These programs are open to all students (unless otherwise noted). A 2.5 combined grade point average, 60 credits earned and all course prerequisites are required for enrollment in the 300/400 courses unless otherwise noted. There is a limit of 21 credits in the 300/400 business courses without being admitted to the College of Business or BA/BS Economics major.

 $(3)_{-}$

Business Analysis Certificate 12 credits

Not available to Information Systems majors or minors.

Required Courses:

neganea cours		
COMM 213/214	Interpersonal Speech Communication (XC)	(3)
INFO SYS 311*	Essentials of Information Systems	(3)
INFO SYS 414	Business Analysis (INFO SYS 311)	(3)
Plus three credi	ts from:	
INFO SYS 481	Strategic IS Project Mgmt (complete 4 core courses)	(3)
MHR/EGRT 360**	Engineering Project Management	(3)
APC 380	Project Management Techniques (w/approval)	(3)

Business Analytics Certificate12 credits

Economic & Business Statistics (XM)

Required Courses:

ECON 210^

MHR 381**

(either required or elective).

SCM 342

(MATH 104, 106, 108, 204, 206 or 171 w/C or placement)			
Plus six credits from:			
ECON 472*	Time Series Analysis & Forecasting	(3)	
(ECON 210 w/C or I	MATH 301 w/C)^		
ECON 473*	Econometric Methods	(3)	
(ECON 210 w/C or MATH 301 w/C)^			
FCON 475*	Predictive Analytics	(3)	

Electives - Plus three credits from:

(ECON 210 w/C or MATH 301 w/C)^

ECON 472*	Time Series Analysis (ECON 210 or MATH 301 w/C)^	(3)
ECON 473* (ECON 210 w/C or MAT	Econometric Methods TH 301 w/C)^	(3)
ECON 475* (ECON 210 w/C or MAT	Predictive Analytics TH 301 w/C)^	(3)
ECON 476* (ECON 210 w/C or MAT	Sports Analyics H 301 w/C)^	(3)
INFO SYS 201 (MATH 104, 106, 171, 2	Intro to Business App Development 104 or 206)	(3)
INFO SYS 315 (INFO SYS 311) or (MH	Database Systems in Business R 381) or (CS 271 w/C)	(3)
MARKET 374 (MARKET 371 and MHR	Marketing Research	(3)
	Marketing Analytics 01 w/C) or (MATH 201 or PSYCH 203 or SOC 281 w/B)	(3)
MARKET 428	Digital Marketing Analytics	(3)

SCM 445** Supply Chain Strategy & Analytics (SCM 341) (3)____

^Analytics certificates may substitute PSYCH 203 w/B or SOC 281 w/B or MATH 301

Supply Chain Modeling & Analysis (c/SCM 341) (3)___

Quantitative Business Analytics

(ECON 210 or MATH 301 w/C) or (MATH 201 or PSYCH 203 or SOC 281 w/B)

(ECON 210 w/C or MATH 301 w/C) - **ONLY OPEN to non-BBA majors as elective**

w/C for ECON 210. Note: ECON 472, ECON 473 or ECON 475 can only be used to fulfill one requirement

* | These courses can be taken with 30 credits earned

** These courses can be taken with 44 credits earned

Business Economics Certificate 12 credits

Not available to BBA majors & BA/BS Economics majors.

Principles of Macroeconomics (XS)

(3)

Required Courses:

ECON 201

ECON 202	Principles of Microeconomics (XS)	(2)
		(3)
Plus three credits from:		
ECON 210	Economic and Business Statistics (XM)	(3)
(MATH 104 106 108	2 204 206 or 171 w/C or placement)	

ECON 300/400 course (3)____ Plus three credits from: (3)

Any additional three credits in any College of Business Dept at the 300/400 level.

Cost Management Certificate 9 credits

Not available to Accounting majors.

Required Courses:

ACCT 207 (ACCT 206 w/C)	Essentials of Managerial Accounting	(3)
ACCT 303	Cost Management (ACCT 207 w/C)	(3)
ACCT 304	Advanced Cost Management (ACCT 303 w/C)	(3)

Cybersecurity Certificate 15 credits

Not available to Information Systems majors or minors.

Required Courses:

INFO SYS 311*	Essentials of Information Systems	(3)
INFO SYS 316		(3)
(INFO SYS 311 w/C or CS 2	/ I W/C)	
INFO SYS 411	Enterprise Security Management (INFO SYS 311)	(3)
INFO SYS 412	Barbarians at the Gates: Securing the Network	(3)
(INFO SYS 311 and INFO SY	YS 316)	
INFO SYS 413	IS Risk Management (INFO SYS 311 W/C)	(3)

Data Modeling and Visualization Certificate 15 credits

Not available to Information Systems majors or minors.

Required Courses:

INFO SYS 311*	Essentials of Information Systems	(3)
INFO SYS 315 (INFO SYS 311 or MHR 381	Database for Business	(3)
	Python for Data Analytics	(3)
INFO SYS 302*	Data Visualization	(3)
(INFO SYS 201 or 301) and	(MATH 109 or 189 or 201 or 301 or ECON 210 or MHR 381 w/C)	
	Data Modeling with Python	(3)
(INFO SYS 301 or 201) and	(INFO SYS 315 w/C)	

updated: 8/28/23

(3)___

These programs are open to all students (unless otherwise noted). A 2.5 combined grade point average, 60 credits earned and all course prerequisites are required for enrollment in the 300/400 courses unless otherwise noted. There is a limit of 21 credits in the 300/400 business courses without being admitted to the College of Business or BA/BS Economics major.

(2)

Digital Marketing Certificate Required Courses: MARKET 363** Digital Marketing $(3)_{_}$ **Digital Marketing Analytics** MARKET 428 (3) (ECON 210 or MATH 301 w/C) or (MATH 201 or PSYCH 203 or SOC 281 w/B) Plus three credits from: COMP SCI 125 World Wide Web Site Development (XS) $(3)_{-}$ INFO SYS 350 E-Commerce Technology Management $(3)_{-}$ (INFO SYS 311 and INFO SYS 201 or CS 125) JOURNAL 251 Foundations of Multimedia Storytelling (3) **MARKET 372**** Retailing in the Digital World (3)___ **MARKET 376**** Advertising & Social Media Marketing $(3)_{-}$ Residency requirement: 6 credits must be earned at UW Oshkosh.

Enterprise Resource Planning Certificate 12 credits

Not available to Information Systems majors or minors.

NOT CURRENTLY OFFERED

Eccontials of Information Systems

Required Courses:

INIEC CVC 211*

INFO SYS 311°	Essentials of Information Systems	(3)
INFO SYS 445 (INFO SYS 311)	Intro to Enterprise Res Planning Systems	(3)
INFO SYS 446	Enterprise Res Planning Systems (INFO SYS 445)	(3)
Plus three credit	ts from:	
ACCT 305 (ACCT 301 and INFO S	Accounting Information Systems	(3)
INFO SYS 314 (c/INFO SYS 311 or CS)	Systems Analysis and Design	(3)
INFO SYS 481	Strategic IS Project Mgmt (complete 4 core courses,	(3)
MHR/EGRT 360**	Engineering Project Management	(3)

* | These courses can be taken with 30 credits earned

Entrepreneurship and Innovation Certificate 9 credits

Not available to Management/Family Business & Entrepreneurship emphasis majors.

Required Courses:

MHR 373** Entrepreneurship (3)___

Plus 2 courses from List A

1 course from List A + 1 course from List B

LIST A

MHR 372**	Creativity and Innovation	(3)
MHR 374**	Social Entrepreneurship	(3)
MHR 454	Managing the Family & Closely-Held Bus [^]	(3)
MHR 475** (complete 6 credits of	Managing the Small Growing Business Business Core courses)	(3)

(complete o creatis of business core courses)		
	LIST B	
ACCT 303	Cost Management (ACCT 207 w/C)	(3)
ART 483 (ART 111 or 102Q1, 11	Prof Practices for the Studio Area 12, 114, 209, and 210)	(3)
COMP SCI 125	World Wide Web Site Development (XS)	(3)
CRIM JUST 212 (CRIM JUST 110 and C	Managing Criminal Justice Organizations (RIM JUST 270)	(3)
EGRT 360**	Engineering Project Management	(3)
FINANCE 320 (FINANCE 331 w/C- ar	Real Estate Finance ad c/MHR 381)	(3)
FINANCE 326	Real Estate Principles	(3)
FINANCE 351 (FINANCE 331 w/C-)	Financial Planning & Risk Management	(3)
FINANCE 431 (FINANCE 331 w/C- ar	Financial Statement Analysis ad c/MHR 381)	(3)
FINANCE 436 (FINANCE 334 or FINA	Advanced Financial Management NCE 431) and (MHR 381 w/C-)	(3)
FINANCE 440	Bus Risk Mgmt & Insurance (FINANCE 340)	(3)
INFO SYS 314 (c/INFO SYS 311 or CS	System Analysis Design (271)	(3)
INFO SYS 352 (INFO SYS 151 and INI	Technology Innovation FO SYS 311)	(3)
KINESLGY 447 (KINESLGY 370)	Admin & Facilities Management in Kines	(3)
MARKET 372**	Retailing in the Digital World	(3)

MHR 360** Project Management (3)___ MHR 383** HR Staffing & Planning (3)___

(MHR 351 and MHR 361) and (ECON 210 w/C or MATH 301 w/C)*

MHR 386**

Compensation Management
(MHR 351 and MHR 361) and (ECON 210 w/C or MATH 301 w/C)*

MUSIC 119 Career Skills for the Music & Arts Industries (3)____ MUSIC 120 Introduction to Music Bus in Arts Admin (3)____ (MUSIC 119 or instructor consent) (3)____

SCM 343 Mfg. Planning & Control Systems (SCM 341) (3)__

*Non-BBA majors may substitute PSYCH 101 or SOC 101 for MHR 351 AND/OR PSYCH 203 or SOC 281 w/B for ECON 210.

updated: 8/28/23

^{** |} These courses can be taken with 44 credits earned

[^] Must be in final semester, admitted to the College of Business, c/BUS 492 or 442 and graduation application on file.

These programs are open to all students (unless otherwise noted). A 2.5 combined grade point average, 60 credits earned and all course prerequisites are required for enrollment in the 300/400 courses unless otherwise noted. There is a limit of 21 credits in the 300/400 business courses without being admitted to the College of Business or BA/BS Economics major.

Finance and Investments Certificate 9 credits

Only available to BBA majors except Finance.

Required Courses:

FINANCE 333	Financial Markets	(3)
(FINANCE 331 w/C- ar	nd c/MHR 381)	
FINANCE 334	Investment Management	(3)
(FINANCE 331 w/C- ar	nd c/MHR 381)	
FINANCE 335	International Business Finance	(3)
(FINANCE 331 w/C- ar	nd c/MHR 381)	

All courses must be taken at UW Oshkosh to fulfill the residency requirement for this certificate.

Financial Management Certificate 9 credits

Only available to BBA majors except Finance.

Required Courses:

MHR 388**

MHR 389**

MHR 453

(MHR 351 and MHR 361)

FINANCE 334 (FINANCE 331 w/C- ar	Investment Management	(3)
FINANCE 431 (FINANCE 331 w/C- ar	Financial Statements Analysis ad c/MHR 381)	(3)
FINANCE 436 (FINANCE 334 or FINA	Advanced Financial Management NCE 431) and (MHR 381 w/C-)	(3)

All courses must be taken at UW Oshkosh to fulfill the residency requirement for this certificate.

Human Resource Management Certificate 12 credits

Not available to Human Resource Management majors.

Required Course	<u>es:</u>	
MHR 361**	Essentials of Human Resource Management	(3)
Plus nine credit	s from:	
FINANCE 451 (FINANCE 331 w/C- and	1 /	(3)
MHR 382** (MHR 351 and MHR 36	Employee Relations 1) *and (ECON 210 w/C or MATH 301 w/C) **	(3)
MHR 383** (MHR 351 and MHR 361	HR Staffing & Planning 1)* and (ECON 210 w/C or MATH 301 w/C)**	(3)
MHR 384**	Training & Development (MHR 351 and MHR 361) #	(1.5)
MHR 385** (MHR 351 and MHR 36	Occupational Safety & Health	(1.5)
MHR 386** (MHR 351 and MHR 36	Compensation Management 1) **and (ECON 210 w/C or MATH 301 w/C) ***	(3)
MHR 387**	Benefits Administration (MHR 351 and MHR 361) #	(1.5)

* Non-BBA majors may substitute PSYCH 101 or SOC 101 for MHR 351

HR Information & Metrics

(MHR 351 and MHR 361) # and (ECON 210 w/C or MATH 301 w/C) ##

Managing Change[^]

**Non-BBA majors may substitute PSYCH 203 or SOC 281 w/B for ECON 210

International Human Resources Mgmt

- ^ Must be in final semester, admitted to the College of Business, c/BUS 492 or 442 and graduation application on file.
 - * | These courses can be taken with 30 credits earned
 - ** | These courses can be taken with 44 credits earned

Information Systems Certificate 12 credits

Not available to Information Systems majors or minors.

Required Courses:

INFO SYS 311*	Essentials of Information Systems	(3)
INFO SYS 314	Systems Analysis and Design	(3)
(c/INFO SYS 311 or CS	S 271)	

Plus three credits from:

COMP SCI 142	Intro to Computer Science & Programming	(3)
(MATH 103 or PBIS 187 or	PBIS 188 or PBIS 189 all w/C or placement in MATH 104 or higher)	
COLAR CCLOSA	000 : 00 : 1	(2)

COMP SCI 221 OO Design & Programming I (3)____ (MATH 104 or 108 or 206 w/C) or (CS 142) or (placement to MATH 171) INFO SYS 201 Intro to Business Application Development (3)___

(MATH 104 or MATH 106 or MATH 171 or MATH 204 or MATH 206)

INFO SYS 301* Python for Data Analytics (3)___

Plus three credits from:

The student must complete an additional three credits in any INFO SYS 300/400 level not already taken.

Insurance & Risk Management Certificate 9 credits

Required Courses:

FINANCE 340 Risk Management & Insurance (3)___ (FINANCE 331 w/C- or ECON 210 w/C- or MATH 171 w/C- or MATH 201 w/C-)

Plus three credits from:

FINANCE 351 Financial Planning and Risk Management (3)___

FINANCE 445 Insurance Company Operations (FINANCE 340) (3)

Plus three credits from:

Note: Finance 351 and 445 only count once toward the nine credit certificate requirement.

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(1.5)

(3)

(3)

These programs are open to all students (unless otherwise noted). A 2.5 combined grade point average, 60 credits earned and all course prerequisites are required for enrollment in the 300/400 courses unless otherwise noted. There is a limit of 21 credits in the 300/400 business courses without being admitted to the College of Business or BA/BS Economics major.

International Business Certificate 9credits

Not available to International Economics certificate, Global Business minors and Management/International emphasis majors. BA/BS Econ majors cannot double count ECON courses used in major.

Nine gradity and two different departments from list below

Nine credits and	<u>d two different departments from list belo</u>	ow:
ACCT 406	International Accounting (ACCT 302)	(3)
BUS 494	International Business Study Tour	(3)
ECON 319*	Economics in Less Developed Countries [^]	(3)
ECON 320*	Econ of the Caribbean through Service Learning	(3)
(ECON 101 or 201 or EC	CON 202)	
ECON 336*	Comparative Economic Systems [^]	(3)
ECON 386*	Economics of Latin America [^]	(3)
ECON 387*	Econ & Social Development of Great Britain	(3)
(ECON 101 or 201 or EC	CON 202 w/C)	
ECON 388*	Economics of European Integration & Growth [^]	(3)
ECON 410*	International Capital Markets [^]	(3)
ECON 420*	International Trade [^]	(3)
FINANCE 335	International Business Finance	(3)
(FINANCE 331 w/C- and	d c/MHR 381)	
MARKET 375**	Global Marketing (MARKET 371)	(3)
MHR 375**	Global Management	(3)
SCM 345**	Global Procure & Strategic Sourcing (SCM 341)	(3)

Marketing Certificate 12 credits

Not available to Marketing majors.

Required Course:

MARKET 371**	Essentials of Marketing	(3)
Plus nine credit	s from:	
MARKET 363**	Digital Marketing	(3)
MARKET 372**	Retailing in the Digital World	(3)
MARKET 374**	Marketing Research	(3)
(MARKET 371 and MHI	R 381 w/C)	
MARKET 375**	Global Marketing (MARKET 371)	(3)
MARKET 376**	Advertising & Social Media Marketing	(3)
MARKET 377**	Consumer Behavior (MARKET 371)	(3)
MARKET 379**	Professional Sales	(3)
MARKET 418	Marketing Analytics	(3)
(ECON 210 or MATH 30	01 w/C) or (MATH 201 or PSYCH 203 or SOC 281 w/B)	
MARKET 428 (ECON 210 or MATH 30	Digital Marketing Analytics D1 w/C) or (MATH 201 or PSYCH 203 or SOC 281 w/B)	(3)
MARKET 473	Market Strategy edits of 300/400 level Marketing courses)	(3)
MARKET 474	Honors Thesis	(3)

International Economics Certificate 15 credits

^ Prerequisite for these courses = ECON 201 w/C and ECON 202 w/C

Not available to BA/BS Economics majors.

Required Courses:

ECON 201	Principles of Macroeconomics (XS)	(3)
ECON 202	Principles of Microeconomics (XS)	(3)
ECON 410* (ECON 201 w/C and EC	International Capital Markets CON 202 w/C)	(3)
ECON 420* (ECON 201 w/C and EC	International Trade CON 202 w/C)	(3)
Plus three credi	ts from:	
ECON 319*	Economics of Less Developed Countries	(3)

ECON 319"	ECO	nomic	.S O	ii Les	s Deve	HODE	aa c	_OU	ıntrı	es	(3)
(ECON 201 w/C and E	CON 20	2 w/C)									
	_	6.1	_		- 41		_				/- \

ECON 320*	Econ of the Caribbean through Service Learning	(3)
(ECON 101 or 201 or EC	ON 202)	
ECON 336*	Comparative Economic Systems	(3)

(ECON 201 w/C and E	CON 202 w/C)	
ECON 386*	Economics of Latin America	(3)
(ECON 201 w/C and E	CON 202 w/C)	
FCON 207*	From Q Cosial Day alammant of Cyant Duitain	(2)

LCON 307	Leon & Social Development of dieat britain	(3)
(ECON 101 or 201 or E	CON 202 w/C)	
ECON 388*	Economics of European Integration & Growth	(3)

ECON 388*	Economics of European Integration & Growth	(3)
(ECON 201 w/C and EC	ON 202 w/C)	
An Approved into	ernational experience [^]	(3)

^ALL Office of International Education approved College of Business &
Economics study abroad courses qualify. Other study abroad experiences
may be approved by Economics Department Chair.

These courses can be taken with 30 credits earned

Marketing Analysis & Insights Certificate 12 credits

Residency requirement: 9 credits must be earned at UW Oshkosh.

Not available to Marketing majors.

Required Courses:

MARKET 418	Marketing Analytics	(3)
(ECON 210 or MATH 301 w/C) or (MATH 201 or PSYCH 203 or SOC 281 w/B)		
MARKET 428	Digital Marketing Analytics	(3)
(ECON 210 or MATH	301 w/C) or (MATH 201 or PSYCH 203 or SOC 281 w/R)	

Three credits from:

ECON 210	Economic & Business Statistics (XM)	(3)
(MATH 104, 106,	108, 204, 206, or 171 w/C or qualified to take MATH 106 or 171)	
A A T. L 2.04	A 1: 1 C: (1: ()(AA)	(2)

Applied Statistics (XM) (3)___ MATH 201 (MATH 104, 108, 204 or any PBIS w/C) MATH 301 Introduction to Probability & Statistics (XM)(3)

(MATH 172 w/C) PSYCH 203 Elementary Psychological Statistics (XM) (3)

(PSYCH 101 w/C) and (any PBIS or MATH 104 or higher placement) Social Statistics (XM) (3)

(MATH 104) or (any PBIS) or (higher than MATH 104 placement) Plus three credits from:

ECON 472* Time Series Analysis & Forecasting $(3)_{--}$ (ECON 210 w/C or MATH 301 w/C) ECON 473* **Econometric Methods** (3)___

(ECON 210 w/C or MATH 301 w/C) **Database Systems in Business** INFO SYS 315 (3)

(INFO SYS 311) or (MHR 381) or (CS 271 w/C) MARKET 374** Marketing Research (3) (MARKET 371 and MHR 381 w/C)

POLI SCI 245 Political Methodology $(3)_{-}$ (3)

Audience Insights (2.5 GPA and RTF 115) or (instructor consent for non RTF majors)

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These courses can be taken with 44 credits earned

These programs are open to all students (unless otherwise noted). A 2.5 combined grade point average, 60 credits earned and all course prerequisites are required for enrollment in the 300/400 courses unless otherwise noted. There is a limit of 21 credits in the 300/400 business courses without being admitted to the College of Business or BA/BS Economics major.

Sports Analysis Certificate 12 credits Not available to BA/BS Economics majors. **Required Courses: ECON 202** Principles of Microeconomics (XS) (3) ECON 210^ Economic and Business Statistics (XM) $(3)_{-}$ (MATH 104, 106, 108, 204, 206, or 171 w/C or placement) ECON 340* **Economics of Sports** $(3)_{--}$ (ECON 202 or 208 w/C) ECON 476* **Sports Analyics** (3)___ (ECON 210 w/C or MATH 301 w/C)^ ^Sports Analysis certificates may substitute CRIM JUS 281 w/C, PSYCH 203 w/C,

Sales Leadership Certificate 9 credits				
Required Courses:				
MARKET 331 [^]	Fundamentals of Sales	(3)		
MARKET 335 [^]	Sales Management	(3)		
MARKET 338 [^]	Advanced Sales Topics	(3)		
^These courses must be enrolled in concurrently.				

SOC 281 w/C, MATH 201 w/B, or MATH 301 for ECON 210.

Supply Chain Management Certificate
12 credits

Not available to Supply Chain Management majors.

Required Courses:					
SCM 341**	Essentials of Operations & Supply Chain Mgm	t (3)			
Plus nine credits from:					
SCM 342	Supply Chain Modeling & Analysis (c/SCM 341)	(3)			
SCM 343	Mfg. Planning and Control Systems (SCM 341)	(3)			
SCM 344	Supply Chain & Logistics Mgmt (SCM 341)	(3)			
SCM 345	Global Procure & Strategic Sourcing (SCM 341)	(3)			
SCM 441	Case Studies in Supply Chain Management	(3)			
(SCM 342) and (SCM 343 or SCM 344)					
SCM 445**	Supply Chain Strategy & Analytics (SCM 341)	(3)			
SCM 449	Supply Chain Management Topics (SCM 341)	(3)			
SCM 460	Quality Management & Six Sigma (SCM 341)	(3)			

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^{* |} These courses can be taken with 30 credits earned

^{** |} These courses can be taken with 44 credits earned