and Not-For-Profit Accounting	3
ACCT 4183, Accounting Analytics	3
LAW 4043, Law of Business Organizations	3
<b>Sub-total</b>	<b>42</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	<b>1</b>
<b>Total Required Hours:</b>	<b>120</b>

# Major in Accounting

## Associate of Science

<b>University Requirements:</b>	
See University General Requirements for Associate degrees (p. 43)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
BUSN 1003, First Year Experience Business	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Associate of Science Degrees (p. 79)	35
<p><b>Students with this major must take the following:</b>  <i>COMS 1203, Oral Communication</i>  <i>ANTH 2233, Introduction to Cultural Anthropology</i> <b>OR</b>  <i>SOC 2213, Introduction to Sociology</i>  <i>MATH 1023, College Algebra</i> or <i>MATH</i> course that requires <i>MATH 1023</i> as a prerequisite  <i>ECON 2313, Principles of Macroeconomics</i></p>	
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
Grade of "C" or better is required for all major courses.	
ACCT 2033, Introduction to Financial Accounting	3
ACCT 2133, Introduction to Managerial Accounting	3
ACCT 3003, Intermediate Accounting I	3
ACCT 3053, Cost Accounting with a Managerial Emphasis	3
ACCT 4013, Tax Accounting I	3
<b>ISBA</b> 1503, Microcomputer Applications <b>OR</b> CS 1013, Introduction to Computers	3
<b>ISBA</b> 2033, Programming Fundamentals	3
<b>Sub-total</b>	<b>21</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	1
<b>Total Required Hours:</b>	<b>60</b>

# Department of Information Systems and Business Analytics

*Professor James Doering, Chair*

**Professors:** Fish, Jones, Moeeni, P. Ruby, R. Ruby, Segall, Seydel

**Associate Professors:** Sinclair

The Department of **Information Systems and Business Analytics (ISBA)** offers the undergraduate curricula in **Information Systems and Business Analytics** and Business Technology. Areas of study offered by the **ISBA** Department include, but are not limited to: business technology, network and telecommunications management, enterprise resource planning, end-user computing, data management (including database management, data mining, and data warehousing), software development (including programming languages and systems analysis/development), web interface development, e-commerce, project management, supply chain technologies (including operations management, automatic data capture and simulation modeling), information technology (IT) planning and strategy, and related areas.

## **COMPUTER & INFORMATION TECHNOLOGY PROGRAM:**

The Bachelors of Science in Computer & Information Technology is designed to prepare students for careers as IT professionals. Our graduates hold positions as network administrators, applications programmers, website developers, database architects, operations schedulers, and technical support specialists, to name a few. Of particular interest to potential students who already have practical IT experience should be the alignment of many **ISBA** courses with industry certifications. Consequently, students can simultaneously complete their major requirements and prepare for industry certification exams. This further makes it possible for students to receive course credit for certifications already earned.

## **BUSINESS TECHNOLOGY PROGRAM:**

In conjunction with the College of Education and Behavioral Science, the **ISBA** department offers the Bachelor of Science in Education concentration in Business Technology. This is a program of study designed to prepare teachers of business subjects for the secondary schools. Business subjects taught in the secondary school are generally intended to provide high school graduates with entry level job skills, as well as the economic competencies those graduates will need. Emphasis is given, through this department and the College of Education and Behavioral Science, to the methods by which this information can be effectively imparted. For satisfactory completion of this program, a student must fulfill all requirements as established by the university, the Neil Griffin College of Business, the College of Education and Behavioral Science, and this department. Vocational certification is available and the **ISBA** department is also approved by the State of Arkansas for teacher training.

## **OTHER PROGRAMS:**

In addition to offering the four-year programs described above, the **ISBA** department offers an Associate of Science in Computer & Information Technology, a Certificate in Information Technology, and minors in electronic commerce and **Information Systems and Business Analytics**. These programs are intended to provide the student with several options that will complement other coursework and provide stepping stones to four-year degrees. These can be completed in relatively little time.

Please visit <http://www.astate.edu/college/business/> for further information about the **ISBA** Department, its degree programs, classes, and more.

# Major in Business Technology

## Bachelor of Science in Education

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42) (For Neil Griffin College of Business requirements, see p. 125)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
BUSN 1003, First Year Experience Business	<b>3</b>
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)  <b>Students with this major must take the following:</b> <i>ECON 2313, Principles of Macroeconomics</i> <i>COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)</i>	<b>35</b>
<b>Neil Griffin College of Business Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Business Section)	<b>39</b>
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Major Requirements	
GCOM 3673, Desk Publishing and Publication Design	3
ISBA 3533, Microcomputer Applications II	3
ISBA 4453, Global E-Commerce	3
MKTG 4073, Social Media Marketing	3
<b>Sub-total</b>	<b>12</b>
<b>Professional Education Requirements:</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Professional Education Requirements. Courses denoted below with an asterisk (*) require admission to the Teacher Education Program. For additional information, see Professional Education Requirements for Secondary Majors in the College of Education and Behavioral Science section.	
*EDBU 4533, Methods and Materials in Teaching Business Technology	3
*ELSE 3643, The Exceptional Student in the Regular Classroom	3
PSY 3703, Educational Psychology	3
SCED 2513, Introduction to Secondary Teaching	3
*SCED 3515, Performance Based Instructional Design	5
*SCED 4713, Educational Measurement with Computer Applications	3
*TIBU 4826, Business Teaching Internship in the Secondary School	12
<b>Sub-total</b>	<b>32</b>
<b>Total Required Hours:</b>	<b>121</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>



# Major in **Information Systems and Business Analytics**

## Bachelor of Science

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42) (For Neil Griffin College of Business requirements, see p. 125)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
BUSN 1003, First Year Experience Business	<b>3</b>
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)  <b>Students with this major must take the following:</b> A "C" or better in MATH 2143, Business Calculus <b>OR</b> MATH 2194, Survey of Calculus <b>OR</b> MATH 2204, Calculus I ECON 2313, Principles of Macroeconomics COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)	<b>35</b>
<b>Neil Griffin College of Business Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Business Section) Grade of "C" or better required in <b>ISBA 3013, Management Information Systems</b>	<b>39</b>
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Major Requirements	
<b>ISBA 2033, Programming Fundamentals</b>	<b>3</b>
<b>ISBA 2523, Telecommunications and Networking Essentials</b>	<b>3</b>
<b>ISBA 3033, Intermediate Programming</b>	<b>3</b>
<b>ISBA 3353, Mobile and Web Development</b>	<b>3</b>
<b>ISBA 3403, Database Management</b>	<b>3</b>
<b>ISBA 3413, Advanced Database Management</b>	<b>3</b>
<b>ISBA 3603, Systems Analysis and Design</b>	<b>3</b>
<b>ISBA 4453, Global eCommerce</b>	<b>3</b>
<b>ISBA 4523, Advanced Network Telecommunications</b>	<b>3</b>
<b>ISBA 4623, Computer Security</b>	<b>3</b>
<b>ISBA 4653, Data Capture</b>	<b>3</b>
<b>ISBA 4853, IT Project Management</b>	<b>3</b>
<b>Sub-total</b>	<b>36</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	<b>7</b>
<b>Total Required Hours:</b>	<b>120</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>

## ASSOCIATE OF SCIENCE IN **INFORMATION SYSTEMS AND BUSINESS ANALYTICS**

All candidates for an Associate Degree in the Neil Griffin College of Business must satisfy the University Requirements for all Associate Degrees (refer to index for page reference), as well as the specific degree requirements listed under the **ISBA** major.

### Major in **Information Systems and Business Analytics**

#### Associate of Science

<b>University Requirements:</b>	
See University General Requirements for Associate degrees (p. 43)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
BUSN 1003, First Year Experience Business	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Associate of Science Degrees (p. 79)	<b>35</b>
<b>Students with this major must take the following:</b> <i>MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite</i> <i>COMS 1203, Oral Communication</i> <i>ECON 2313, Principles of Macroeconomics</i>	
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Major Requirements	
ACCT 2033, Introduction to Financial Accounting	3
<b>ISBA</b> 1503, Microcomputer Applications <b>OR</b> CS 1013, Introduction to Computers	3
<b>ISBA</b> 2033, Programming Fundamentals	3
<b>ISBA</b> 2523, Telecommunications and Networking Essentials	3
<b>ISBA</b> 3013, Management Information Systems	3
<b>ISBA</b> 3403, Database Management	3
<b>ISBA</b> or CS Electives <i>CS 1013 may not be used to satisfy this requirement.</i>	3
<b>Sub-total</b>	<b>21</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	1
<b>Total Required Hours:</b>	<b>60</b>

## Certificate in Information Technology (IT)

The program is intended to deliver training that provides foundation working knowledge in information technology. The resulting certificate is independent of any degree program and can be used either to enhance whatever degree is being pursued by the student or to demonstrate IT accomplishments of the non-degree-seeking student. For the latter, the certificate incorporates a basic communications component, a Business foundation component, and a strong basic IT component.

<b>Requirements:</b>	
<b>Communications Component</b>	<b>Sem. Hrs.</b>
ENG 1003, Composition I	3
ENG 1013, Composition II	3
<b>Business Knowledge Component</b>	<b>Sem. Hrs.</b>
ACCT 2033, Introduction to Financial Accounting	3
Business Electives	6
<b>Information Technology Component</b> Grade of "C" or better required for all courses in the Information Technology Component	<b>Sem. Hrs.</b>
ISBA 1503, Microcomputer Applications	3
ISBA 2033, Programming Fundamentals	3
ISBA Elective (other than ISBA 1503 or ISBA 2033)	3
<b>Total Required Hours:</b>	<b>24</b>

# Department of **Information Systems and Business Analytics** Minors

## Minor in **Information Systems and Business Analytics**

<b>Required Courses:</b>	<b>Sem. Hrs.</b>
Students must maintain a minimum GPA of 2.25 or a grade of at least a "C" for each course in the minor.	
<b>ISBA</b> 2033, Programming Fundamentals	3
<b>ISBA</b> 2523, Telecommunications and Networking Essentials	3
<b>ISBA</b> 3013, Management Information Systems	3
<b>ISBA</b> 3403, Database Management	3
<b>Select two of the following:</b> <b>ISBA</b> 4453, Global E-commerce <b>ISBA</b> 4653, Automatic Data Capture <b>ISBA</b> 4853, IT Project Management	6
<b>Total Required Hours:</b>	<b>18</b>

## Minor in **Electronic Commerce**

<b>Required Courses:</b>	<b>Sem. Hrs.</b>
Students must maintain a minimum GPA of 2.25 or a grade of at least a "C" for each course in the minor.	
<b>ISBA</b> 3353, Mobile and Web Applications Development <b>OR</b> MDIA 4373, Internet Communications	3
<b>ISBA</b> 3403, Database Management	3
<b>ISBA</b> 4453, Global E-Commerce	3
GSCM 3163, Supply Chain Management <b>OR</b> MKTG 3013, Marketing	3
<b>Select two of the following:</b> <b>ISBA</b> 2033, Programming Fundamentals <b>ISBA</b> 488V, Internship (in area in E-Commerce) <b>OR</b> MKTG 428V, Internship GCOM 3673, Digital Design	6
<b>Total Required Hours:</b>	<b>18</b>

# Major in Economics

## Bachelor of Arts

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42) <i>(For Neil Griffin College of Business requirements, see p. 125)</i>	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
BUSN 1003, First Year Experience Business	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)  <b>Students with this major must take the following:</b> <i>MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite</i> <i>COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)</i>	35
<b>Language Requirement:</b>	<b>Sem. Hrs.</b>
Foreign Language (See Beginning of Business Section)	0-12
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
ISBA 3013, Management Information Systems	3
ECON 2313, Principles of Macroeconomics <i>Required ONLY if not taken to satisfy a part of the General Education Requirements</i>	0-3
ECON 2323, Principles of Microeconomics	3
ECON 3313, Microeconomic Analysis	3
ECON 3323, Money and Banking	3
ECON 3353, Macroeconomic Analysis	3
Upper-level Economics Electives	12
Upper-level History Electives	3
Upper-level Political Science Electives	6
Upper-level Sociology Elective	3
<b>Sub-total</b>	<b>39-42</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	28-43
<b>Total Required Hours:</b>	<b>120</b>

# Major in Global Supply Chain Management

## Bachelor of Science

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42) (For Neil Griffin College of Business requirements, see p. 125)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
BUSN 1003, First Year Experience Business	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> A "C" or better in MATH 2143, Business Calculus <b>OR</b> MATH 2194, Survey of Calculus <b>OR</b> MATH 2204, Calculus I ECON 2313, Principles of Macroeconomics COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)	
<b>Neil Griffin College of Business Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Business Section)	39
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
GSCM 3063, Transportation	3
GSCM 3163, Supply Chain Management	3
MKTG 3023, Applied Research	3
MKTG 4313, Prescriptive Analytics	3
GSCM 4103, Concepts of Business Logistics	3
GSCM 4123, Organizational Purchasing	3
GSCM 4133, International Logistics	3
<b>Select one of the following:</b> ACCT 3053, Cost Accounting with a Managerial Emphasis <b>ISBA</b> 4453, Global E Commerce <b>ISBA</b> 4853, IT Project Management ECON 4103, International Trade MGMT 4123, International Management MKTG 4113, International Marketing	3
<b>Sub-total</b>	<b>24</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives (must include at least 3 upper-level hours)	19
<b>Total Required Hours:</b>	<b>120</b>

# Major in International Business

## Bachelor of Science

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42) (For Neil Griffin College of Business requirements, see p. 125)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
BUSN 1003, First Year Experience Business	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> A "C" or better in MATH 2143, Business Calculus <b>OR</b> MATH 2194, Survey of Calculus <b>OR</b> MATH 2204, Calculus I ECON 2313, Principles of Macroeconomics COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)	
<b>Neil Griffin College of Business Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Business Section)	39
<b>Language Requirements</b>	<b>Sem. Hrs.</b>
French, German, or Spanish <i>International Business majors should take their foreign language during their freshman and sophomore years. No waiver will be allowed for the language requirement. If English is a second language, 12 hours of 3000 level English courses may be used to meet the language requirement.</i>	12
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
ISBA 4453, Global E-Commerce	3
FIN 3813, International Financial Management and Banking	3
ECON/IB 4143, Export Policies and Procedures	3
GSCM 4133, International Logistics and Outsourcing	3
MKTG 4113, International Marketing	3
MGMT 3193, Social Impact Management	3
MGMT 4123, International Management	3
<b>Select one of the following:</b> IB 3013, Global Experience IB 4283, Internship in International Business	3
<b>Sub-total</b>	<b>24</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives (must include at least 3 upper-level hours)	7
<b>Total Required Hours:</b>	<b>120</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>

# Major in Management

## Bachelor of Science Emphasis in International Business

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42) (For Neil Griffin College of Business requirements, see p. 125)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
BUSN 1003, First Year Experience Business	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> A "C" or better in MATH 2143, Business Calculus <b>OR</b> MATH 2194, Survey of Calculus <b>OR</b> MATH 2204, Calculus I ECON 2313, Principles of Macroeconomics COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)	
<b>Neil Griffin College of Business Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Business Section)	39
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
MGMT 3143, Human Resource Management	3
MGMT 3153, Organizational Behavior	3
MGMT 3613, Leadership	3
MGMT 4163, Small Business Management	3
MKTG 3023, Applied Research	3
<b>Sub-total</b>	<b>15</b>
<b>Emphasis Area (International Business):</b>	<b>Sem. Hrs.</b>
ECON/IB 4143, Export Policies & Procedures	3
FIN 3813, International Financial Management and Banking	3
GSCM 4133, International Logistics and Outsourcing	3
MGMT 4123, International Management	3
MKTG 4113, International Marketing	3
<b>Select one of the following:</b> ISBA 4453, Global E-Commerce ECON 4103, International Trade ECON 4363, Global Environmental Policies IB 3013, Global Experience IB 4133, International Law IB 4283, Internship in International Business MGMT 3193, Social Impact Management	3
<b>Sub-total</b>	<b>18</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	10
<b>Total Required Hours:</b>	<b>120</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>



# Major in Marketing

## Bachelor of Science Emphasis in International Business

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42) (For Neil Griffin College of Business requirements, see p. 125)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
BUSN 1003, First Year Experience Business	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> A "C" or better in MATH 2143, Business Calculus <b>OR</b> MATH 2194, Survey of Calculus <b>OR</b> MATH 2204, Calculus I ECON 2313, Principles of Macroeconomics COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)	
<b>Neil Griffin College of Business Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Business Section)	39
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
GSCM 3163, Supply Chain Management	3
MKTG 3023, Applied Research	3
MKTG 4043, Consumer Behavior	3
MKTG 4083, Marketing Research Design and Analysis	3
MKTG 4223, Marketing Management	3
<b>Sub-total</b>	<b>15</b>
<b>Emphasis Area (International Business):</b>	<b>Sem. Hrs.</b>
ECON/IB 4143, Export Policies & Procedures	3
FIN 3813, International Financial Management and Banking	3
GSCM 4133, International Logistics and Outsourcing	3
MGMT 4123, International Management	3
MKTG 4113, International Marketing	3
<b>Select one of the following:</b> ISBA 4453, Global E-Commerce ECON 4103, International Trade ECON 4363, Global Environmental Policies IB 3013, Global Experience IB 4133, International Law IB 4283, Internship in International Business MGMT 3193, Social Impact Management	3
<b>Sub-total</b>	<b>18</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	10
<b>Total Required Hours:</b>	<b>120</b>

# Major in Marketing

## Bachelor of Science Emphasis in Marketing Analytics

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42) (For Neil Griffin College of Business requirements, see p. 125)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
BUSN 1003, First Year Experience Business	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> A "C" or better in MATH 2143, Business Calculus OR MATH 2194, Survey of Calculus OR MATH 2204, Calculus I ECON 2313, Principles of Macroeconomics COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)	
<b>Neil Griffin College of Business Core Courses:</b>	<b>Sem. Hrs.</b>
(See Beginning of Business Section)	39
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
MKTG 3023, Applied Research	3
MKTG 3163, Supply Chain Management	3
MKTG 4043, Consumer Behavior	3
MKTG 4083, Marketing Research Design and Analysis	3
MKTG 4223, Marketing Management	3
<b>Sub-total</b>	<b>15</b>
<b>Emphasis Area (Marketing Analytics):</b>	<b>Sem. Hrs.</b>
MKTG 4213, Marketing Analytics	3
MKTG 4253, Data Analytics and Visualization	3
MKTG 3173, Category Management	3
<b>Select one of the following:</b> CS 2114, Structured Programming ISBA 2033, Programming Fundamentals ISBA 3353, Mobile and Web Applications Development ISBA 3403, Database Management ISBA 3413, Advanced Database Management ISBA 3663, Data Mining ISBA 4453, Global E-commerce ISBA 4853, IT Project Management MKTG 4313, Prescriptive Analytics MKTG 4143, Advanced Category Management	3
<b>Sub-total</b>	<b>12</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	16
<b>Total Required Hours:</b>	<b>120</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>

# Department of Management and Marketing Minors

## Minor in Entrepreneurship

<b>Required Courses:</b> Students must maintain a minimum GPA of 2.25 or a grade of at least a "C" for each course in the minor.	<b>Sem. Hrs.</b>
ACCT 2033, Introduction to Financial Accounting	3
ECON 2313, Principles of Macroeconomics <b>OR</b> ECON 2323, Principles of Microeconomics	3
FIN 3713, Business Finance	3
MKTG 3013, Marketing	3
MGMT 3183, Entrepreneurship	3
MGMT 4163, Small Business Management	3
MGMT 4183, Family Business Management	3
<b>Total Required Hours:</b>	<b>21</b>

## Minor in International Business

<b>Required Courses:</b> Students must maintain a minimum GPA of 2.25 or a grade of at least a "C" for each course in the minor.	<b>Sem. Hrs.</b>
<b>ISBA</b> 4453 Technologies for Global E-Commerce	3
ECON/IB 4143, Export Policies and Procedures	3
GSCM 4133, International Logistics and Outsourcing	3
MGMT 3193 Social Impact Management	3
MGMT 4123, International Management	3
MKTG 4113, International Marketing	3
<b>Total Required Hours:</b>	<b>18</b>

## Minor in Logistics

<b>Required Courses:</b> Students must maintain a minimum GPA of 2.25 or a grade of at least a "C" for each course in the minor.	<b>Sem. Hrs.</b>
ECON 2313, Principles of Macroeconomics <b>OR</b> ECON 2323, Principles of Microeconomics	3
GSCM 3063, Transportation	3
GSCM 3163, Supply Chain Management	3
GSCM 4103, Concepts of Logistics	3
GSCM 4133, International Logistics and Outsourcing	3
MKTG 3013, Marketing	3
<b>Total Required Hours:</b>	<b>18</b>

# Major in Sport Management

## Bachelor of Science

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
HPES 1013, Introduction to HPESS (Making Connections)	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> <i>MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)</i>	
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Major Requirements	
ISBA 1503, Microcomputer Applications	3
COMS 3203, Business & Professional Communication	3
ES 3743, Research and Statistics in Exercise Science	3
HPES 1883, Foundations of HPESS <i>Must be completed ONLY if HPES 1013 is not completed as the First Year Making Connections Course.</i>	0-3
HPES 4896, Internship in HPESS <b>OR</b> HPES 4863, Internship in HPESS I <b>AND</b> HPES 4893, Internship in HPESS II	6
PE 1002, Concepts of Fitness	2
PE 3113, Business of Esports	3
PE 3853, Sports Promotion and Sales Management	3
PE 3863, Economic and Financial Mgmt for Sport Organizations	3
PE 3873, Facility and Event Management	3
PE 4743, Legal Issues in Sport	3
PE 4763, Sport Analytics	3
PE 4773, Organization and Management of Sports Programs	3
PE 4843, Philosophy and Ethics in Sports	3
PE 4853, Applied Psychology of Sports and Exercise	3
PE 4863, Diversity in Sport and Athletics	3
STCM 3003, Principles of Public Relations	3
<b>Sub-total</b>	<b>50-53</b>
<b>Minor (select one of the following):</b>	<b>Sem. Hrs.</b>
Refer to appropriate college for information regarding specific minors.	
General Business	21
Marketing	18
Multimedia Journalism	19
<b>Sub-total</b>	<b>18-21</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	8-14
<b>Total Required Hours:</b>	<b>120</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>

# Major in Health Promotion

## Bachelor of Science

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42)	
<b>First Year Making Connections Course:</b>	Sem. Hrs.
HPES 1013, Introduction to HPESS (Making Connections)	3
<b>General Education Requirements:</b>	Sem. Hrs.
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<p><b>Students with this major must take the following:</b>            BIO 2203 AND 2201, Human Anatomy and Physiology I and Laboratory            MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite            COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)</p>	
<b>Major Requirements:</b>	Sem. Hrs.
Grade of "C" or better required for all Major Requirements	
BIO 2223 AND 2221, Human Anatomy and Physiology II and Laboratory	4
ISBA 1503, Microcomputer Applications	3
ES 3543, Human Anatomy and Anatomic Fundamentals of Motion	3
ES 3553, Basic Physiology of Activity	3
ES 3623, Techniques of Physiological Fitness Assessment	3
ES 3653, Techniques of Aerobic Conditioning	3
ES 4693, Techniques of Strength Training and Conditioning	3
GCOM 3673, Desktop Publishing & Publication Design	3
HLTH 2513, Principles of Personal Health	3
HLTH 2523, First Aid and Safety	3
HLTH 3523, Public and Community Health	3
HLTH 3533, Strategies for Teaching Health Education	3
HLTH 3563, Human Sexuality	3
HLTH 4513, Consumer Health	3
HLTH 4523, Current Issues in Health	3
HLTH 4543, Drug Use and Abuse	3
HLTH 4633, Health Promotion Assessment and Planning	3
HLTH 4643, Health Promotion Implementation and Evaluation	3
HPES 1883, Foundations of HPESS <i>Must be completed ONLY if HPES 1013 is not completed as the First Year Making Connections Course.</i>	0-3
HPES 4896, Internship in HPESS OR HPES 4863, Internship in HPESS I AND HPES 4893, Internship in HPESS II	6
HP 2013, Medical Terminology	3
NS 2203, Basic Human Nutrition	3
NRS 3353, Aging and the Older Adult OR SOC 4353, Sociology of Aging	3
PE 1002, Concepts of Fitness	2
<b>Sub-total</b>	<b>72-75</b>
<b>Electives:</b>	Sem. Hrs.
Electives	7-10
<b>Total Required Hours:</b>	<b>120</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>

# Major in Computer Science

## Bachelor of Arts

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>Business Track (Select all of the courses in one of the following tracks):</b>  <b>Electronic Commerce Track</b> ISBA 3353, Mobile and Web Applications Development ISBA 4453, Global E-Commerce MKTG 3013, Marketing GCOM 3673, Digital Publishing and Publication Design  <b>Information Technology Track</b> ISBA 2523, Telecommunications and Networking Essentials ISBA 4453, Global E-Commerce ISBA 4653, Automatic Data Capture ISBA 4853, IT Project Management  <b>General Business Track</b> ACCT 2023, Fundamental Accounting Concepts FIN 3713, Business Finance LAW 2023, Legal Environment of Business MGMT 3153, Organizational Behavior MKTG 3013, Marketing	12-15
<b>Sub-total</b>	<b>69-73</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	<b>9-13</b>
<b>Total Required Hours:</b>	<b>120</b>

# Major in Engineering Technology

## Bachelor of Science

### Emphasis in Computer Aided Drafting and Design

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42)	
<b>First Year Making Connections Course</b>	<b>Sem. Hrs.</b>
UC 1013, Making Connections (or equivalent course)	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> <i>MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite</i> <i>COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)</i>	
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Major Requirements	
ISBA 3013 Management Information Systems	3
ENG 3043, Technical Writing	3
MGMT 3153, Organizational Management <b>OR</b> Sociology Elective <b>OR</b> Psychology Elective	3
RET 3113, Fund. Applications of Renewable Energy	3
TECH 3773, Statistics <b>OR</b> STAT 3233, Applied Statistics I	3
TECH 3863, Industrial Safety	3
TECH 4813, Operations Systems Research	3
TECH 4823, Quality Assurance	3
TECH 4853, Lean 6 Sigma for Manufacturing	3
TECH 4883, Work Center Management	3
<b>Sub-total</b>	<b>30</b>
<b>Emphasis Area (Computer Aided Drafting and Design):</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Emphasis Area Requirements	
MATH 1033, Plane Trigonometry	3
TECH 2703 Technical Graphics and AutoCAD	3
TECH 2863, Principles of Technology	3
TECH 3413, AutoCAD / Inventor	3
TECH 3433, AutoCAD 3-D Modeling	3
TECH 3453, Advanced Technology Design - Solid Works	3
TECH 3843, Manufacturing Materials and Processes	3
TECH 3853, Computer Aided Manufacturing (CAM)	3
TECH 3873, Tool Design	3
TECH 4743, Computer Numeric Control	3
TECH 4873, Motion and Time Study	3
<b>Sub-total</b>	<b>33</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	19
<b>Total Required Hours:</b>	<b>120</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>

# Major in Engineering Technology

## Bachelor of Science Emphasis in Computer Systems

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42)	
<b>First Year Making Connections Course</b>	<b>Sem. Hrs.</b>
UC 1013, Making Connections (or equivalent course)	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> <i>MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)</i>	
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Major Requirements	
ISBA 3013 Management Information Systems	3
ENG 3043, Technical Writing	3
MGMT 3153, Organizational Management <b>OR</b> Sociology Elective <b>OR</b> Psychology Elective	3
RET 3113, Fund. Applications of Renewable Energy	3
TECH 3773, Statistics <b>OR</b> STAT 3233, Applied Statistics I	3
TECH 3863, Industrial Safety	3
TECH 4813, Operations Systems Research	3
TECH 4823, Quality Assurance	3
TECH 4853, Lean 6 Sigma for Manufacturing	3
TECH 4883, Work Center Management	3
<b>Sub-total</b>	<b>30</b>
<b>Emphasis Area (Computer Systems):</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Emphasis Area Requirements Courses denoted below with an asterisk (*) cannot be taken on the A-State campus; they are taught only at the 2+2 program institutions.	
RET 4123, Energy Conservation and Efficiency	3
* TECH 1013, Networking Essentials - Cisco I	3
* TECH 1023, Router Technologies - Cisco II	3
* TECH 2033, Advanced Routing and Switching - Cisco III	3
* TECH 2043, WAN Technologies and Design - Cisco IV	3
TECH 2863, Principles of Technology	3
Technology and Renewable Energy Technology Electives (TECH, RET)	15
<b>Sub-total</b>	<b>33</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	19
<b>Total Required Hours:</b>	<b>120</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>



# Major in Engineering Technology

## Bachelor of Science Emphasis in Technical Studies

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42)	
<b>First Year Making Connections Course</b>	<b>Sem. Hrs.</b>
UC 1013, Making Connections (or equivalent course)	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> <i>MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite</i> <i>COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)</i>	
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Major Requirements	
ISBA 3013 Management Information Systems	3
ENG 3043, Technical Writing	3
MGMT 3153, Organizational Management <b>OR</b> Sociology Elective <b>OR</b> Psychology Elective	3
RET 3113, Fund. Applications of Renewable Energy	3
TECH 3773, Statistics <b>OR</b> STAT 3233, Applied Statistics I	3
TECH 3863, Industrial Safety	3
TECH 4813, Operations Systems Research	3
TECH 4823, Quality Assurance	3
TECH 4853, Lean 6 Sigma for Manufacturing	3
TECH 4883, Work Center Management	3
<b>Sub-total</b>	<b>30</b>
<b>Emphasis Area (Technical Studies):</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Emphasis Area Requirements	
RET 4123, Energy Conservation and Efficiency	3
TECH 2863, Principles of Technology	3
TECH 3843, Manufacturing Materials and Processes	3
Technical Electives (ENGR, MATH, PHYS, CHEM, RET, ISBA)	12
Technology and Renewable Energy Technology Electives (TECH, RET)	12
<b>Sub-total</b>	<b>33</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	19
<b>Total Required Hours:</b>	<b>120</b>

# Major in Engineering Technology

## Bachelor of Science

### Emphasis in Technology Management

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42)	
<b>First Year Making Connections Course</b>	<b>Sem. Hrs.</b>
UC 1013, Making Connections (or equivalent course)	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<b>Students with this major must take the following:</b> <i>MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite</i> <i>COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)</i>	
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Major Requirements	
ISBA 3013 Management Information Systems	3
ENG 3043, Technical Writing	3
MGMT 3153, Organizational Management <b>OR</b> Sociology Elective <b>OR</b> Psychology Elective	3
RET 3113, Fund. Applications of Renewable Energy	3
TECH 3773, Statistics <b>OR</b> STAT 3233, Applied Statistics I	3
TECH 3863, Industrial Safety	3
TECH 4813, Operations Systems Research	3
TECH 4823, Quality Assurance	3
TECH 4853, Lean 6 Sigma for Manufacturing	3
TECH 4883, Work Center Management	3
<b>Sub-total</b>	<b>30</b>
<b>Emphasis Area (Technology Management):</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Emphasis Area Requirements	
RET 4123, Energy Conservation and Efficiency	3
TECH 2863, Principles of Technology	3
TECH 3713, Fiscal Aspects	3
TECH 3753, Legal Aspects	3
TECH 3843, Manufacturing Materials and Processes	3
Accounting Electives	3-6
Management Electives	6-9
Technology and Renewable Energy Technology Electives (TECH, RET)	3-9
<b>Sub-total</b>	<b>33</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	19
<b>Total Required Hours:</b>	<b>120</b>

## ASSOCIATE OF SCIENCE IN ENGINEERING TECHNOLOGY

The Associate of Science degree with a Major in Engineering Technology will allow the student to meet the general education requirements, the degree preconditions, and utilize the opportunities to exercise work experience or prior education that may contribute to this degree option.

The program allows students to participate in a two-year program to meet the needs of industry while preserving the option of earning a baccalaureate degree in the future. It permits industry to meet its educational and training requirements when a four-year degree is not warranted.

The student must complete a minimum of 60 credit-hours of work and must adhere to all policies established by the university. Flexibility is provided through counseling and the review of prior experience which may be substituted for formal college credit.

The Associate of Science-Technology is accredited by The Higher Learning Commission.

## Major in Engineering Technology

### Associate of Science

<b>University Requirements:</b>	
See University General Requirements for Associate degrees (p. 43)	
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Associate of Science Degrees (p. 79)	<b>35</b>
<b>Students with this major must take the following:</b> <i>MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite</i>	
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
TECH 2703, Technical Graphics and AutoCAD	3
TECH 2863, Principles of Technology	3
TECH 3773, Statistics <b>OR</b> STAT 3233, Applied Statistics I <b>OR</b>	3
Technology Electives	9
<b>Sub-total</b>	<b>18</b>
<b>Electives:</b>	<b>Sem. Hrs.</b>
Technical Electives (TECH, RET, <b>ISBA</b> , ENGR, CS, MATH)	7
<b>Total Required Hours:</b>	<b>60</b>

<b>Support Courses:</b>	<b>Sem. Hrs.</b>
Grade of "C" or better required for all Support Courses OR 2.5 (or greater) grade point average in the Support Courses listed	
CE 2202, Civil Engineering Presentations	2
CS 1013, Introduction to Computers OR ISBA 1503, Microcomputer Applications	3
ENG 3043, Technical Writing	3
MGMT 3123, Principles of Management	3
MGMT 3183, Entrepreneurship	3
REI 4413, Real Estate Law	3
TECH 3413, AutoCAD Inventory	3
TECH 3433, AutoCAD 3D Modeling	3
TECH 3773, Statistics OR STAT 3233, Applied Statistics I	3
TECH 3863, Industrial Safety	3
Sub-total	29
<b>Electives:</b>	<b>Sem. Hrs.</b>
Electives	10
<b>Total Required Hours:</b>	<b>120</b>

# Major in Disaster Preparedness and Emergency Management

## Bachelor of Science

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>University Requirements:</b>	
See University General Requirements for Baccalaureate degrees (p. 42)	
<b>First Year Making Connections Course:</b>	<b>Sem. Hrs.</b>
UC 1013, Making Connections	3
<b>General Education Requirements:</b>	<b>Sem. Hrs.</b>
See General Education Curriculum for Baccalaureate degrees (p. 78)	35
<p><b>Students with this major must take the following:</b>  <i>MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite</i>  <i>Twelve hours of Social Sciences (Required Departmental Gen. Ed. Option)</i></p> <p><b>Students with this major must take the following for AAS degree:</b>  <i>CS 1013, Introduction to Computers OR</i>  <i>ISBA 1503, Microcomputer Applications</i></p>	
<b>Major Requirements:</b>	<b>Sem. Hrs.</b>
DPEM 1101, Introduction to Incident Management	1
DPEM 1111, Introduction to Resource Management	1
DPEM 1121, Introduction to CBRNE	1
DPEM 1703, Introduction to Community Response	3
DPEM 2223, Hazardous Materials Containment	3
DPEM 2233, Principles of Healthcare Emergency Management	3
DPEM 2303, Environmental Health Training in Emergency Response	3
DPEM 2313, Pandemic Planning and Preparedness	3
DPEM 2323, Respiratory Protection	3
DPEM 2343, Emergency Responder HAZMAT Technician for CBRNE	3
DPEM 2353, Global Perspectives in Disaster Preparedness <i>Includes Core Disaster Life Support (CDLS).</i>	3
DPEM 2363, Fundamentals of CBRNE Crime Scene Management	3
DPEM 3503, Principles of Disaster Preparedness and Emergency Management <i>Includes Basic Disaster Life Support (BDLS).</i>	3
DPEM 3553, Ethical and the Law in Disaster Preparedness and Emergency Management	3
DPEM 3573, Business Continuity in DPEM	3
DPEM 4513, Physical Care of CBRNE Injuries	3
DPEM 4523, Risk Identification and Prevention	3
DPEM 4533, Disaster and Mental Health	3
DPEM 4553, Capstone in Homeland Security and Disaster Preparedness	3
DPEM 4563, Non-Governmental Agencies & DPEM	3
DPEM 4713, Advanced Information Officer	3
DPEM 3593, Research Concepts in DPEM	3
<b>Sub-total</b>	<b>60</b>
<b>Emphasis Area:</b>	<b>Sem. Hrs.</b>
<i>In consultation with their advisor, students must select courses within one area of emphasis (for example: Disaster Preparedness &amp; Emergency Management, Law Enforcement, Health Care, Administration.) Fifteen hours must be upper-level.</i>	22
<b>Total Required Hours:</b>	<b>120</b>

The bulletin can be accessed at <https://www.astate.edu/a/registrar/students/bulletins/>

# Major in Radiologic Sciences (cont.)

## Bachelor of Science in Radiologic Sciences Emphasis in Medical Imaging Informatics

A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/>

<b>Emphasis Area (Medical Imaging Informatics):</b>	<b>Sem. Hrs.</b>
ISBA 1503, Microcomputer Applications	3
ISBA 2033, Programming Fundamentals	3
ISBA 2523, Telecommunications and Networking	3
ISBA 3013, Management Information Systems	3
ISBA 3403, Database Management	3
ISBA 4523, Advanced Telecommunications	3
ISBA 4623, Computer Security	3
ISBA 488V, Internship	3
RS 3142, Advanced Imaging and Therapy I	2
RS 3152, Advanced Imaging and Therapy II	2
RSMR 4712, Imaging Information Management	2
RSMR 4713, Imaging Standards of Communication and Interoperability	3
<b>Sub-total</b>	<b>33</b>
<b>Required Support Courses:</b>	<b>Sem. Hrs.</b>
BIO 2223 AND 2221, Human Anatomy and Physiology II and Laboratory	4
<b>Total Required Hours:</b>	<b>126</b>

# Certificate in Mammography

Core requirements listed on page 349

<b>Required Courses:</b> <i>Students must have previously earned a BSRS degree.</i>	<b>Sem. Hrs.</b>
RS 4502, Mammography Procedures	2
RS 4512, Mammography Instrumentation	2
RS 4553, Breast Imaging Clinical Education I	3
RS 4563, Breast Imaging Clinical Education II	3
RS 4573, Imaging in Women's Health Clinical Education	3
RSU 4213, Ultrasound Physics and Instrumentation I	3
RSU 4323, Physics and Instrumentation II	3
RSU 4833, Breast Sonography	3
<b>Total Required Hours:</b>	<b>22</b>

# Certificate in Medical Imaging Informatics

Core requirements listed on page 349

<b>Required Courses:</b> <i>Students must have previously earned a BSRS degree.</i>	<b>Sem. Hrs.</b>
<b>ISBA</b> 1503, Microcomputer Applications	3
<b>ISBA</b> 2033, Programming Fundamentals	3
<b>ISBA</b> 2523, Telecommunications and Networking	3
<b>ISBA</b> 3013, Management Information Systems	3
<b>ISBA</b> 3403, Database Management	3
<b>ISBA</b> 4523, Advanced Telecommunications	3
<b>ISBA</b> 4623, Computer Security	3
<b>ISBA</b> 488V, Internship	3
RS 3142, Advanced Imaging and Therapy I	2
RS 3152, Advanced Imaging and Therapy II	2
RSMR 4712, Imaging Information Management	2
RSMR 4713, Imaging Standards of Communication and Interoperability	3
<b>Total Required Hours:</b>	<b>33</b>

- ACCT 2133. Introduction to Managerial Accounting** The course covers basic accounting and reporting for manufacturing companies. The course is also devoted to managerial uses of accounting data for the decision making function and to special accounting reports. Prerequisite, ACCT 2033 with a C or better. Fall, Spring, Summer. (ACTS#: ACCT 2013)
- ACCT 3003. Intermediate Accounting I** An in depth study of accounting statements, the accounting process, and inventory valuation procedures. Prerequisites, ACCT 2033, MATH 2143, STAT 3233, and **ISBA 1503**; all with "C" or better. Fall, Spring, Summer.
- ACCT 3013. Intermediate Accounting II** A detailed study of operational assets, investments, liabilities, and an introduction to the corporate form of organization. Prerequisite, ACCT 2133 and ACCT 3003 with a grade of C or better. Spring, Summer.
- ACCT 3053. Cost Accounting with a Managerial Emphasis** Accounting issues from the viewpoint of the manager. Examination of costing techniques, cost behavior, cost volume profit relationships, and budgeting. Emphasis is on use of relevant information in decision making for managers. Prerequisites, ACCT 2133, MATH 1023 or higher, and **ISBA 1503**; all with a "C" or better. Fall, Summer.
- ACCT 3063. Hospitality Accounting** The accounting principles, concepts, conventions, and information systems utilized in management decision making for the hospitality industry. Focus on internal control, cost control, budgeting, and analysis of financial data. Prerequisites, ACCT 2133, MATH 1023 or higher, and **ISBA 1503**; all with "C" or better. Fall.
- ACCT 4013. Tax Accounting I** Examines the laws, rules, and procedures of federal income taxes for individuals. In addition, the business events and transactions which influence taxable income for individuals are studied. Prerequisites, ACCT 2033, MATH 2143, STAT 3233, and **ISBA 1503**; all with "C" or better. Fall, Spring.
- ACCT 4023. Advanced Accounting and International Issues** Advanced study of accounting concepts and problems in the areas of business combinations, partnerships, and international accounting. Prerequisite, ACCT 3013 with a grade of C or better. Spring.
- ACCT 4033. Accounting Information Systems** Study of the role, design, characteristics, and function of accounting information systems. Prerequisites, ACCT 3013 and **ISBA 2033** with a grade of C or better. Spring, Summer.
- ACCT 4053. Auditing I** Standards and procedures, code of ethics, form of audit reports and statements, and the principles underlying the verification of data presented in financial reports. Prerequisites, ACCT 3013 and STAT 3233; all with "C" or better. Fall, Summer.
- ACCT 4113. Tax Accounting II** Continuation of Tax Accounting I. Emphasis in this course will be on federal income tax laws for partnerships, fiduciaries, and corporations. Prerequisite, ACCT 4013. Spring.
- ACCT 4123. Government and Not-For-Profit Accounting** Accounting concepts and reporting standards for state or local government entities and not-for-profit organizations. Emphasis is on areas covered in CPA exam content specifications. Prerequisite, ACCT 3013 with a grade of C or better. Spring, Summer.
- ACCT 4133. Accounting Statistics** Statistical concepts and applications for accounting and auditing. Coverage includes sampling, probability, hypothesis testing, regression, data mining, and forecasting. Prerequisite, ACCT 3013 and STAT 3233 with a "C" or better. Fall.
- ACCT 4143. International Accounting** Introduction to international accounting issues including political, legal, and cultural influences, international accounting standards, foreign currency transactions, consolidated reporting for global firms, planning, control, and performance measurement systems, transfer prices and taxation. Prerequisite, ACCT 3013 with C or better. Fall.
- ACCT 4153. Fraud Examination** A study of how and why occupational fraud is committed, how fraudulent conduct can be deterred, and how allegations of fraud should be investigated and re-solved. Prerequisites, ACCT 2133, MATH 2143, STAT 3233, and **ISBA 1503**; all with "C" or better. Spring.



**AGRI 4433. Organic Agriculture Production** Principles and practices of organic production in plant and animal systems including: certification requirements, soil fertility, crop rotation, variety and breed selection, health management strategies, optimizing yield and quality, nutrition and feeding, ethical issues, processing, storage and marketing. Prerequisites, PSSC 1303 and ANSC 1613, or instructor permission. Dual-listed with AGRI 5433. Spring, odd.

**AGRI 4523. Applied Modern Biotechnology** An introduction to the principles and the applications of modern Biotechnology with emphasis on the applications of recombinant DNA technology to solve environmental and human health problems. The review of major biotechnology companies and bio-products is also included. Prerequisites, BIOL 2013 and 2011, CHEM 1052, BIOL 3013 and 3011 or AGRI 2213 or CHEM 4243 or related courses approved by the instructor. Dual-listed with AGRI 5523. Fall.

**AGRI 4723. Agricultural Connections, Technical Interpretation and Professional Applications** Exercises to synthesize high quality technical information from multiple sources into different types of professional written and verbal presentations, using problem solving exercises. Analytical skills and interactive discussions are emphasized. Prerequisites, AGECE 1003, ANSC 1613, and PSSC 1303. Prerequisites or corequisites, AGRI 3233 or STAT 3233 or TECH 3773. Fall, Spring.

## Agricultural Systems Technology (AGST)

**AGST 2003. Intro to Agricultural Systems Technology** Introduction to physical concepts relevant to different agricultural systems: applied mechanics, agricultural equipment technology, agricultural power trains and machinery management, efficiency and precision. Prerequisites: CS 1013 or ISBA 1503, ENG 1013, MATH 1023 or higher. Fall.

**AGST 3503. Geospatial Data Applications** Basic understanding and utilization of software applications to manage geospatial and tabular data, including text editors, spreadsheets, databases and geodatabases for data: collection, cleaning, joining, filtering, summarization, visualization and unit conversion. Prerequisite: AGST 2003 or CE 2223. Fall, Spring.

**AGST 3543. Fundamentals of GIS/GPS** Geospatial data acquisition, mapping, and interpretation for human-environment interactions using geographic information systems and the global positioning system. Prerequisites: COMS 1203, ENG 1013, MATH 1023 or higher; Prerequisite or corequisite: AGECE 3013 or AGST 3503 or BIO 3023. Fall, Spring.

**AGST 4003. Modern Irrigation Systems** Methods, equipment, current issues and future directions of irrigation, irrigation design and scheduling, drainage systems, irrigation measurements, performance evaluation, and impact on productive and sustainable agriculture. Two hours lecture and two hours lab weekly. Dual listed with AGST 5003. Prerequisites: AGST 2003; PSSC 2813. Spring.

**AGST 4022. Irrigation Technology Tools** Technical tools and software related to irrigation system hydraulic design and management. Dual listed with AGST 5022. Prerequisites: AGST 3543, AGST 4003. Fall.

**AGST 4501. Agricultural Decision Analysis** Hands-on experience with cloud/desktop software, spatial algorithms and image processing of georeferenced data obtained from diverse sources, such as human scouts, ground and equipment sensors, and unmanned aerial systems. Dual listed with AGST 5501. Prerequisite: AGST 3543 with a grade of B or better. Fall.

**AGST 4511. Unmanned Aircraft Systems** Software and mobile applications for designing flight missions, collecting data, and analyzing/interpreting imagery for agricultural practices. Intended to prepare students for the Federal Aviation Administration (FAA) remote pilot license exam. Dual listed with AGST 5511. Prerequisites: AGST 3543, AGST 4773. Fall.

**AGST 4543. Understanding Geographic Information Systems** Methods, concepts, software, analysis and modeling of geospatial data using raster and vector data models for human-environment interactions using geographic information systems (GIS). Dual listed with AGST 5543. Prerequisite, AGST 3543 with a grade of B or better. Fall.

- CHEM 4043. Environmental Chemistry** An overview of the chemistry of natural waters, soils, and the atmosphere. Emphasis will be on the chemical and biological agents which affect the quality of the environment. The most commonly used analytical techniques and quality assurance and control procedures will be covered. Special course fees may apply. Prerequisites, CHEM 3103 and CHEM 3101. Fall, even.
- CHEM 4204. Inorganic Chemistry** Includes the recent concepts of bonding and molecular structure as well as some of the less common chemistry of the elements. Lecture three hours, laboratory three hours per week. Special course fees may apply. Prerequisites, CHEM 3124. Spring.
- CHEM 4224. Instrumentation** Application and operational theories of modern instruments. Laboratory includes use of gas chromatography, infrared, ultraviolet visible and atomic absorption, spectroscopy, and electrochemical techniques. Lecture two hours, laboratory six hours per week. Special course fees may apply. Prerequisites, CHEM 3054, CHEM 3124. Fall.
- CHEM 4241. Biochemistry Laboratory** Experiments aimed to acquaint the student with problems and more important methods of biochemical research. Laboratory three hours per week. Special course fees may apply. Corequisite, CHEM 4243. Fall.
- CHEM 4243. Biochemistry** Presentation of the important areas of modern biochemistry and a description of methods commonly employed in biochemical research. Lecture three hours per week. Special course fees may apply. Prerequisites, CHEM 3113 and 3111. Fall, Spring.
- CHEM 427V. Research in Chemistry** Directed study in some specialized phase of chemistry designed to provide experience in independent investigations. Special course fees may apply. Prerequisite, permission of the Chemistry Departments Independent Studies Committee. Fall, Spring, Summer.
- CHEM 4281. Chemistry Seminar** Preparation and presentation of a professional quality computer based seminar focusing on research completed during Research in Chemistry, CHEM 427V. Chemistry majors are required to take this course in their senior year. Prerequisite, third hour of CHEM 427V. Spring.
- CHEM 4343. Pharmacology** The study of drugs and their mechanisms of action at the system, cellular, and molecular levels. Special course fees may apply. Prerequisites, BIO 2223 or BIO 3233, BIO 4104, and CHEM 4243. Spring.
- CHEM 4393. Special Problems** Selected special or current topics of interest to faculty and students that require prerequisite coursework. See individual semester schedules for more information about each offering. Registration restricted by instructor permission. Irregular.
- CHEM 4443. Advanced Biochemistry** A continuation of CHEM 4243 biochemistry with a focus on anabolic metabolism and bioinformation processes vital in biological systems and current research in biochemistry and medical correlates. Dual listed as CHEM 5243. Prerequisite, CHEM 4243. Spring.
- CHEM 4501. Chemistry Capstone** A one-credit required course for all chemistry majors, focused on applying knowledge learned in various chemistry courses to solving broad, integrated chemical problems. Prerequisite, Chemistry major, submission of Application/Intent to Graduate Form. Fall, Spring.

## Information Systems and Business Analytics (ISBA)

- ISBA 1503. Microcomputer Applications** Students will learn basic computer skills that can be used immediately, throughout college, and beyond. Emphasis on learning basic office applications in word processing, spreadsheets, databases, and presentation graphics. Fall, Spring.
- ISBA 2033. Programming Fundamentals** An introduction to Windows programming using Microsoft Visual Studio or a similar integrated development environment. Students learn to write programs using an object oriented programming language and incorporating sequence, selection, and repetition structures. Prerequisite, ISBA 1503 or CS 1013. Fall.

- ISBA 2413. Word Processing I** Introduction to word processing concepts and applications. Prerequisite, Ability to keyboard. Fall.
- ISBA 2523. Telecommunications and Networking Essentials** This course will examine networking fundamentals. These include networking media, connectivity, devices, telecommunications protocols, and different networking models. Spring.
- ISBA 2543. Keyboarding for Professionals** Covers entry level and advanced level job simulations in legal, medical, technical, accounting, and other firms. Prerequisite, Keyboarding I or equivalent. Summer. (ACTS#: BUSI 1103)
- ISBA 3013. Management Information Systems** Provides understanding of information needs of management, information technology used by various business subsystems, and how technology can be utilized for competitive advantage. Prerequisites, ISBA 1503 or CS 1013; ACCT 2023 or ACCT 2033; and ECON 2313. Fall, Spring, Summer.
- ISBA 3033. Intermediate Programming** Continuation of ISBA 2033 (Programming Fundamentals). Uses language taught from previous semester in ISBA 2033. Emphasis is on array processing, multiple document applications, database interactivity, and programmer-written functions and classes. Pre/Co-requisite, ISBA 3013. Prerequisites, "C" or better in ISBA 2033; or instructor permission. Spring.
- ISBA 3353. Mobile and Web Applications Development** Development of web and mobile applications from design to deployment. Includes markup, client-side and server side, stylesheet, and related languages, as well as associated development technologies. Pre/Co-requisite, ISBA 3013. Prerequisite, programming course with a grade of "C" or better. Fall.
- ISBA 3403. Database Management** Enterprise-wide database theory and SQL with the use of industry standard DBMS, such as MySQL, Oracle, or SQL Server. Pre/Co-requisite, ISBA 3013. Fall.
- ISBA 3413. Advanced Database Management** Extends the coverage of ISBA 3403 using a popular DBMS. Topics include client applications, object oriented database development, and data security. Pre/Co-requisite, ISBA 3013. Prerequisite, "C" or better in CIT 3403. Spring.
- ISBA 3523. Operations Management** Introduction to the operations function in manufacturing and services. Emphasis on continual improvement of systems for producing goods and services. Pre/Co-requisite, ISBA 3013. Prerequisites, ISBA 1503; ACCT 2023 or ACCT 2033; and STAT 3233. Fall, Spring, Summer.
- ISBA 3533. Microcomputer Applications II** Continuation of ISBA 1503 to cover advanced topics in the area of spreadsheets and databases. Prerequisite, ISBA 1503 or CS 1013, and ISBA 2033. Fall.
- ISBA 3603. Systems Analysis and Design** Covers the basic techniques used in the analysis, design, and implementation of computer based information systems. Provides overview of the systems development life cycle, systems documentation and program specifications, data gathering and information reporting activities, transition from analysis to design. Pre/Co-requisite, ISBA 3013. Corequisite, ISBA 3403. Fall.
- ISBA 3623. LAN Administration** Covers topics pertinent to the administration of a local area network. Topics include, user management, file management, security, and network printing. Pre/Co-requisite, ISBA 3013. Prerequisite, computer literacy. Fall.
- ISBA 3663. Data Mining** Theory and practice of knowledge discovery in databases (KDD) with emphasis on predictive modeling and model evaluation using computer software such as SAS to perform data mining. Pre/Co-requisite, ISBA 3013. Prerequisites, STAT 3233; or instructor permission. Fall, odd.
- ISBA 3853. Computer Forensics** Students are introduced to information systems role in forensic computing. Emphasis will be on the retrieval, preservation, and analysis of computer data which might be used in legal cases. Suggest previous criminology courses or experience for FOSC majors before enrolling. Pre/Co-requisite, ISBA 3013. Prerequisite, ISBA 1503 or CS 1013. Fall.

- ISBA 409V. Special Problems in Computer Information Technology** Individual problems in CIT arranged on a case by case basis after consultation with the instructor. Student must meet departmental requirements before enrolling in this course. Pre/Co-requisite, **ISBA 3013**. Fall, Spring, Summer.
- ISBA 4453. Global E-Commerce** Provides an understanding of the technologies behind E-commerce and how they enable the delivery of goods and services using electronic formats in a global context. Pre/Co-requisite, **ISBA 3013**. Spring.
- ISBA 4503. Business Technology Methods** The present status and software usage of business technology personnel. Special attention is given to instructional innovations. Intended for BSE majors. Pre/Co-requisite, **ISBA 3013**. Fall.
- ISBA 4513 Business Technology Field Experience** Provides business technology teachers, under direct supervision, the opportunity to develop and refine vocational competencies in office occupation. Special course fees may apply. Pre/Co-requisite, **ISBA 3013**. Summer.
- ISBA 4523. Advanced Network Telecommunications** This course builds on the fundamental concepts covered in ISBA 2523 by extensive coverage of major topics that include routing protocols, wireless LAN infrastructure, internet working hardware, TCP/IP subnetting, VLANs, and network security. Pre/Co-requisite, **ISBA 3013**. Prerequisite, **ISBA 2523**. Fall.
- ISBA 4533. Word Processing II** Advanced word processing concepts and applications. Pre/Co-requisite, **ISBA 3013**. Prerequisites, **ISBA 2413**; or instructor permission. Spring.
- ISBA 4603. Microcomputer Applications III** Course three of the study of the role of a software suite as a tool used in business. The applications covered will include, Word Processing, Spreadsheet, Database, and electronic presentations. Pre/Co-requisite, **ISBA 3013**. Prerequisite, **ISBA 3533**. Spring.
- ISBA 4623. Computer Security** Discusses the primary topics of computer security needed by IT professionals in both commercial and military installations. Includes access control, cryptography, continuity planning, physical security, and the overall management of security issues. Pre/Co-requisite, **ISBA 3013**. Spring.
- ISBA 4653. Automatic Data Capture** Methods, technologies, systems, and standards used in supply chain information systems and e-business for automatically identifying objects, and collecting and transferring data. Technologies such as bar coding, RFID, smart cards, magnetic striping, biometrics, GPS, real time locating, and voice data entry, as well as their business applications are addressed. Pre/Co-requisite, **ISBA 3013**. Prerequisites, **ISBA 2033**, and **ISBA 2523**. Corequisite, **ISBA 3603**. Fall.
- ISBA 4853. IT Project Management** Provides students with the information needed to manage a technical project within a business environment. Students will work a project simulation through the project management cycle from project team selection to project implementation. Taken during last semester or with instructor permission. Pre/Co-requisite, **ISBA 3013**. Spring.
- ISBA 4863. Current Topics in ISBA** The content of this course will be based upon current issues within the business world as they relate to the use of **Information Systems and Business Analytics**. Pre/Co-requisite, **ISBA 3013**. Prerequisite, minimum of 60 hours. Irregular.
- ISBA 488V. Internship in ISBA** Provides practical information technology experience in a **ISBA** setting. Students will be assigned to work with an outside organization to gain real world training. Pre/Co-requisite, **ISBA 3013**. Prerequisites, Permission of Department Chair and Internship Director required. Fall, Spring, Summer.

## Clinical Laboratory Science (CLS)

- CLS 1003. Making Connections Clinical Laboratory Science** Open to incoming Freshmen only. This course will provide both an introduction to the nature of university education and a general orientation to the functions and resources of the university as a whole. This section of First Year Seminar is a special health professions section and will include a focus on understanding and appreciating various health professions and how laboratory professionals interact with other health care professionals. Fall.

- ECH 4053. Today's Families: Interdisciplinary Approaches** An interdisciplinary course designed to promote a critical approach to examining the family and its role in society. Prerequisite, twelve hours of coursework in Interdisciplinary Family Minor OR Instructor permission. Spring.
- ECH 4061. Early Childhood Education Symposium** A symposium with an identified theme related to current events or needs in the field of early childhood education. Designed for early childhood professionals. May be repeated. Summer.
- ECH 4086. Teaching Internship in Early Childhood Education Kindergarten** Six semester hours. Prerequisite, Admission to the internship semester as specified by the Office of Professional Programs of the College of Education and Behavioral Science. Must be admitted to the Teacher Education Program. Special course fees may apply. Fall, Spring.
- ECH 4096. Teaching Internship in Early Childhood Education Primary Grades 1 to 3** 6 semester hours. Prerequisite, Admission to the internship semester as specified by the Office of Professional Programs of the College of Education and Behavioral Science. Prerequisites, Admission to the Teacher Education Program. Special course fees may apply. Fall, Spring.
- ECH 4603. Physical and Psychological Environments for Young Children** Explores the physical and psychological environments needed to support development of the whole child. Includes health, safety, nutrition, physical arrangements and space, communication, guidance and group management. Ten clock hours of Field Experience required. Spring.
- ECH 4613. Curriculum and Assessment for Early Care and Education** Develops knowledge for assessing children and implementing appropriate curriculum for young children. Includes study of the curriculum, integrated units, observational methods and self assessment. Ten clock hours of Field Experience required. Fall.
- ECH 4623. Child Care Program Management and Mentoring** Introduction to basic management and administration of child care programs, including programs for out of school time of elementary grade children. Includes policies, procedures, staff supervision and mentoring, funding, finances, licensing, and curriculum implementation. Emphasis on professional development, including ethics and advocacy. Fall.
- ECH 4636. Practicum in Early Care and Education** Students observe and effectively participate in a group setting for young children for extended periods of time, increasingly responsible for all aspects of the group. This course includes a seminar which will focus upon professionalism. Prerequisites, ECH 4623. Summer.
- ECH 480V. Special Topics** Current subjects of interest in Early Childhood Education professionals with appropriate subtitles. All special topics must be approved by teacher education curriculum committee. One, two, or three credit hours. Special topics may be applied as an elective course to a degree program with permission of advisor and department chair prior to enrollment in the course. Must be admitted to Teacher Education Program. Irregular.

## Economics (ECON)

- ECON 2113. Business Statistics I** Statistical methods used in studying business and economic data, averages and dispersions, probability, sampling, statistical inference, estimation, tests of hypotheses, index numbers, linear regression and correlation. Prerequisites, MATH 1023 or MATH 2143, and ISBA 1503 or CS 1013. Fall, Spring, Summer. (ACTS#: BUSI 2103)
- ECON 2313. Principles of Macroeconomics** National income accounting, inflation and unemployment, competing theories of national income, fiscal policy, the Federal Reserve system and monetary policy, and international trade. Fall, Spring, Summer. (ACTS#: ECON 2103)
- ECON 2323. Principles of Microeconomics** Principles of resource allocation, supply and demand, consumer behavior, costs of production, the competitive model, oligopoly, and factor markets. Fall, Spring, Summer. (ACTS#: ECON 2203)
- ECON 2333. Economic Issues and Concepts** Designed to give the student a basic understanding of our economic system. Basic economic concepts will be explored and contemporary economic problems and issues will be examined in light of the concepts learned. Fall, Spring.

- ECON 3113. Data Analysis** Computer integrated analysis of descriptive and inferential business statistics with an emphasis on the application of statistical techniques and interpretation. Prerequisite, ECON 2113. Irregular.
- ECON 3313. Microeconomic Analysis** Designed to develop an analytical framework for the study of the determination of relative prices and the allocation of resources in a market economy. The course will cover consumer choice and demand, resource utilization and the theory of the firm, competitive market equilibrium and resource allocation, and noncompetitive market structures. Prerequisites, ECON 2313 and 2323. Fall.
- ECON 3323. Money and Banking** Monetary and banking history, with emphasis on the theory of money and banking in the United States, operations of commercial banks and the Federal Reserve System. Prerequisites, ECON 2313 and 2323. Spring.
- ECON 3353. Macroeconomic Analysis** Explains economic theories as they relate to national policy making. Emphasis on causes of inflation and unemployment. Prerequisites, ECON 2313 and 2323. Spring.
- ECON 3363. Labor Economics** The economics of labor markets, factors affecting economy demand for labor and the decisions of workers to supply labor. Current labor market problems such as unemployment, unions, poverty and productivity will be analyzed. Prerequisites, ECON 2313 and 2323. Irregular.
- ECON 370V. Economics Internship** Practice experience in economic research and development. Prerequisites, ECON 2313 and ECON 2323. Permission of department chair and internship director required. Fall, Spring.
- ECON 4023. Free Enterprise and the Market: A Survey of Austrian Economics** Survey of the contributions of the Austrian school of Economics. Topics include the importance of entrepreneurship, the proper role of the state, the socialist calculation debate, the Hayek-Keynes debate, and institutions that facilitate the use of specialized and diffusely-held knowledge. Prerequisites, ECON 2313 and ECON 2323. Spring.
- ECON 4103. International Trade** Economic theory and history of international trade. Topics such as comparative advantage, the effect of protectionism and determination of exchange rates will be emphasized. Prerequisites, ECON 2313 and 2323. This course can be counted as an Economics elective. This course is cross listed as IB 4103. Fall.
- ECON 4143. Export Policy and Procedures** Provides the rationale for exports and provides training on the skills for managing an export business. Coverage includes export promotion and incentives, lines and letters of credit, foreign exchange issues, international trade logistics, export documentation, and security and regulatory issues. Prerequisites, Completion of 60 hours. Cross-listed as IB 4143. Spring.
- ECON 4303. Economics of Sports** Applies microeconomic theory to the sports industry. The course includes discussions of the economics of professional and intercollegiate athletics, applying the concepts of the collective bargaining, cartel behavior, game theory, antitrust issues, and public finance. Prerequisite, ECON 2323. Fall.
- ECON 4313. History of Economic Thought** Brief review of the doctrines of economic thinkers from early time through Marshall. Broader study of modern writers and theories. Prerequisites, ECON 2313 and 2323, or ECON 2333. Irregular.
- ECON 4323. Economic Policy Analysis** Deals with public revenues, the theory of taxation, institutions and problems of the revenue system as a whole, and the effects of the taxing, spending, lending, and borrowing by government units upon the national income and employment. Prerequisites, ECON 2313 and 2323, or ECON 2333. Fall.
- ECON 4333. Government Regulation of Business** Survey of theoretical treatments of oligopoly, natural monopoly, and market failures, review of antitrust statutes applicable to price fixing, monopoly, mergers, vertical restraints, and price discrimination, social welfare trade-offs associated with public regulation of electric, natural gas, cable TV, and telecommunications firms. Prerequisite, ECON 2313, 2323. Spring.
- ECON 4343. Managerial Economics** Practice in the use of economic principles in solving business problems. Areas covered include uncertainty, forecasting, demand analysis, and capital management. Prerequisites, ECON 2313 and 2323, ECON 2113 and ISBA 3523. Fall.

## Interdisciplinary Studies (IDS)

- IDS 2013. Introduction to Interdisciplinary Studies** Introduction to the concept of interdisciplinary study, exploration of research and career possibilities for IDS majors, and composition of individualized program of study. Fall.
- IDS 2023. Introduction to Service Learning** Introduction to principles of service learning and the Social Change Model of Leadership to promote personal learning, social growth, and civic responsibility. Students participate in a community-based project as determined by the instructor of record. Fall.
- IDS 3013. Critical Thinking in the Profession** Exploration of the role of critical thinking in a range of professional settings through reading, writing and communication using technology, professionally-prepared materials, and statistical charts. Basic overview of the research writing process is included. Prerequisites, ENG 1013, and ISBA 1503 or CS 1013. Fall, Spring, Summer.
- IDS 3023. Advanced Service Learning** Course integrates academic objectives with service experiences to foster student learning, personal and social growth, and civic responsibility. Students establish expectations and responsibilities to address a campus or community need in partnership with the community-based service project. Course theme determined by instructor at time of instruction. Prerequisites, IDS 2023. Spring.
- IDS 4013. Seminar in Professional Development** Capstone experience is designed to ensure BSIS students meet their individualized educational goals upon graduation. Students will develop and articulate employment skills for each area of study and enhance workplace skills including professional-level reading, writing and communications. Open to any student with senior-level standing (90 or more earned college credits). Fall, Spring, Summer.
- IDS 4023. Leadership in the Profession** Independent study of a specific problem in a professional setting relevant to one or more of a student's BSIS emphasis areas. Student will present a formal plan of action using solutions grounded in leadership theory. Prerequisites, ENG 1013, IDS 3013, and ISBA 1503 or CS 1013. Fall, Spring, Summer.

## International Studies (INST)

- INST 4503. Special Topics** Focused treatment of an issue, theme or problem related to international history, politics, culture, or related area. Irregular.
- INST 4603. Capstone Project in Global Studies** Application of skills and knowledge gained in the Global Studies emphasis to the analysis of a specific topic. Fall, Spring.
- INST 4803. Independent Study** Independent readings for advanced students only. Limited to three hours. Must have consent of department chair. Irregular.

## International Program (IP)

- IP 1111. International Bridge Program** The Undergraduate International Bridge Program is a course that helps students develop effective academic study skills, such as listening and note taking, as well as life skills. Additionally, this course will provide English language tutoring assistance for any of the other classes in which students are enrolled. This course is taught in conjunction with the University College First Year Experience courses. Fall, Spring.
- IP 4001. International Bridge Program** This course is designed to facilitate the student's transition into American university study and life in the United States and to provide academic, linguistic, and cultural support for international students enrolled in a graduate program of study at ASU.