Concentration Requirements Worksheet

Department of Mathematics  
October 2016

Name_________________________________________________________ Expected Graduation Date_____________________

BASIC REQUIREMENTS FOR PRIMARY CONCENTRATORS

8 Pure Math Courses to include one math course from each of the areas below

- Math 110 – 119 (Analysis)  Math Course ____________ (Math 212a, b & Math 213a, b will satisfy this requirement)
- Math 120 – 129 (Algebra)    Math Course ____________  (Math 221 & Math 223a, b will satisfy this requirement)
- Math 130 – 139 (Geometry)  Math Course ____________ (Math 231a, b, Math 230a, b &  Math 232a, b will satisfy this requirement)

5 Additional Math courses (Math 91r and Math 60r will not be counted towards concentration credit)

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4 More Pure Math Courses or Courses from Related Fields

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Applied Mathematics 21a*, 21b*, 50**,101, 104, 105, 106***, 107, 111, 115, 120****, 121, 147, 201, 202, 205, 207, 210, 211
Astronomy 150, 193
Organismic and Evolutionary Biology 173, 181, 252
Chemistry 160, 161, 242
Computer Science 51, 121, 124, 125, 181, 187, 220r, 221, 222, 223, 225, 226r, 228, 277
Economics 1052, 2010a, 2010b, 2010c, 2052, 2099, 2120
Engineering Sciences 123, 125, 145, 156, 181, 201, 202, 203, 209, 210, 220, 241, 255
Philosophy 140, 144
Physical Sciences 12a, 12b
Physics or Applied Physics, all except 90r, 91r, 95, 120, 129, 136, 140, 141, 141a and courses which are primarily laboratory courses such as 123 and 191
Statistics 107, 110, 111, 139, 140, 149, 170, 171, 210, 211, 215, 220, 221
Systems Biology 200

* May not count towards requirements in addition to any of the following courses, Math 18, 19a, 19b, 21a, 21b, 23a, 25a, 55a, 55b
** May not count in addition to Math 99r or a Freshmen Seminar
*** May not count in addition to Math 122
**** May not count in addition to Math 121

All Primary Concentrators are required to submit a five page expository paper in mathematics. The paper should be an original, coherent and correct exposition of a topic in pure or applied mathematics. The paper should be written during the sophomore or junior year under the supervision of a professor or tutor in a tutorial (Math 99r) or Math 91r reading course or a 100 or 200 level course that the student is contemporaneously enrolled in. Both the professor or tutor and the Director of Undergraduate Studies must accept the paper. Ordinarily students enrolled in a tutorial (Math 99r) automatically satisfy the expository paper requirement as part of the structure of the tutorial.
BASIC REQUIREMENTS FOR SECONDARY CONCENTRATORS

5 Pure Math Courses to include one math course from each of the areas below

- **Math 110 – 119** (Analysis)  
  Math Course  

- **Math 120 – 129** (Algebra)  
  Math Course  

- **Math 130 – 139** (Geometry)  
  Math Course  

- Additional Math Course  
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- Additional Math Course  
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ADDITIONAL INFORMATION

Students declaring a joint concentration with Math as the primary are required to write a senior thesis.

Students wishing to receive an honors recommendation from the department must write a senior thesis.

Junior Expository Papers are due the end of the Reading Period of the Spring Semester of the Junior Year.

Senior Theses are due the Monday following Spring Break.