

University College Bachelor of Science degree in **APPLIED MATHEMATICS (UC 20)** Advisor _____

Name _____ Address _____ Phone _____ SS# _____

E-Mail: _____ Transfer Credit: _____ 10/09

| UNITS | DISTRIBUTION AREAS | TRANSFER UNITS | COMPLETED AT WASHINGTON UNIV | IN PROGRESS | TO BE EARNED | |
|---------------|--|----------------|------------------------------|-------------|--------------|--|
| 9 | English Composition (U11-101, 203, and 1 300-level composition course) | | | | | |
| 9 | Humanities | | | | | |
| 9 | Social Sciences | | | | | |
| 9 | Math/ Science | | | | | |
| 9 | Foreign Language and/or Creative Arts | | | | | |
| 15 | Applied Mathematics - U20-123, U20-155, U20-156, U20-255, U20-256 | | | | | |
| 6 | Applied Mathematics Advanced Requirements: U20-301, U20-309 | | | | | |
| 12 | Mathematics Electives – 9 units must be On the 400-level | | | | | |
| | General Electives | | | | | |
| 120 | Totals (30 upper-level units, 18 in residence) | | | | | |
| Matriculation | | Updates | | | GPA: | |

GENERAL EDUCATION REQUIREMENTS

English*: Undergraduate degree candidates in University College must complete a 6-unit Basic Writing Requirement consisting of Principles of Writing (EComp 101) and Critical and Researched Writing (EComp 203). The 3-unit Advanced Writing Requirement must be fulfilled by any 300-level or higher English Composition course. EComp 203 and the 300-level-or-higher composition course are required of all undergraduate degree candidates, and these courses must be taken at Washington University.

*A student who transfers English Composition courses from another college or university must consult an academic advisor at University College.

Humanities: (9 credits) Courses from Classics, History*, Literature, Philosophy, Religious Studies.

Social Sciences: (9 credits) Courses from: Anthropology, Economics, History*, Political Science, Psychology, Social Thought and Analysis.

*History courses may satisfy either the Humanities or Social Sciences requirements, but not both.

Math and Science: (9 credits) Biology, Chemistry, Earth and Planetary Sciences, Physics, and Science. To meet the quantitative reasoning requirement you must take one of the following: Econ 231 (Economic Statistics), Math 1011 (Intro to Statistics), Math 123 (Programming in C), Math 141 (Pre-Calculus I), Math 142 (Pre-Calculus II), Math 155 (Calculus I), Math 156 (Calculus II), Math 205 (Applied Statistics Online), Math 210 (The Art of Mathematical Thinking), Math 212 (Sports and Statistics), Math 255 (Calculus III), Math 256 (Calculus IV), any 300 level and higher math classes, PolSci 323 (Introduction to Quantitative Methods) or Psych 300 (Psychological Statistics).

Foreign Language and/or Creative Arts: (9 credits) Art, Creative Writing, Dance, Drama, Film Studies, Music, Speech and Foreign Languages.

RESIDENCY REQUIREMENT

You must complete the final 36 units of course work toward the Bachelor of Science degree at Washington University. At least half the credits for the major and at least 18 units of advanced (300-400) courses must be completed at Washington University.

REQUIREMENTS: MAJOR IN APPLIED MATHEMATICS

A degree in mathematics is useful for those seeking careers in teaching, research, the sciences, or business and government. The Applied Mathematics major is suggested if you plan a career in actuarial work, industrial mathematics or statistics.

Requirements for the Applied Mathematics Major

To complete the Applied Mathematics Major, you must also complete:

- Calculus I, II, III, and IV (Math 155, 156, 255, and 256);
- 18 units of 300- and 400-level mathematics courses, including Math U20-301 and 309; of the remaining four courses, three must be at the 400 level.

You should select additional courses in the social and physical sciences that relate to your career interests.

COURSES

U20-1011 Introduction to Statistics
U20-123 Programming in C
U20-140 Algebra
U20-141, 142, Precalculus I and II
U20-155, 156, 255, 256 Calculus I-IV
U20-205 Applied Statistics Online
U20-210 The Art of Mathematical Thinking
U20-212 Sports and Statistics
U20-301 Differential Equations
U20-305 Introduction to the Practice of Statistics
U20-309 Linear Algebra
U20-310 Differential Equations
U20-4171 Introduction to Topology and Modern Analysis
U20-420 Experimental Design
U20-421 Theory of Functions of a Complex Variable
U20-429 Linear Algebra
U20-430 Modern Algebra
U20-434 Survival Analysis
U20-436 Linear Programming and Extensions
U20-439 Linear Statistical Models
U20-475 Statistical Computation
U20-4931 Advanced Probability
U20-4941 Advanced Statistics
U20-495 Stochastic Processes

To receive the Bachelor of Science degree, you must maintain a 2.0 GPA in all courses taken and receive a grade of C- or better in all courses applied to your major.