

# MILLERSVILLE UNIVERSITY

Student Name: \_\_\_\_\_ Student I.D.# \_\_\_\_\_

|              |  |
|--------------|--|
| DEGREE: BS   | <b>MAJOR REQUIREMENTS FOR A BS DEGREE IN</b> |
| MAJOR: MATH  | <b>MATHEMATICS: STATISTICS</b>               |
| OPTION: STAT | Total credit hours required: 120.0 minimum   |

## REQUIREMENTS AND POLICIES FOR THE BS MATHEMATICS MAJOR

### A. Policies for Admission to the Major

1. New students (freshmen and transfers) must be admitted to the Mathematics major by the Office of Admissions upon admission to the University.
2. Admission into the Mathematics major from other departments is upon approval of the chairperson of the Department of Mathematics. A "C-" or better in MATH 161 and all Math courses already taken which count toward a Mathematics major is required for admission.
3. Non-degree and continuing education students must be admitted to the Mathematics major by the Office of Admissions, subject to approval by the chairperson of the Department of Mathematics.

### B. Policies for Retention in the Major

1. University requirements for retention.
2. A mathematics major taking any Math course required as a prerequisite for a later Math course must earn a grade of "C-" or better in that course before being admitted to the later course for which it is a prerequisite.
3. Periodically, a mathematics major's progress will be reviewed in accordance with the "Department Evaluation of Majors" policy stated in the University catalog. A student who does not demonstrate satisfactory progress will be notified of the department's concern. Subsequent notifications may result in being terminated as a major in the department.

### C. Policies for Completion of the Major

1. Completion of all University curricular requirements.

**Note to the student:** *This form is provided as a guide. It is your responsibility to consult regularly with your advisor to be aware of changes and curriculum details which are not incorporated on this form.*

## MAJOR SEQUENCE AND DEGREE REQUIREMENTS

Major: **BS MATHEMATICS**

Option: **STATISTICS**

Major Field Requirements: **45.0 credits**

Other Requirements: **18.0 - 21.0 credits**

When applicable, up to six of the **REQUIRED RELATED** courses may be credited toward the Liberal Arts Core subject to normal distribution rules.

| Course No.   | Short Title                 | C.H. | Grade | Course No.  | Short Title            | C.H. | Grade |
|--|-----------------------------|------|-------|---|------------------------|------|-------|
| <b>REQUIRED MATHEMATICS COURSES (34.0-35.0 credits)</b>                                |                             |      |       | <b>REQUIRED RELATED COURSES (18.0-21.0 credits)</b>   |                        |      |       |
| MATH 161   | Calculus I*                 | 4.0  | _____ | CSCI 161  | Intro to Programming I | 4.0  | _____ |
| MATH 211   | Calculus II                 | 4.0  | _____ | PHYS 231  | Physics I w/Calculus   | 5.0  | _____ |
| MATH 310   | Intro Mathematical Proof    | 3.0  | _____ | <p><b>One of the following options:</b></p> <p>a) Three courses (at least 3.0 credits each) chosen from the departments of Biology, Chemistry, Computer Science, Earth Science, and Physics, which count toward the major in that department and to include at least one of: BIOL 375, CSCI 162, ESCI 340, ESCI 341, ESCI 342, or PHYS 232.</p> <p style="text-align: center;"><b>--OR--</b></p> <p>(b) Four courses (at least 3.0 credits each) chosen from a single department which count toward the major in that department.</p> |                        |      |       |
| MATH 311   | Calculus III                | 4.0  | _____ |   |                        |      |       |
| MATH 322   | Linear Algebra I            | 4.0  | _____ |   |                        |      |       |
| MATH 335   | Mathematical Statistics I   | 3.0  | _____ |   |                        |      |       |
| MATH 345   | Abstract Algebra I          | 3.0  | _____ |   |                        |      |       |
| MATH 365   | Ord. Differential Equations | 3.0  | _____ |   |                        |      |       |
| MATH 375   | Numerical Analysis          | 3.0  | _____ |   |                        |      |       |
| MATH 464   | Real Analysis I             | 3.0  | _____ |   |                        |      |       |
| <p>*With permission, MATH 163 Honors Calculus I may be taken in place of MATH 161.</p> |                             |      |       |   |                        |      |       |
| <b>REQUIRED COURSES - Statistics Option (10.0 credits)</b>                             |                             |      |       |   |                        |      |       |
| MATH 435   | Mathematical Statistics II  | 3.0  | _____ |   |                        |      |       |
| MATH 535   | Statistical Methods I       | 3.0  | _____ |   |                        |      |       |
| MATH 536   | Statistical Methods II      | 3.0  | _____ |   |                        |      |       |
| MATH 537   | Stat Prob Solving Seminar   | 1.0  | _____ |   |                        |      |       |
| <p>Additional Recommended: MATH 370, 375, 422.</p>                                     |                             |      |       |   |                        |      |       |