

**Pending final Institute approval

BS in Discrete Mathematics: Course Requirements Fall 2015**

MATH Courses:

Core courses (16/19):

- __MATH 1550/1551 Differential Calc (3/2)
- __MATH 1552 Integral Calculus (4)
- __MATH 1553/1554* Linear Alg (2/4)
- __MATH 2551 Multivariable Calculus (4)
- __MATH 2602 Linear & Discrete Math
or MATH 2552 Differential Eq.* (4)

*Recommended

MATH 1564 Lin Alg w/ Abstract Vector Spaces (4) may be used in place of 1553/1554; only recommended for students with a 5 on the BC Calculus exam or at least a B in MATH 1552.

Bridging courses:

- __MATH 2106 Found. Of Math. Proof **(3)
- __MATH 2406 Abst. Vector Spaces (3)
- __MATH 3012 Applied Combin. (3)
- __MATH 3215 Prob. and Stat. (3)

Upper level foundation courses:

- __MATH 4107 Abstract Alg. I (3)
- __MATH 4317 Real Analysis I (3)
- __MATH 4022 Graph Theory (3)
- __MATH 4080 Senior Project I (2)
- __MATH 4090 Senior Project II (2)

Other core courses:

Technical Electives (9) Courses chosen from a preapproved list of MATH, CS, ISYE, ECE courses

- __CS 2050/2051 Intro Discrete Math CS(3)
- __CS 1301 Intro to Computing (3)
- __CS 1331 Intro Obj-oriented Prog. (3)
- __CS 2110 Computer Organiz &
Program (4)
- __CS 3510/3511 Design & Analysis of
Algorithms (3)
- __CS 4510 Automata & Complexity (3)
Theory (3)

- __ISYE 3232 Stochastic Manufacturing
& Services Systems (3)
- __ISYE 3133/3833 Eng. Optimization OR
MATH 4580 Linear Prog. (3)

Supporting courses:

- __Lab Sci (BIOL, CHEM, EAS) (4)
- __PHYS 2211 Physics I (4)
- __PHYS 2212 Physics II (4)

General Requirements:

Humanities (12 total):

- __ENGL 1101 (3)
- __ENGL 1102 (3)
- Humanities/Fine Arts Elective (6): approved
HUM courses, such as Literature, Phil, Foreign
Language, etc.

Social Sciences (12 total):

- __One of HIST 2111, HIST 2112, POL 1101,
INTA 1200, PUBP 3000 (3)
- Social Science Electives (9): approved SS
courses, such as Economics, Psychology,
History, etc.

- __APPS 1040 or 1050 - Wellness (2)

Global Perspective (3) _____
This course may be chosen to also count as a
Humanities course or as a Social Science
course.

Free Electives **(9)

Total: 122 hours

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