## The College of Business Administration

P.N. Saksena, Dean Stephanie Lawson, Associate Dean for Accreditation and Graduate Programs Chlotia Garrison, Associate Dean for Undergraduate Programs

### **Undergraduate Degree Programs and Requirements**

Four undergraduate programs are offered by the College of Business Administration: the Bachelor of Science in Applied Software Development, the Bachelor of Science in Business Administration, the Bachelor of Science in Computer Science, the Bachelor of Science in Cybersecurity, the Bachelor of Arts in Economics, and the Bachelor of Science in Digital Information Design. The baccalaureate degree program in Business Administration is accredited by AACSB International--The Association to Advance Collegiate Schools of Business (https://www.aacsb.edu/) and the baccalaureate degree in Computer Science is accredited by ABET (www.abet.org).

The College of Business Administration delivers transformative education to the most diverse student body in the heart of the Carolinas. The College will promote student success with professional development, innovative programs, experiential learning, and regional partnerships through quality instruction, applied and pedagogical research, and impactful service.

Ten areas of concentration are available within the Bachelor of Science in Business Administration degree program. These concentrations are accounting, computer information systems, economics, entrepreneurship, finance, health care management, human resource management, international business, marketing, and management. The accounting concentration offers an integrated undergraduate/graduate curriculum that allows for optimum efficiency in continuing into a graduate program with an accounting emphasis.

The Business degree program prepares undergraduates for careers in the business world by offering an academically challenging program that produces a new kind of leader for business, industry, government, the arts, and health services. This new leader leaves the program with the skills needed to function as a professional in the complex organizations of the 21st century. The core business curriculum includes two integrating threads: professional development and technology with analytics. Throughout the business foundation and core courses, professional development opportunities are provided through classroom assignments and interaction with business professionals. In addition, each concentration has identified a course that will include a professional development component as students face graduation and search for positions in their field. Analytical skills are increasingly important in the business world. Technology and business analytics are emphasized throughout the entire business program. Along with an integrated curriculum, the faculty and business leaders have developed a comprehensive list of competencies that students must attain before graduation from this program. The competency categories for the business degree are communication, teamwork/diversity, adaptability, problem solving, accountability and ethics. Most business courses also emphasize team projects in addition to individual assignments. Internship experiences are integrated into some concentrations and encouraged in others.

The College of Business Administration is dedicated to offering quality classroom instruction and to enhancing personal development through interaction between faculty and students. A faculty open-door policy facilitates this approach. Quality classroom instruction is provided by a faculty who meet the high standards of scholarship required for AACSB and ABET accreditation.

A number of scholarships are awarded annually to College of Business Administration students. Eligibility is determined on the basis on donor criteria.

The College of Business Administration offers minors in the areas of accounting, business administration, computer science, digital information design, economics, entrepreneurship, finance, financial planning, health care management, hospitality and hotel management, human resource management, management, marketing, professional business, and risk assurance. For specific requirements for individual minors, see page 142.

#### Academic Advising

Academic advising is an integral part of the learning process in the College of Business Administration. The role of the academic adviser is to assist in making appropriate decisions about academic programs and career goals, provide academic information about Winthrop University and degree programs, and suggest appropriate involvement in on-campus, off-campus and experiential opportunities. Freshmen are assigned a faculty adviser after summer orientation. Not only will advisers help with program selections and scheduling, but they will also be available to assist with the adjustment to university life throughout the first year. Students who transfer after their freshman year are assigned an adviser in the academic concentration of their choice.

Transfer evaluations are completed by the Office of Student Services. The subject matter and the level of the course are considered for evaluation. Upper-level courses in the core and concentration of the business administration degree which have been completed prior to achieving junior status may be used to meet elective requirements, but must be replaced in the core or concentration by approved advanced courses (if not transferred from an AACSB accredited institution). Upper-level business and computer science courses may not transfer from two-year institutions. Only 50% of the business core and concentration may transfer toward a business administration degree. CSCI majors must complete 30 hours of computer science courses numbered above 299. Only nine hours of upper-level courses may transfer into the program and must be from an ABET-accredited program.

The Director of Student Services in the College of Business Administration is: Vanessa Valdez, Office of Student Services 228 Thurmond Building (803) 323-4833, Fax (803) 323-3960 valdezv@winthrop.edu

## COLLEGE OF BUSINESS ADMINISTRATION

### Faculty

Professors Melissa Carsten Adriana Cordis Steven Frankforter Chlotia Garrison, Associate Dean Philip Gibson Malayka Klimchak Willis Lewis Michael Matthews Vacant, Chair, Accounting, Finance, & Economics Hemant Patwardhan Cara Peters D. Keith Robbins, Chair, Management & Marketing Jane B. Thomas P. N. Sakena, Dean

#### **Associate Professors**

Andrew Besmer Stephen Dannelly, Chair, Computer Science & Quantitative Methods Marguerite Doman Tracy Griggs Stephanie Lawson, Associate Dean Danko Tarabar Michael Whitney

#### **Assistant Professors**

Terri Guidry Maureen Hahn Joanna Jackson Jayne Maas Kent Miller Nicholas Moellman Max Ostinelli Alex Perri Charles Randle Hannah Richards Anna Romanova Shirley (Yi) Shen Larry Stevens Celeste Tiller Gang Wang Paul Wiegand

## **Bachelor of Science in Business Administration**

Students enrolled in the Bachelor of Science in Business Administration program or enrolled in business classes may not enroll in courses numbered above 299 unless they have at least a 2.0 grade-point average, completed 54 hours, and a grade of C- or better in HMXP 102.

Transfer students must complete HMXP 102 prior to taking upper-level courses in the College of Business Administration. Students who transfer in 54 or more semester hours must complete this course within their first semester. If, during this time, such students do not earn a C- or better in HMXP 102, they will not be permitted to take additional courses above 299 until this general education requirement is met.

Within the 120 hours required for this degree, the student must include 40 hours in courses numbered above 299. Students pursuing a Bachelor of Science in Business Administration must select one of ten concentrations. Many students choose to fulfill elective hours with a second concentration or business administration minor. No more than six hours of business course credit may overlap between two concentrations or a concentration and a business minor. Business students must have six distinct hours in their business minor.

#### **Accelerated Programs**

The Finance and Human Resource Management concentrations have an opportunity for students to complete an undergraduate and graduate degree in five years with a total of 150 hours: 120 undergraduate and 30 graduate hours where the programs would share six 500-level hours. The combined program includes increased rigor, when compared to the undergraduate program, while allowing certain classes to overlap between the B.S. and the M.B.A. degrees.

Students must complete an *Intent to Pursue a Combined Program* form prior taking any of the 500-level courses for graduate credit as an undergraduate student; must have a 3.0 undergraduate GPA at the time of completion of the Intent to Pursue a Combined Program form and prior to taking each of the 500-level courses for graduate credit.

## Bachelor of Science in Business Administration

General Education Courses		Semester Hours
ACAD 101	Principles of the Learning Academy	1
Shared Skills and Proficiencies		
Writing and Critical Thinking (C- or better	required for each course)	
WRIT 101, HMXP 102, CRTW 201	Composition; The Human Experience: Who Am I?	
	Crit Reading, Thinking, & Writing	9
Oral Communication	Met in major with MGMT 365	0
Technology	Met in major with CSCI 101 & labs	0
Intensive Writing	Met in major with MGMT 365	0
<b>Constitution Requirement</b>	See approved list, p. 16; may be met by other req	0-3
Physical Activity	See approved list, p. 16	1
Thinking CriticallyAcross Disciplines*		
Global Perspectives	See approved list, p. 16	3
Historical Perspectives	See approved list, p. 16	3
Introducing Students to Broad Disciplinary		
Social Science	See approved list, p. 16; must include 2 designators 3 hours met in major with ECON 215	3
Humanities and Arts	See approved list, p. 16; must include 2 designators	6
Quantitative Skills and Natural Science* (3 c		6-8
Quantitative Skills	See approved list, p. 16; 3 hours met in major with MA	
Natural Science	See approved list, p. 16 [Must include a lab science. If	
	courses taken, must be in 2 different groups:	- (0 )
	Life, Physical, Earth].	
*No more than two courses in the major may coun		
Subtotal	1	32-37
<b>Business Administration Program Requirem</b>	ents	72-88
Foundation Courses (C- or better required t		27-28
BADM 180	Business Issues and Careers	3
CSCI 101, 101B, 101C & 101D; OR 101 & 102	IE Intro to Comp & Info Processing, Excel, Access, Adv,	Excel 3
MATH 105, 151 or 201	Applied Calculus, Applied College Algebra, Calculus	
ACCT 280	Introduction to Financial Accounting	3
ACCT 281	Introduction to Managerial Accounting	3
ECON 215	Principles of Microeconomics	3
ECON 216	Principles of Macroeconomics	3
QMTH 205	Business Statistics	3
QMTH 210	Business Analytics	3
Core Courses (C- or better required for each	n course)	21
BADM 250	Legal & Ethical Environ of Business	3
FINC 311	Principles of Finance	3
MGMT 321	Management and Leadership	3
MGMT 341	Business Information Systems	3
MGMT 365	Business Communication & Professional Developmer	nt 3
MGMT 480	Business Policy	3
MKTG 380	Principles of Marketing	3
Applied Quantitative Skills-Choose one of th		3
ACCT 304	Accounting Analytics	3
BADM 571	Applied Analytics and Data Visualization	3
CSCI 350	Programming for Business	3
ECON 306	Applied Econometrics	3
High Impact Practice Experience - Choose on		3
	unt. A course will count in the core or concentration but not	both.)
Internship		2
ACCT 491	Accounting Internship	3
BADM 491 BADM 492	Internship in General Business	3
BADM 492	Internship in International Business	3
CSCI 491	Software Development Internship	3
CSCI 492	Information Systems Internship	3
ECON 491 ENTP 401	Internship in Economics	3
ENTR 491 EINC 491	Internship in Entrepreneurship Internchip in Finance	3
FINC 491 MCMT 491	Internship in Finance Internship in Management	3
MGMT 491 MGMT 493	Internship in Management Internship in Hospitality Management	3 3
11101111 470	incention in mosphanty management	3

	COLLEGE OF BUSINESS ADMINISTRATIONACCOUNTING/COMP INFO	RMATION SYSTEMS
MKTG 491	Internship in Marketing	3
Study Abroad		
BADM 200	International Field Experience	3
BADM 400	International Field Experience	3
<b>Business Research</b>		
ACCT 495	Accounting Research and Communication	3
BADM 391	Business Research Seminar	3
BADM 595	Research in Business Administration	3
CSCI 471	Research in Computer Science	3
ECON 495	Research in Economics	3
MCNR 300	McNair Research Experience	3
Service Learning		
BADM 381	Service Learning and Leadership	3
Business Asumon Cro	dite	

#### **Business Acumen Credits**

Students will participate in non-credit activities related to business, career and professional development, leadership, guest speakers/panel events, and club and organization leadership hosted by the CBA. Each CBA approved non-credit activity earns 1 point. Students are required to earn eight points if they enter Winthrop as a freshman or six points if enter as a transfer.

<b>Business Concentration Requirement; choose one of the following:</b> (C- or better required for each course)		18-28
Accounting, below	Computer Information Systems, below	
Economics, page 74	Entrepreneurship, page 74	
Finance, page 74	Health Care Management, page 75	
Human Resource Management, page 76	International Business, page 76	
Management, page 76	Marketing, page 77	
Electives (Number varies depending on hours required for concentration.)		0-16
Total	-	120

## See pages 15-18 for additional degree requirements.

<b>Bachelor of Science in Business Administration - Accounting</b>		
General Education, see page 72		32-40
Foundation, Core, Applied Quantitative, and	High Impact Practice Experience Courses, see pages 72-73	54-55
Accounting Concentration		24
ACCT 303	Accounting Information Systems	3
ACCT 305	Intermediate Accounting I	3
ACCT 306	Intermediate Accounting II	3
ACCT 309	Cost Accounting	3
ACCT 401	Introduction to Tax	3
ACCT 407	Advanced Topics in Financial Accounting	3
ACCT 509	Auditing Principles & Procedures	3
One High Impact Practice Course (ACCT 49	1 and 495 may count in either the core or concentration but not both.	Must incor-
porate case studies, projects, research or internship	s, etc. to satisfy HIP requirement.)	3
ACCT 491	Accounting Internship	
ACCT 495	Accounting Research and Communication	
ACCT 515	Audit Analytics	
ACCT 520	Internal Auditing	
ACCT 521	Fraud and Forensics	
Electives		0-10
Total		120
Bachelor of Science in Busi	ness Administration - Computer Information Systems	
General Education, see page 72	icess runningution computer mornation bystems	32-40
	High Impact Practice Experience Courses, see pages 72-73	54-55
Computer Information Systems Concentration		28
CSCI 207 & 208	Intro to Computer Sci I & II	8
CSCI 210	Programming Tools	1
CSCI 290, 293, 295, 297, or 392	JavaScript Program, C#, Visual Basic, Scripting, Prgm in Java	1
CSCI 355	Database Processing	3
CSCI 475	Software Engineering I	3
CSCI 476 or 491	Software Engineering II, Internship in Comp Sci	3
MATH 261 or QMTH 310	Found of Discrete Mathematics, Intro to Data Mining	3
	C C	

COLLEGE OF BUSINESS ADMINISTRATION -- ECONOMICS/ENTREPRENEURSHIP/FINANCE Two of: 6 Accounting Information Systems 3 3 3 3 **ACCT 303** CSCI 365 Information Security Web Application Design CSCI 441 Mobile Application Development Network Processing CSCI 451 3 CSCI 466 Software Project Management CSCI 477 3 Electives 0-7 Total 120-122 **Bachelor of Science in Business Administration - Economics** 

General Education, see page 72		32-40
Foundation, Core, Applied Quantitative, an	d High Impact Practice Experience Courses, see pages 72-73	54-55
Economics Concentration		18
ECON 315 or 415	Microeconomic Analysis or Case Studies in Economics	3
ECON 316	Macroeconomic Theory	3
ECON 335	Monetary Economics	3
Three of any ECON above 299		9
Electives		6-16
Total		120

## Bachelor of Science in Business Administration - Entrepreneurship

General Education, see page 72 Foundation, Core, Applied Quantitative, and Entrepreneurship Concentration	High Impact Practice Experience Courses, see pages 72-73	32-40 54-55 18
ENTR 373	Intro to Entrepreneurship	3
ENTR 374	Strategic Entrepreneurial Growth	3
ENTR 473	Entrepreneurial Finance	3
ENTR 579	Business Plan Development	3
Two of:	-	
BADM 561	Electronic Commerce for Managers	3
ENTR 491	Internship in Entrepreneurship	3
MGMT 322	Introduction to Talent Management	3
MKTG 387	Promotion Management and Digital Marketing	3
MKTG 385	Marketing Research	3
MKTG 485	Services Marketing	3
MKTG 581	Marketing for Global Competitiveness	3
Electives	Ŭ Å	6-18
Total		120

## **Bachelor of Science in Business Administration - Finance**

General Education, see page 72 Foundation, Core, Applied Quantitative, and Take one of two tracks:	High Impact Practice Experience Courses, see pages 72-73	32-40 54-55
Finance ConcentrationCorporate Finance Tr	rack	21
FINC 312	Intermediate Corporate Financial Management	3
FINC 498	Adv Corp Financial Mgmt	3
FINC 512	Investments	3
FINC 513	Banking and Financial Service Management	3
FINC 514	International Financial Management	3
ACCT 305	Intermediate Accounting I	3
One of:	-	
ECON 335	Money and Banking	3
FINC 491	Internship in Finance	3
Electives		4-13
Total		120
Finance ConcentrationFinancial Planning Track		21
ACCT 401	Introduction to Tax	3
BADM 501	Estate Planning	3
FINC 315	Principles of Financial Planning	3

	COLLEGE OF BUSINESS ADMINISTRATIONFINANCE/HEALTHC	ARE MANAGEMENT
FINC 512	Investments	3
FINC 515	Insurance and Risk Management	3
FINC 516	Employee Benefits and Retirement Planning	3
FINC 420	Financial Plan Development	3
Electives	-	4-13
Total		120

Total

Note: Anyone completing any combination of 15 hours of FINC from the above lists plus 3 hours of ACCT, BADM or ECON from the above lists would qualify for the Finance option, general track.

## Bachelor of Science in Business Administration - Finance (Accelerated)

General Education, see page 72 Foundation, Core, Applied Quantitative, and Take one of two tracks:	High Impact Practice Experience Courses, see pages 72-73	32-40 54-55
Finance ConcentrationCorporate Finance	Track	21
FINC 312	Intermediate Corporate Financial Management	3
FINC 498	Adv Corp Financial Mgmt	3
FINC 512*	Investments	3
FINC 513	Banking and Financial Service Management	3
FINC 514	International Financial Management	3
ACCT 305	Intermediate Accounting I	3
One of:	U U	
ECON 335	Money and Banking	3
FINC 491	Internship in Finance	3
Electives	*	4-13
Total		120
Finance ConcentrationFinancial Planning Track		21
ACCT 401	Introduction to Tax	3
BADM 501	Estate Planning	3
FINC 315	Principles of Financial Planning	3
FINC 512	Investments	3
FINC 515	Insurance and Risk Management	3
FINC 516	Employee Benefits and Retirement Planning	3
FINC 420	Financial Plan Development	3
Electives	-	4-13
Total		120

Note: Anyone completing any combination of 15 hours of FINC from the above lists plus 3 hours of ACCT, BADM or ECON from the above lists would qualify for the Finance option, general track.

Undergraduate students pursuing this program must complete an Intent to Pursue a Combined Program form prior to registering for two FINC 500-level courses and must have a 3.0 undergraduate GPA at the time this form is completed. No petitions will be allowed for students to count courses after-the-fact if they fail to complete the Intent to Pursue a Combined Program form prior to taking the (2) FINC 500-level courses. Selection of courses should be discussed with an academic advisor.

\*must be taken at the graduate level

## Bachelor of Science in Business Administration - Health Care Management

General Education, see page 72 Foundation, Core, Applied Quantitative, and Health Care Management Concentration	l High Impact Practice Experience Courses, see pages 72-73	32-40 54-55 21
HCMT 200	Intro to Health Care Management	3
HCMT 300	The Health Care Manager	3
HCMT 302	Health Care Planning & Marketing	3
HCMT 303	Health Care Organizations & the Legal Environ	3
HCMT 491	Health Care Management Internship	3
HCMT 492	Econ & Health Care Finance	3
HCMT 493	Seminar in Health Care Management	3
Required internship to be taken summer be	etween Jr & Sr year.	
Electives	-	4-13
Total		120

## COLLEGE OF BUSINESS ADMINISTRATION--HUMAN RESOURCE MGMT/INT'L BUSINESS/MANAGEMENT Bachelor of Science in Business Administration - Human Resource Management

General Education, see page 72 Foundation, Core, Applied Quantitative, and High Impact Practice Experience Courses, see pages 72-73 Human Resource Management Concentration		32-40 54-55 18
MGMT 322	Introduction to Talent Management	3
MGMT 323	Acquiring Talent	3
MGMT 325	Organizational Theory and Behavior	3
MGMT 522	Growing and Developing Talent	3
MGMT 524	Employment Law	3
MGMT 526	Talent Management Seminar	3
Electives Total	-	6-18 120

Bachelor of Science in Business Administration - Human Resource Management (Accelerated)

General Education, see page 72 Foundation, Core, Applied Quantitative, ar	nd High Impact Practice Experience Courses, see pages 72-73	32-40 54-55
Human Resource Management Concentration		18
MGMT 322	Introduction to Talent Management	3
MGMT 323	Acquiring Talent	3
MGMT 491 <sup>+</sup>	Management Internship	3
MGMT 522	Growing and Developing Talent	3
MGMT 524*	Employment Law	3
MGMT 526*	Talent Management Seminar	3
Electives		7-16
Total		120
*must be taken at the graduate level		

*Undergraduate students pursuing this program must complete an Intent to Pursue a Combined Program form prior to registering for MGMT 524 and 526.* 

<sup>+</sup>Cannot count twoard the high impact practice course.

## Bachelor of Science in Business Administration - International Business

General Education, see page 72 Foundation, Core, Applied Quantitative, and International Business Concentration	l High Impact Practice Experience Courses, see pages 72-73	32-40 54-55 21
MGMT 200	Introduction to International Business	3
ECON 521	International Trade & Investment	3
FINC 514	International Financial Management	3
MGMT 529	International Management	3
MKTG 581	Marketing for Global Competitiveness	3
One of:	0 1	
BADM 492	Internship in International Business	3
BADM 400	International Field Experience	
BADM 401	Business and Study Abroad	
Choose 3 hours from ANTH 301, 321; FREN 302; GEOG 303, 306; GERM 301;		
HIST 334, 345, 351, 547, 548, 560, 561; MCOM 302; PLSC 332, 335, 338; RELG 300; SPAN 421,422		3
Courses that support the concentration		0-6
Foreign language (non-native speakers of E	English must obtain permission from the department)	
Electives		0-13
Total		120
Bachelor of Scient	ce in Business Administration - Management	
General Education, see page 72 Foundation, Core, Applied Quantitative, and Take one of two tracks (Management, Hotel and H	1 High Impact Practice Experience Courses, see pages 72-73	32-40 54-55
Management Track:		18
MGMT 475	Leadership Theory and Development	3
MGMT 575 or PHIL 575	Business Ethics	3
Two of:		5
BADM 561	Electronic Commerce for Managers	3
ENTR 373	Introduction to Entrepreneurship	3
	introduction to Entrepreneurship	5

	COLLEGE OF BUSINESS ADMINISTRA	TIONMARKETING
MGMT 322	Introduction to Talent Management	3
MGMT 325	Organizational Theory & Behavior	3
MGMT 330	Sustainable Business Practices	3
MGMT 491 <sup>+</sup>	Internship in Management	3
MGMT 529	International Management	3
Two additional courses over 299 fro	om the following designators:	
ACCT, BADM, CSCI, ECON, ENT	R, FINC, HCMT, MGMT, MKTG, QMTH	6
Hotel and Hospitality Management		
MGMT 475	Leadership Theory and Development	3
MGMT 575 or PHIL 575	Business Ethics	3
MGMT 360	Hotel Management	3
MGMT 460	Hospitality Management Strategies	3
MGMT 493	Internship in Hospitality Management	3
MGMT 322 or MKTG 485	Intro to Talent Mgmt, Services Marketing	3
Electives		7-16
Total		120
At least nine hours (including MGMT 47	75 and MGMT 575/PHIL 575) must be courses numbered over 399.	

At least nine hours (including MGMT 475 and MGMT 575/PHIL 575) must be courses numbered over 399. Only one internship, regardless of designator, may be counted toward the required concentration credit hours. \*Cannot count twoard the high impact practice course.

## Bachelor of Science in Business Administration - Marketing

General Education, see page 72 Foundation, Core, Applied Quantitative, and Marketing Concentration	l High Impact Practice Experience Courses, see pages 72-73	32-40 54-55 18
MKTG 381	Consumer Behavior	3
MKTG 387	Digital Marketing and Promotion Management	3
MKTG 385	Marketing Research	3
MKTG 489	Marketing Strategy	3
Choose two from the following:		
BADM 571	Business Analytics	3
MKTG 483	Sales and Relationship Marketing	3
MKTG 485	Services Marketing	3
MKTG 491+	Internship in Marketing	3
MKTG 581	Marketing for Global Competitiveness	3
Electives		7-16
Total		120
*Connot count toward the high impact practice course		

<sup>+</sup>*Cannot count toward the high impact practice course.* 

## COLLEGE OF BUSINESS ADMINISTRATION--COMPUTER SCIENCE Bachelor of Science in Computer Science

The Bachelor of Science in Computer Science is accredited by the Computing Accreditation Commission of ABET (www.abet.org).

The goals of the Bachelor of Science in Computer Science are to prepare students for careers in software design and implementation and for graduate study in Computer Science. The students in this program are provided with a background that allows them to progress toward leadership roles.

These goals are implemented by a curriculum that carefully blends theory and applications. After completing a two semester introductory sequence in computer science, the student takes a series of courses that provide a strong background in the basic mathematical tools of calculus, logic, discrete mathematics, and probability and statistics and that provide a good background in the natural and social sciences and the humanities.

Transfer students bringing in upper level Computer Sciences courses may transfer those courses from any school with programs in Computer Science accredited by the Computing Accrediting Commission of ABET.

General Education Courses		Semester Hours
ACAD 101	Principles of the Learning Academy	1
Shared Skills and Proficiencies	1 0 9	
Writing and Critical Thinking (C- or better r	equired in each course)	
WRIT 101, HMXP 102, CRTW 201	Composition; The Human Experience: Who Am I?	
	Crit Reading, Thinking, & Writing	9
Oral Communication	Met in major with CSCI 327	0
Technology	Met in major with CSCI 207 and 327	0
Intensive Writing	Met in major with CSCI 327	0
Constitution Requirement	See approved list, p. 16; may be met by other req	0-3
Physical Activity	See approved list, p. 16	1
Thinking CriticallyAcross Disciplines		
Global Perspectives	See approved list, p. 16	3
Historical Perspectives	See approved list, p. 16	3
Introducing Students to Broad Disciplinary P	Perspectives	
Social Science	See approved list, p. 16; must include 2 designators	6
Humanities and Arts	See approved list, p. 16; must include 2 designators	6
Quantitative Skills and Natural Science (3 co	urses)	
Quantitative Skills	Met in major with MATH 201 and 202	0
Natural Science	Met in major with science requirement	0
Subtotal		29-32
Computer Science Program Requirements		46
CSCI 207	Introduction to Computer Science I	4
CSCI 208	Introduction to Computer Science II	4
CSCI 210	Programming Tools	1
CSCI 271	Algorithm Analysis and Data Structures	4
CSCI 311	Computer Architecture and Organization	4
CSCI 327	Social Implications of Computing	3
CSCI 411	Operating Systems	3
CSCI 432	Computer Science Theory	3
CSCI 466	Networking Processing	3
CSCI 475	Software Engineering I	3
CSCI 476	Software Engineering II	3
	50, max 3 hrs from combination of 471, 491 and 492)	9
Choose two different courses from: CSCI 29		2
	iinating assessment exam in the semester in which they grad	uate. This
	er Science & Quantitative Methods Department Chair.	
Additional Math and Science Requirements*		30-33
MATH 201 and 202	Calculus I, Calculus II	8
MATH 261	Foundations of Discrete Mathematics	3
QMTH 205 or MATH 341	Business Statistics, Statistical Methods	3
MAED 200 or MATH above 299 (except 314)		1-4
PHYS 211 or BIOL 220/222 or 221/223	Physics with Calculus, Princi of Cell & Molecular Biol	/Lab 4
	Princ in Ecology, Evolution, & Biodiversity/Lab	
	any 4-hour lab courses counts for that BIOL majors or n	
any 4-hours lab course that counts for CHEM majors or minors, GEOL lab courses that count in the GEOL		
minor		4
MATH course(s) over 299 and/or CHEM 10	5 and/or science course(s) from the above list	7

<sup>\*</sup>minimum of 15 credits of MATH or QMTH

## COLLEGE OF BUSINESS ADMINISTRATION--ECONOMICS

Minor0-24Recommended: Math, Digital Information Design, Risk Assurance, Accounting, and Business Administration<br/>(Students may not choose Computer Science as a minor.)0-15Electives0-15Total120A cumulative 2.0 GPA or better is required on courses in the Computer Science Program Requirements.<br/>Note: Degree requirements may not be waived.120

## See pages 15-18 for additional degree requirements.

## **Bachelor of Arts in Economics**

Economics provides students with an analytical training that is a valuable asset in any career. Many graduates enter the workforce directly and find employment in such diverse areas as banking and finance, management, government service, labor relations, policy research, sports management, consulting, journalism, and marketing. Other students use economics as a foundation for graduate programs in law, business, economics, and policy studies.

General Education Courses		Semester Hours
ACAD 101	Principles of the Learning Academy	1
Shared Skills and Proficiencies	······································	
Writing and Critical Thinking (C- or better		
WRIT 101, HMXP 102, CRTW 201	Composition; The Human Experience: Who Am I?	0
	Crit Reading, Thinking, & Writing	9
Oral Communication	See approved list, p. 16 may be met by other req	0-3
Technology	Met in major with CSCI 101 and labs	0
Intensive Writing	See approved list, p. 16; may be met by other req	0-3
Constitution Requirement	See approved list, p. 16; may be met by other req	0-3
Physical Activity	See approved list, p. 16	1
Thinking CriticallyAcross Disciplines		
Global Perspectives	See approved list, p. 16	3
Historical Perspectives	See approved list, p. 16	3
Introducing Students to Broad Disciplinary		
Social Science	See approved list, p. 16; must include 2 designators	3
	3 hours met in major with ECON 215	
Humanities and Arts	See approved list, p. 16; must include 2 designators	6
Quantitative Skills and Natural Science (3 c	ourses)	9-12
Quantitative Skills	3 hours met in major with MATH	(0-4)
Natural Science	See approved list, p. 16 [Must include a lab science. If	2 (3-8)
	courses taken, must be in 2 different groups:	
	Life, Physical, Earth].	
Subtotal		32-43
Economics Courses		30
ECON 215	Prin of Microeconomics	3
ECON 216	Prin of Macroeconomics	3
ECON 315	Microeconomic Analysis	3
ECON 316	Macroeconomic Analysis	3
Six courses from ECON above 299	5	18
Courses Supporting the Major		
MATH 105 or 201	Applied Calculus, Calculus I	3-4
QMTH 205	Business Statistics	3
QMTH 210	Business Analytics	3
CSCI 101, 101B, 101D and 101A, C or P	Intro to Information Processing, Excel, Advanced Exc	
Minor		15-24
Electives		10-31
Total		120
	hiect designator may be applied toward the major for a Bachel	

Not more than 36 semester hours in any one subject designator may be applied toward the major for a Bachelor of Arts degree. See page 15 for more information.

See pages 15-18 for additional degree requirements.

## Winthrop University Undergraduate Catalog 2022-23

## COLLEGE OF BUSINESS ADMINISTRATION -- APPLIED SOFTWARE DEVELOPMENT

## Bachelor of Science in Applied Software Development

# (For students who have completed an associate's degree in applied science in computer technology, a programming specialization degree from a South Carolina technical college.)

General Education CoursesSemester HoursACAD 101Principles of the Learning Academy1Shared Skills and ProficienciesPrinciples of the Learning Academy1Writing and Critical Thinking (C- or better required in each course)Image: Semester HoursSemester HoursHXCT 301Human Experience/Critical Reading, Thinking, and Writing3Oral CommunicationMet in major with CSCI 3270TechnologyMet in major with CSCI 3270Intensive WritingSee approved list, p. 16; may be met by other req0-3Physical ActivitySee approved list, p. 16; may be met by other req1Thinking CriticallyAcross DisciplinesSee approved list, p. 163
Shared Skills and ProficienciesWriting and Critical Thinking (C- or better required in each course)HXCT 301Human Experience/Critical Reading, Thinking, and WritingOral CommunicationMet in major with CSCI 327TechnologyMet in major with CSCI 101 and labsIntensive WritingMet in major with CSCI 327Constitution RequirementSee approved list, p. 16; may be met by other reqPhysical ActivitySee approved list, p. 16Thinking CriticallyAcross Disciplines
Writing and Critical Thinking (C- or better required in each course)3HXCT 301Human Experience/Critical Reading, Thinking, and Writing3Oral CommunicationMet in major with CSCI 3270TechnologyMet in major with CSCI 101 and labs0Intensive WritingMet in major with CSCI 3270Constitution RequirementSee approved list, p. 16; may be met by other req0-3Physical ActivitySee approved list, p. 161Thinking CriticallyAcross DisciplinesFee approved list, p. 161
HXCT 301Human Experience/Critical Reading, Thinking, and Writing3Oral CommunicationMet in major with CSCI 3270TechnologyMet in major with CSCI 101 and labs0Intensive WritingMet in major with CSCI 3270Constitution RequirementSee approved list, p. 16; may be met by other req0-3Physical ActivitySee approved list, p. 161Thinking CriticallyAcross DisciplinesI
Oral CommunicationMet in major with CSCI 3270TechnologyMet in major with CSCI 101 and labs0Intensive WritingMet in major with CSCI 3270Constitution RequirementSee approved list, p. 16; may be met by other req0-3Physical ActivitySee approved list, p. 161Thinking CriticallyAcross DisciplinesI
TechnologyMet in major with CSCI 101 and labs0Intensive WritingMet in major with CSCI 3270Constitution RequirementSee approved list, p. 16; may be met by other req0-3Physical ActivitySee approved list, p. 161Thinking CriticallyAcross Disciplines
Intensive WritingMet in major with CSCI 3270Constitution RequirementSee approved list, p. 16; may be met by other req0-3Physical ActivitySee approved list, p. 161Thinking CriticallyAcross Disciplines1
Constitution RequirementSee approved list, p. 16; may be met by other req0-3Physical ActivitySee approved list, p. 161Thinking CriticallyAcross Disciplines
Physical ActivitySee approved list, p. 161Thinking CriticallyAcross Disciplines1
Thinking CriticallyAcross Disciplines
Historical Perspectives See approved list, p. 16 3
Introducing Students to Broad Disciplinary Perspectives
<b>Social Science</b> See approved list, p. 16; must include 2 designators 6
Humanities and ArtsSee approved list, p. 16; must include 2 designators6
Quantitative Skills and Natural Science (3 courses)
Quantitative Skills Met in major with MATH 141 and 105 0
Natural ScienceSee approved list, p. 16; must include a lab science.3-4
Subtotal 26-30
50010001 20-50
Computing Technology Transfer Coursework30200-level CPT and IST courses that count toward the degree of Associate in Applied Science in Computer Technology - Programming. Students must have completed the Associate's degree.30
Requirements for the Major 46
CSCI 101 Intro to Computers and Info Processing 1.5
CSCI 101 Labs, any three from 101A, B, C, D, F, I, N, and P 1.5
MATH 105 Applied Calculus 3
MATH 141 Finite Probability and Statistics 3
MATH 261 Foundations of Discrete Mathematics 3
CSCI 311 Computer Architecture and Organization 4
CSCI 327 Social Implications of Computing 3
CSCI 355 Database Processing 3
CSCI 365 Information Security 3
CSCI 411 Operating Systems 3
CSCI 466 Network Processing 3
CSCI 475 Software Engineering I 3
CSCI 476 Software Engineering II 3
CSCI over 299, CSCI 521 highly recommended (max 3 hours from combination of 471, 491, 492) 9
General Electives
TOTAL 120

See pages 15-18 for additional degree requirements

### COLLEGE OF BUSINESS ADMINISTRATION--CYBERSECURITY Bachelor of Science in Cybersecurity

#### **General Education Courses** Semester Hours ACAD 101 Principles of the Learning Academy 1 **Shared Skills and Proficiencies** Writing and Critical Thinking (C- or better required in each course) WRIT 101, HMXP 102, CRTW 201 Composition; The Human Experience: Who Am I? Crit Reading, Thinking, & Writing 9 **Oral Communication** Met in major with CSCI 327 0 Technology Met in major with CSCI 207 and 327 0 **Intensive Writing** Met in major with CSCI 327 0 **Constitution Requirement** See approved list, p. 16; may be met by other req 0-3 See approved list, p. 16 **Physical Activity** 1 Thinking CriticallyAcross Disciplines **Global Perspectives** 3 See approved list, p. 16 **Historical Perspectives** See approved list, p. 16 3 Introducing Students to Broad Disciplinary Perspectives **Social Science** See approved list, p. 16; must include 2 designators 6 **Humanities and Arts** See approved list, p. 16; must include 2 designators 6 Quantitative Skills and Natural Science (3 courses) Quantitative Skills Met in major with MATH 105 or 201 and QMTH 205 0 Natural Science See approved list, p. 16; must include a lab science. 3-4 Subtotal 32-36 **Requirements for the Major** 68.5-69.5 **ACCT 280** Introduction to Financial Accounting 3 3 **ACCT 281** Introduction to Managerial Accounting **ACCT 521** Fraud and Forensics 3 CSCI 101B Using Microsoft Excel .5 CSCI 207 Introduction to Computer Science I 4 **CSCI 208** Introduction to Computer Science II 4 CSCI 210 **Programming Tools** 1 **CSCI 224** Foundations and Principles of Cybersecurity 3 3 CSCI 243 Web Programming CSCI 271 Algorithm Analysis and Data Structures 4 CSCI 311 Computer Architecture and Organization 4 3 CSCI 324 Enterprise System Administration and Security 3 CSCI 327 Social Implications of Computing **Database** Processing CSCI 355 3 **Operating Systems** 3 CSCI 411 Cyber Forensics 3 CSCI 421 **CSCI 424** Ethical Hacking 3 3 CSCI 453 Special Topics in Cybersecurity 3 CSCI 466 Network Processing 3 **CSCI 469** Cloud Computing 3-4 MATH 105 or MATH 201 Applied Calculus, Calculus I Foundations of Discrete Mathematics 3 MATH 261 **QMTH 205 Applied Statistics** 3 **General Electives** 14.5-19.5 TOTAL 120

See pages 15-18 for additional degree requirements

## COLLEGE OF BUSINESS ADMINISTRATION--DIGITAL INFORMATION DESIGN-DIGITAL COMMERCE

Students majoring in Digital Information Design have four concentrations to choose from: Digital Commerce, Digital Mass Media, Interactive Media, and Web Application Development. Within the program, all students take a 29 semester-hour core of courses emphasizing basic and advanced skills in design, digital information, communication theory and the Internet, information systems and organizations, visual design of complex systems, law and ethics, and seminar courses. Students from all tracks work together in a final senior experience that involves collaborating with real-world clients.

## Bachelor of Science in Digital Information Design with a concentration in Digital Commerce

General Education Courses		Semester Hours
ACAD 101	Principles of the Learning Academy	1
Shared Skills and Proficiencies	1 · · · · · · · · · · · · · · · · · · ·	
Writing and Critical Thinking (C- or better	required in each course)	
WRIT 101, HMXP 102, CRTW 201	Composition; The Human Experience: Who Am I?	
	Crit Reading, Thinking, & Writing	9
Oral Communication	See approved list, p. 16	3
Technology	Met in major with CSCI 151	0
Intensive Writing	See approved list, p. 16; may be met by other req	0-3
Constitution Requirement	See approved list, p. 16; may be met by other req	0-3
Physical Activity	See approved list, p. 16	1
Thinking CriticallyAcross Disciplines*		
Global Perspectives	See approved list, p. 16	3
Historical Perspectives	See approved list, p. 16	3
Introducing Students to Broad Disciplinary		
Social Science	See approved list, p. 16; must include 2 designators	6
Humanities and Arts	See approved list, p. 16; must include 2 designators	6
Quantitative Skills and Natural Science* (3 of		9-12
Quantitative Skills	·	
MATH 151 or a MATH that includes Calcu	ılus or has Calculus as a pre-requisite	(3-4)
Additional Quantitative course		(0-4)
Natural Science	See approved list, p. 16 [Must include a lab science. If	2 (3-8)
	courses taken, must be in 2 different groups:	
	Life, Physical, Earth].	
*No more than two courses in the major may coun		
Subtotal	,	41-50
Information Design Core		28
CSCI 151	Overview of Computer Science	3
DIFD 141	Introduction to Web Application Design	4
DESF 161	Intro to Computer Imaging	3
VCOM 262	Introduction to Web Design	3
DIFD 311	Digital Culture and Society	3
DIFD 321	Information Systems and Organizations	3
DIFD 322	User Experience Design	3
DIFD 415	Law and Ethics for Digital Media	3
DIFD 451	Senior Synthesis	3
Digital Commerce Concentration		31
CSCI 101 B & D	Microsft Excel & Advanced Excel	1
ACCT 280	Intro to Financial Accounting	3
QMTH 205 & 210	Business Statistics and Applied Analytics	6
MKTG 380	Principles of Marketing	3
MGMT 341	Business Information Systems	3
BADM 561	Electronic Commerce for Managers	3
MCOM 226	Multimedia Storytelling and Production	3
IMCO 341	Advertising Principles	3
Choose 2 courses from the following:		
MKTG 381, 385, 387, 485, 581		6
Electives		11-20
Total		120
See pages 1	15-18 for additional degree requirements.	

See pages 15-18 for additional degree requirements.

## COLLEGE OF BUSINESS ADMINISTRATION--DIGITAL INFORMATION DESIGN-DIGITAL MASS MEDIA Bachelor of Science in Digital Information Design with a concentration in Digital Mass Media

General Education Courses		Semester Hours
ACAD 101	Principles of the Learning Academy	1
Shared Skills and Proficiencies	Therefore of the Beatrang Headening	-
Writing and Critical Thinking (C- or better	reauired in each course)	
WRIT 101, HMXP 102, CRTW 201	Composition; The Human Experience: Who Am I?	
	Crit Reading, Thinking, & Writing	9
Oral Communication	Met in major with SPCH 201	0
Technology	Met in major with CSCI 151	0
Intensive Writing	Met in major with MCOM 441	0
Constitution Requirement	See approved list, p. 16; may be met by other req	0-3
Physical Activity	See approved list, p. 16	1
Thinking CriticallyAcross Disciplines*		
Global Perspectives	See approved list, p. 16	3
Historical Perspectives	See approved list, p. 16	3
Introducing Students to Broad Disciplinary		
Social Science	See approved list, p. 16; must include 2 designators	6
Humanities and Arts	See approved list, p. 16; must include 2 designators	6
Quantitative Skills and Natural Science* (3		9-12
Quantitative Skills	,	
MATH 151 or a MATH that includes Calcu	llus or has Calculus as a pre-requisite	(3-4)
Additional Quantitative course	1 1	(0-4)
Natural Science	See approved list, p. 16 [Must include a lab science. If	
	courses taken, must be in 2 different groups:	
	Life, Physical, Earth].	
*No more than two courses in the major may cour	-	
Subtotal	,	38-44
Information Design Core		28
CSCI 151	Overview of Computer Science	3
DIFD 141	Introduction to Web Application Design	4
DESF 161	Intro to Computer Imaging	3
VCOM 262	Introduction to Web Design	3
DIFD 311	Digital Culture and Society	3
DIFD 321	Information Systems and Organizations	3
DIFD 322	User Experience Design	3
DIFD 415	Law and Ethics for Digital Media	3
DIFD 451	Senior Synthesis	3
Digital Mass Media Concentration	y	28.5
CSCI 101B	Excel	0.5
MCOM 241**	Media Writing	3
MCOM 226**	Multimedia Storytelling and Production	3
MCOM 346	Television Production	3
MCOM 441	Reporting Public Affairs	3
MCOM 499	Senior Portfolio	1
VCOM 363	Multimedia Design I	3
QMTH 205	Applied Statistics	3
Choose 1 course from the following		3
MCOM 325, 330	Digital News & Video Produc, Convergent Journalis	m
Choose 2 courses from the following (Inter-		6
IMCO 341, 349, 370, 471, MCOM 230, 360,		
Courses Supporting the Concentration		3
SPCH 201	Public Speaking	3
Electives		16.5-22.5
Total		120
**Requires C- or higher		
See names	15-18 for additional degree requirements	

See pages 15-18 for additional degree requirements.

## COLLEGE OF BUSINESS ADMINISTRATION--DIGITAL INFORMATION DESIGN-INTERACTIVE MEDIA Bachelor of Science in Digital Information Design with a concentration in Interactive Media

General Education Courses		Semester Hours
ACAD 101	Principles of the Learning Academy	1
Shared Skills and Proficiencies		
Writing and Critical Thinking (C- or better	required in each course)	
WRIT 101, HMXP 102, CRTW 201	Composition; The Human Experience: Who Am I?	
	Crit Reading, Thinking, & Writing	9
Oral Communication	Met in major with WRIT 465	0
Technology	Met in major with CSCI 151	0
Intensive Writing	Met in major with WRIT 465	0
Constitution Requirement	See approved list, p. 16; may be met by other req	0-3
Physical Activity	See approved list, p. 16	1
Thinking CriticallyAcross Disciplines*		2
Global Perspectives	See approved list, p. 16	3
Historical Perspectives	Met in major with ARTH 176	0
Introducing Students to Broad Disciplinary Social Science		6
Humanities and Arts	See approved list, p. 16; must include 2 designators	6 6
Quantitative Skills and Natural Science* (3 c	See approved list, p. 16; must include 2 designators	9 <b>-12</b>
Quantitative Skills	ouises)	<i>J</i> -1 <u>2</u>
MATH 151 or a MATH that includes Calcu	lus or has Calculus as a pre-requisite	(3-4)
Additional Quantitative course	nus of hus culculus us a pre requisite	(0-4)
Natural Science	See approved list, p. 16 [Must include a lab science. If	
	courses taken, must be in 2 different groups:	
	Life, Physical, Earth].	
*No more than two courses in the major may coun		
Subtotal	,	35-41
Information Design Core		28
CSCI 151	Overview of Computer Science	3
DIFD 141	Introduction to Web Application Design	4
DESF 161	Intro to Computer Imaging	3
VCOM 262	Introduction to Web Design	3
DIFD 311	Digital Culture and Society	3
DIFD 321	Information Systems and Organizations	3
DIFD 322	User Experience Design	3
DIFD 415	Law and Ethics for Digital Media	3
DIFD 451	Senior Synthesis	3
Interactive Media Concentration		55
ARTH 176	Intro to Art History from Renaissance to Present	3
CSCI 207	Intro to Computer Science	4
CSCI 243 DESE 101	Programming for the Web	3
DESF 101 DESE 120	Design Process, Methods and Mindsets	e
DESF 120 DESF 154	Design Drawing Design and Color	3 3
VCOM 151	Design Fundamentals	3
VCOM 258	Introduction to Typography	3
VCOM 259	Introduction to Graphic Design	3
VCOM 355	Design Concepts	3
VCOM 362	Interactive Media	3
VCOM 363	Multimedia Design I	3
VCOM 374	History of Graphic Design and Illustration	3
VCOM 462	Interface Design in Alternative e-media	3
VCOM 463	Motion Graphics 2	3
VCOM 578	Professional Portfolio and Practices	3
Choose two courses from any of the following		6
MCOM 226	Multimedia Storytelling & Prod	
MCOM 241	Media Writing	
MUST 531	Computer Music Composition I	
MUST 532	Computer Music Composition II	
DESF 222	Visual Thinking and Symbolic Communication	
VCOM 358	Intermed Typography	

COLLEGE OF BUSINESS ADMINIS	STRATIONDIGITAL INFORMATION DESIGN-WEB APPLICAT	TION DEVELOPMENT
VCOM 392	Special Topics in Visual Communication Design	
VCOM 453	Corporate Identity	
Course Supporting the Concentration		3
WRIT 465	Preparation of Oral and Written Reports	3
Electives		0
Total		121-127

See pages 15-18 for additional degree requirements.

## Bachelor of Science in Digital Information Design with a concentration in Web Application Development

General Education Courses		Semester Hours
ACAD 101	Principles of the Learning Academy	1
Shared Skills and Proficiencies	Timelples of the Learning Academy	1
Writing and Critical Thinking (C- or better	required in each course)	
WRIT 101, HMXP 102, CRTW 201	Composition; The Human Experience: Who Am I?	
WRIT 101, THVIAT 102, CRTW 201	Crit Reading, Thinking, & Writing	9
Oral Communication	See approved list, p. 16; CSCI 327 recommended	3
Technology	Met in major with CSCI 151	0
Intensive Writing	See approved list, p. 16; CSCI 327 recommended	0-3
Constitution Requirement	See approved list, p. 16; may be met by other req	0-3
Physical Activity	See approved list, p. 16	1
Thinking CriticallyAcross Disciplines*	see approved list, p. 10	1
Global Perspectives	See approved list, p. 16	3
Historical Perspectives	See approved list, p. 16	3
Introducing Students to Broad Disciplinary		0
Social Science	See approved list, p. 16; must include 2 designators	6
Humanities and Arts	See approved list, p. 1; must include 2 designators	6
Quantitative Skills and Natural Science* (3		9-12
Quantitative Skills		
MATH 151 or a MATH that includes Calc	ulus or has Calculus as a pre-requisite	(3-4)
Additional Quantitative course	May be met in major with QMTH 205	(0-4)
Natural Science	See approved list, p. 16 [Must include a lab science. If	
	courses taken, must be in 2 different groups:	- (3 3)
	Life, Physical, Earth].	
*No more than two courses in the major may cour		
Subtotal	ii toewiw requirements in these wread	41-50
Information Design Core		28
CSCI 151	Overview of Computer Science	3
DIFD 141	Introduction to Web Application Design	4
DESF 161	Intro to Computer Imaging	3
VCOM 262	Introduction to Web Design	3
DIFD 311	Digital Culture and Society	3
DIFD 321	Information Systems and Organizations	3
DIFD 322	User Experience Design	3
DIFD 415	Law and Ethics for Digital Media	3
DIFD 451	Senior Synthesis	3
Web Application Design Concentration	5	37.5
QMTH 205	Applied Statistics	3
CSCI 101B	Microsoft Excel	0.5
CSCI 207 & 208	Intro to Computer Science I & II	8
CSCI 210	Programming Tools	1
CSCI 243	Programming for the Web	3
CSCI 355	Database Processing	3
CSCI 390	JavaScript	1
CSCI 441	Web Application Design and Development	3
CSCI 475 & 476	Software Engineering I & II	6
CSCI 477	Software Project Management	3
VCOM 362	Interactive Media	3
VCOM 462	Interface Design in Alternative e-media	3
Electives	~	4.5-13.5
Total		120
See nages	15-18 for additional degree requirements.	

See pages 15-18 for additional degree requirements.