

MATHEMATICS, B.S.

ACTUARIAL SCIENCE OPTION (MAAS)

(Fall 2017-Summer 2018)

MATHEMATICS BS CORE COURSES (29 credits) *Note: grades of C- or better required; only one D grade allowed in core or option/2.0 GPA

- _____ 4 MA 16500 Analytic Geometry & Calculus I
- _____ 4 MA 16600 Analytic Geometry & Calculus II
- _____ 3 MA 17500 Intro Discrete Math or MA 27500 Intermediate Discrete Math
- _____ 4 MA 26100 Multivariate Calculus
- _____ 3 MA 35100 Elementary Linear Algebra
- _____ Approved Science Courses (3 courses):

_____ 4 Credits _____	(AST A100, ASTR 26400, 36400, 37000, 40100, or
_____ 4 Credits _____	BIOL 10000, 10800, 10900, 11700, 11900, 12600, 12700, 14000, 18300, or
_____ 3 Credits _____	BIOL 18400, 19500 or BIOL 200—500 level, or
	CHM 10200, 11500, 11600, 18300, 18400, 21800, or
	GEOG G107, G109, G237, G315, or
	GEOL G100, G103, G104, G108, G113, G121 or GEOL 200-500, or
	PHYS 12700, 15200 or PHYS 200—500 level)
- _____ **Lab Check (2 required):

_____ Lab 1 _____	(**Note: science labs may overlap with approved science classes)
_____ Lab 2 _____	(BIOL 10001, 10800, 10900, 11700, 11900, 20300, 20400, 21500, 21600, or
	CHM 11500, 11600, or GEOL G103, G104, L100, or
	PHYS 15200, 20100, 21800, 21900, 22000, 22100 or 25100)

ACTUARIAL SCIENCE OPTION (39 credits) *Note: grades of C- or better required; one D grade allowed in core or option/2.0 GPA

- _____ 3 CS 11400 Intro to Visual Basic
- _____ 3 MA 27300 Financial Methods
- _____ 3 STAT 51100 Statistical Methods
- _____ 3 STAT 51200 Applied Regression Analysis
- _____ 3 STAT 51600 Basic Probability Applications
- _____ 3 STAT 51700 Statistical Inference
- _____ 3 STAT 52000 Time Series and Applications
- _____ 3 Credits MA Elect:

	(MA 31400, MA 49000 MFE, 57500, or MA 30000:59900—* except MA 35100, or STAT 51400 or CS 38400 or 54300, or BUS K327)
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- _____ 3 BUS A201 Intro Financial Accounting
- _____ 3 BUS A202 Intro to Managerial Accounting
- _____ 3 ECON E201 Intro to Microeconomic
- _____ 3 ECON E202 Intro to Macroeconomic
- _____ 3 BUS F301 Financial Management

A&S BS LIBERAL ARTS REQUIREMENTS (14 credits — credits may vary with double counting/language placement — see advisor)

- _____ 3 Second Semester Writing (C- or higher) (ENG W140 or ENG W233)
- _____ 3 Speaking Requirement (C- or higher) (COM 11400 or HIST H125)
- _____ 8 Credits Language Sequence (credit/placement required for 2 semesters of foreign language)

_____ (1 st)	_____ (2 nd)	one course at second semester level required
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Options: (Arabic, French, German, Japanese, Latin, Spanish)

GENERAL EDUCATION REQUIREMENTS (33 Credits) *Note: grades of C- or higher required in Gen Ed/2.0 GPA

****Up to 6 credits in Gen Ed GA1 to GB7 and 3 credits GCAP (C8) may originate in major discipline —see advisor for more information.**

- _____ 3 GA1 Category A1 -- Written Communication (See Bulletin or myBLUEprint for **General Education** courses)
- _____ 3 GA2 Category A2 -- Speaking and Listening
- _____ 3 GA3 Category A3 -- Quantitative Reasoning (**MA 16500)
- _____ 3 GB4 Category B4 -- Scientific Ways of Knowing (**see Mathematics Core/science requirements)
- _____ 3 GB5 Category B5 -- Social & Behavioral Ways of Knowing
- _____ 3 GB6 Category B6 -- Humanistic and Artistic Ways of Knowing
- _____ 3 GB7/71 Category B7 or B71 -- Interdisciplinary or Creative Ways of Knowing (**FL11 and FL12 options)
- _____ 9 Additional Credits -- Category A or B General Education courses

_____ (FL11/FL112)	_____ (ENG W233)	_____ (2 nd Science)
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- _____ 3 **GCAP Category C8--Capstone Experience** (IPFW course only)

MINOR/ELECTIVES (to reach 120 credits): _____

IPFW Residency Requirements: _____ 32 credits at 200 level or above at IPFW _____ with 15 of 32 credits at 300-400 in major
B.S. Requirements: _____ 120 credits _____ 30 credits 300–400 level _____ 2.0 GPA Degree/Major/Gen Ed _____ C- or above in Major/Gen Ed

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PLAN—ACTUARIAL SCIENCE OPTION (MAAS)

(Fall 2017-Summer 2018)

Term: Year: 20				Term: Year: 20			
Course No.	Course Title	Pre-Reqs	Crs.	Course No.	Course Title	Pre-Reqs	Crs.
MA 165000 (GA3)	Anlytc Geometry & Calc 1	MA 159 or 154 (C- or above); or placement	4	MA 16600	Anlytc Geometry & Calc II	MA 165 (C- or above)	4
ENG W131 or (GA1)	Reading, Writing, & Inquiry	Self-Place or ENG W129 (C- or above)	3	COM 11400 or HIST H125 (GA2/A&S)	Fundament of Speech or Great Debates		3
GB4 (**See Mathematics core requirements)	Gen Ed Science/Lab (Approved course)	*See lab requirement	4	Science/with Lab (Gen Ed A/B options)	Approved Science/Lab	*See lab requirement	4
FL 1 st semester (**GB7 options)	Foreign Language 1		4	FL 2nd (**GB7 or Gen Ed A/B options)	Foreign Language 2	FL 1/ placement	4
Total Semester Credit Hours			15	Total Semester Credit Hours			15

Term: Year: 20				Term: Year: 20			
Course No.	Course Title	Pre-Reqs	Crs.	Course No.	Course Title	Pre-Reqs	Crs.
MA 26300	Multivar & Vector Calc	MA 16600, (C- or above)	4	MA 35100	Elementary Linear Algebra	2 sem calc (C- or above grades)	3
MA 17500 or MA 27500	Intro Discrete Math or Intermed Discrete Math	√	3	CS 11400	Intro to Visual Basic	MA 149 or 153	3
BUS A201	Princ of Financial Accounting	Sophomore or permission	3	STAT 51100	Statistical Methods	2 sem calc (C- or above grades)	3
MA 27300	Financial Mathematics	MA 16600, (C- or above)	3	ECON E201	Intro to Microeconomic	Sophomore; MA 153 or beyond	3
ENG W233 (Gen Ed A/B)	Intermed Expos Writing	ENG W131 (C- or above)	3	BUS A202	Intro to Managerial Accounting	BUS A201	3
Total Semester Credit Hours			16	Total Semester Credit Hours			15

Term: Year: 20				Term: Year: 20			
Course No.	Course Title	Pre-Reqs	Crs.	Course No.	Course Title	Pre-Reqs	Crs.
STAT 51200	Applied Regression Analysis	STAT 511, 517, or 528 (C- or above)	3	BUS F305 (Recommended)	Intermediate Corporate Finance	√	3
BUS F301	Financial Management		3	STAT 51700 or Math Elective	Statistical Inference or Math Elective	√	3
ECON E202	Intro to Macroeconomic	ECON E201	3	Science (no lab) (Gen Ed A/B options)	Approved Science		3
STAT 51600 or Math Elective	Basic Probability or Math Elective	√	3	GB7/71 (if needed)	Gen Ed Create/Interdisc		3
GB5	Gen Ed Social/Behavior		3	GB6	Gen Ed Hum/Artistic		3
Total Semester Credit Hours			15	Total Semester Credit Hours			15

Term: Year: 20				Term: Year: 20			
Course No.	Course Title	Pre-Reqs	Crs.	Course No.	Course Title	Pre-Reqs	Crs.
BUS F303 (Recommended)	Intermediate Finance	√	3	STAT 52000	Time Series and Applications	STAT 512 or permission	3
STAT 51600 or Math Elective	Basic Probability Appl or Math Elective	√	3	BUS F420 (Recommended)	Equity & Fixed Income Investments	√	3
GCAP (C8)	Gen Ed Capstone	√	3	MA 49000 MFE	Models of Financial Economics	√	4
@ @ (Elective) or Gen Ed A or B	Free elective course or Gen Ed A or B (if needed)		3	STAT 51700 or Math Elective	Statistical Inference or Math Elective	√	3
@ @ (Elective) or Gen Ed A or B	Free elective course or Gen Ed A or B (if needed)		3	MA490	FM Practicum	√	1
Total Semester Credit Hours			15	Total Semester Credit Hours			14

√ = See IPFW Bulletin or myBLUEprint for additional course prerequisites

Summer Courses:

120 credits required for Bachelor of Science degree
2.0 GPA required for Bachelor of Science degree/major