

Checksheet: B.S. in Mathematics, Actuarial Science Option

Part 1 General Requirements [43-47 credits]

First Year Experience Course [1 credit]

SCI	I120	1	
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(Not required if student transfers with 18 or more credit hours.)

English and Communication [9 credits]

ENG	W131 or W140 (honors)	3	
ENG		3	
COMM	R110	3	

Grade of C or better required for each composition (ENG) course. For second ENG course select from: ENG W270, W231, W230, W320; or TCM 22000 or 32000.

Modern Foreign Language [8 credits]

American Sign Language is acceptable.

Arts & Humanities [3 credits]

		3	
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See General Education Common Core Course Options for Math Majors list for acceptable courses.

Social Sciences [3 credits]

ECON	S201	3	
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ECON S201 is the recommended course for actuarial science majors. See General Education Common Core Course Options for Math Majors list for acceptable courses.

NOTE: ECON E201 does not cover some of the topics included on the Actuarial Exam.

Therefore, Actuarial students are expected to take the honors section of microeconomics (S201).

Additional Arts & Humanities or Social Sciences [3 credits]

ECON	E202	3	
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See General Education Common Core Course Options for Math Majors list for acceptable courses.

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Cultural Understanding [3 credits]

		3	
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May be satisfied through Modern Foreign Language Requirement. See General Education Common Core Course Options for Math Majors list for acceptable courses.

Computer Science [3-4 credits]

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Grade of C or better required. Course must be in a higher level programming language. Approved courses include CSCI 23000, N305, N311, N331, N335, N345. CSCI 23000 recommended. See advisor for approval of course not on list.

Life and Physical Sciences [13 credits]

PHYS	15200	4	

At least 4 courses selected from BIOL, CHEM, GEOL, PHYS, or AST. PHYS 15200 (or a more advanced physics course) must be one of the 4 required science courses. At least 1 course must contain a laboratory. See General Education Common Core Course Options for Math Majors list for acceptable courses. Grade of C- or better required in each course, except for at most one grade of D+ or D. The following courses are NOT acceptable: all AGR courses; AST A130; BIOL N100, N120, N200; CHEM C100, C101, C102, C110; GEOL G130; PHYS 01000, 10000, 14000, 20000, 21800, 21900.

Except for laboratory courses combined with corresponding lecture courses, 1 credit hour and, in general, 2 credit hour courses do not apply in this area.

A minimum of 120 credits must be completed for graduation. This total must include residence of at least 2 semesters at IUPUI and completion of at least 32 credits at IUPUI in courses at the 300-level or above.

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Part 2 Actuarial Science Option Requirements

Major Area: A grade of C or better is required in each course.
 G.P.A. in major courses must be 2.5 or above.
 F: offered fall, S: offered spring, SS: offered summer session

Mathematics [30 credits]

MATH 16500 (F, S, SSI)	Anal. Geom. & Calculus I (P: 15400 or 15900)	4	
MATH 16600 (F, S, SSII)	Anal. Geom. & Calculus II (P: 16500)	4	
MATH 17100 (F, S, SSI, SSII)	Multidimensional Math (P: 15400 or 15900)	3	
MATH 26100 (F, S, SSI)	Multivariate Calculus (P: 16600 and 17100)	4	
MATH 26600 (F, S, SSII)	Differential Equations (P: 16600, 17100; C: 26100)	3	
MATH 35100 (F, S)	Linear Algebra (P: 26100)	3	
MATH 37300 (S)	Mathematical Finance (P: 16500)	3	
MATH 42100 (F odd) or 42300 (F even) or 42600 (S)	Linear Prog & Opt Tech (P: 26100, 35100) or Discrete Mod (P: 26600 & 35100) or Applied Modeling (P: 26600, PHYS 15200)	3	
MATH or STAT	elective*	3	

*Suggested MATH or STAT elective: STAT 35000 (F, S), P: MATH 16600.

Probability and Statistics [14-15 credits]

STAT 41600 (F)	Probability (P: MATH 26100)	3	
STAT 41700 (S)	Statistical Theory (P: STAT 41600)	3	
STAT 47200 (F)	Actuarial Models I (P: STAT 41600)	3	
STAT 47300 (S)	Actuarial Models II (P: STAT 41600)	3	
STAT	elective*	2 or 3	

*Suggested STAT electives: STAT 51200 and STAT 37100

MATH 27600 can be used as a MATH elective. Other MATH/STAT electives must be 300-level or above and cannot include STAT 30100.

Capstone Experience

[2 - 3 credits]

MATH	49200		
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Economics (Minor)

[15 credits]

ECON	S201* (F, S)	3	
ECON	E202 or S202 (P: E201 or S201) (F, S)	3	
ECON	E305 (P: E201 & E202) (F, S)	3	
ECON	E321 (P: E201 & E202) (S, SSI)	3	
ECON	E322 (P: E201 & E202) (F, SSII)	3	

*Actuarial students must take the honors section of microeconomics (S201). To be awarded the minor you must submit an application to the Dept. of Economics.

Business

[9 credits]

BUS	A200 (F, S, SSII)	3	
BUS	F300 (P: A200) (F, S, SSII)	3	
BUS	F305* (P: F300) (F, S, SSI)	3	

*Before taking BUS F305, contact the Kelley School of Business at 317-274-2147 or busugrad@iupui.edu to receive permission. Inform them that you are an Actuarial Science major.

Note: A business minor can be completed with four additional courses: BUS L203, P300, M300 + one elective. NOTE: BUS K201 does not apply towards this degree. See advisor for details.

General Electives

[6-10 credits]

Suggested electives for this program include the required business courses to complete a business minor or courses in computer science. Courses taken outside the School of Science and Liberal Arts must receive advisor's approval. No more than 6 credits of clinical, athletic, or performing arts courses will be approved. Courses taken on a pass/fail option will be applied only as general electives and not toward degree area requirements of the school or department.