

## Checksheet: B.S. in Mathematics, Applied Statistics Option (Tentative)

### 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]

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

#### Additional Arts & Humanities or Social Sciences [3 credits]

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

#### 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 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.

Want to learn more about careers in math? [ams.org/employment/undergrad.html](http://ams.org/employment/undergrad.html)

## Checksheet: B.S. in Mathematics, Applied Statistics Option

### Part 2 Pure Mathematics 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.

#### Core Courses [27 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 41400 (F)	Numerical Methods (P: 26600 & a high-level programming course)	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	

#### Probability and Statistics [18 credits]

STAT	35000 or 51100	3	
STAT 41600 (F)	Probability	3	
STAT 41700 (S)	Statistical Theory (P: STAT 41600)	3	
STAT 51200 (F)	Applied Regression Anal (P: STAT 41700)	3	
STAT 42100**	Statistical Modeling Using R and SAS	3	
STAT	Elective	3	

\*\*Signifies a new course that is expected to be approved for fall 2016.

#### Capstone Experience [2 - 3 credits]

MATH	49200		
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#### Minor Area [credit hours vary depending on minor requirements; usually 15-21 credits]


At least 3 courses beyond the introductory level. A secondary area of concentration in one of the physical sciences or in a subject which makes serious use of mathematics, such as physics, computer science or economics is desirable.

#### General Electives [8-15 credits]


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.

Independent Study (correspondence) courses for general electives up to a maximum of 12 credits may be taken with the permission of the Associate Dean for academic programs in the School of Science.

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.