**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 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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