



UNIVERSITY OF THE PHILIPPINES MINDANAO  
Office of the University Registrar  
**BACHELOR OF SCIENCE IN APPLIED MATHEMATICS**  
Approved on June 24, 2003

**FIRST YEAR, FIRST SEMESTER**

| Course No. | Course Description                | Lecture | Lab | Units     | Prerequisite/s |
|------------|-----------------------------------|---------|-----|-----------|----------------|
| AMAT 19    | Finite Mathematics                | 3       |     | 3         |                |
| MATH 17    | Algebra & Trigonometry            | 5       |     | 5         |                |
| GE         |                                   | 3       |     | 3         |                |
| GE         |                                   | 3       |     | 3         |                |
| GE         |                                   | 3       |     | 3         |                |
| PE 1       | Foundations of Physical Fitness   | (2)     |     | (2)       |                |
| NSTP 1     | National Service Training Program | (3)     |     | (3)       |                |
|            |                                   |         |     | <b>17</b> |                |

**FIRST YEAR, SECOND SEMESTER**

| Course No. | Course Description                | Lecture | Lab | Units     | Prerequisite/s     |
|------------|-----------------------------------|---------|-----|-----------|--------------------|
| MATH 36    | Mathematical Analysis I           | 5       |     | 5         | MATH 14 or MATH 17 |
| STAT 1     | Elementary Statistics             | 2       | 1   | 3         | MATH 11 or MATH 17 |
| GE         |                                   | 3       |     | 3         |                    |
| GE         |                                   | 3       |     | 3         |                    |
| GE         |                                   | 3       |     | 3         |                    |
| PE 2/4     |                                   | (2)     |     | (2)       |                    |
| NSTP 2     | National Service Training Program | (3)     |     | (3)       |                    |
|            |                                   |         |     | <b>17</b> |                    |

**SECOND YEAR, FIRST SEMESTER**

| Course No. | Course Description       | Lecture | Lab | Units     | Prerequisite/s |
|------------|--------------------------|---------|-----|-----------|----------------|
| AMAT 150   | Computer Programming     | 2       | 1   | 3         | COI            |
| MATH 37    | Mathematical Analysis II | 5       |     | 5         | MATH 36        |
| GE         |                          | 3       |     | 3         |                |
| GE         |                          | 3       |     | 3         |                |
| GE         |                          | 3       |     | 3         |                |
| GE         |                          | 3       |     | 3         |                |
| PE 2/3/4   |                          | (2)     |     | (2)       |                |
|            |                          |         |     | <b>20</b> |                |

**SECOND YEAR, SECOND SEMESTER**

| Course No. | Course Description        | Lecture | Lab | Units     | Prerequisite/s   |
|------------|---------------------------|---------|-----|-----------|------------------|
| AMAT 110   | Mathematical Modeling     | 3       |     | 3         | MATH 37 & STAT 1 |
| MATH 38    | Mathematical Analysis III | 3       |     | 3         | MATH 37          |
| MATH 101   | Logic & Set Theory        | 3       |     | 3         | MATH 37 or COI   |
| GE         |                           | 3       |     | 3         |                  |
| GE         |                           | 3       |     | 3         |                  |
| GE         |                           | 3       |     | 3         |                  |
| PE 2/3/4   |                           | (2)     |     | (2)       |                  |
|            |                           |         |     | <b>18</b> |                  |

**THIRD YEAR, FIRST SEMESTER**

| Course No. | Course Description                 | Lecture | Lab | Units     | Prerequisite/s                       |
|------------|------------------------------------|---------|-----|-----------|--------------------------------------|
| MATH 120   | Linear Algebra                     | 3       |     | 3         | MATH 38 or COI                       |
| MATH 141   | Introductory Combinatorics         | 3       |     | 3         | MATH 101 or CMSC 55                  |
| MATH 176   | Numerical Analysis I               | 3       |     | 3         | MATH 38 & either AMAT 150 or CMSC 21 |
| MATH 181   | Introduction to Probability Theory | 3       |     | 3         | MATH 28 or MATH 38                   |
| STAT 101   | Statistical Methods                | 2       | 1   | 3         | STAT 1                               |
|            | ELECTIVE                           |         |     | 3         |                                      |
|            |                                    |         |     | <b>18</b> |                                      |

### THIRD YEAR, SECOND SEMESTER

| Course No. | Course Description                           | Lecture | Lab | Units     | Prerequisite/s       |
|------------|--|---------|-----|-----------|----------------------|
| AMAT 115   | Introduction to Mathematical Decision Theory | 3       |     | 3         | MATH 181 or STAT 145 |
| AMAT 160   | Linear Programming                           | 3       |     | 3         | MATH 120 or COI      |
| AMAT 167   | Mathematical Models in Operations Research I | 3       |     | 3         | AMAT 110 & MATH 181  |
| MATH 151   | Ordinary Differential Equations              | 3       |     | 3         | MATH 28 or MATH 38   |
| MATH 177   | Numerical Analysis II                        | 3       |     | 3         | MATH 176             |
|            | ELECTIVE                                     |         |     | 3         |                      |
|            |  |         |     | <b>18</b> |                      |

### THIRD YEAR, SUMMER

| Course No. | Course Description | Lecture | Lab | Units | Prerequisite/s |
|------------|--------------------|---------|-----|-------|----------------|
| AMAT 198   | Practicum          |         |     | 3     | COI            |

### FOURTH YEAR, FIRST SEMESTER

| Course No. | Course Description                     | Lecture | Lab | Units     | Prerequisite/s            |
|------------|--|---------|-----|-----------|---------------------------|
| AMAT 161   | Non-linear Programming                 | 3       |     | 3         | MATH 120 or COI           |
| AMAT 162   | Integer & Dynamic Programming          | 3       |     | 3         | AMAT 160                  |
| AMAT 190   | Special Problem                        | 1       |     | 1         | COI                       |
| AMAT 199   | Undergraduate Seminar                  | 1       |     | 1         | MATH 38 & MATH 101 or COI |
| ENG 10     | Writing of Technical/Scientific Papers | 3       |     | 3         | AH 2 & Junior Standing    |
| MATH 155   | Advanced Calculus I                    | 3       |     | 3         |                           |
| GE         |  | 3       |     | 3         |                           |
|            |  |         |     | <b>17</b> |                           |

### FOURTH YEAR, SECOND SEMESTER

| Course No. | Course Description             | Lecture | Lab | Units     | Prerequisite/s                          |
|------------|--------------------------------|---------|-----|-----------|---|
| AMAT 190   | Special Problem                | 2       |     | 2         | COI                                     |
| AMAT 191   | Special Topics                 | 3       |     | 3         | COI                                     |
| MATH 111   | Modern Algebra I               | 3       |     | 3         | MATH 38 & or either MATH 101 or CMSC 55 |
| PI 100     | The Life & Works of Jose Rizal | 3       |     | 3         | Junior Standing                         |
|            | ELECTIVE                       | 3       |     | 3         |   |
| GE         |                                | 3       |     | 3         |   |
|            |                                |         |     | <b>17</b> |   |

### TOTAL NUMBER OF UNITS - 145

**NOTE:** The specification of the domain [i.e., GE (AH), GE (SSP) and GE (MST) of the GE courses for any semester is intended primarily to help the students keep track of the number of GE units he/she has taken in each domain. Nothing in this document therefore prevents a student, for example, from taking a GE course in the AH or NSM domain, when the checklist provides a GE (SSP) course for a particular year or semester, so long as the number of required GE units in each domain is complied with.

#### General Education

| ARTS and HUMANITIES DOMAIN<br>(15 units) |                            | SOCIAL SCIENCE and PHILOSOPHY<br>DOMAIN (15 units) |                               | NATURAL SCIENCE and MATHEMATICS<br>DOMAIN (15 units) |                         |
|--|----------------------------|--|-------------------------------|--|-------------------------|
| AH 1                                     | COMM I                     | SSP 1  | HIST I                        | MST 1  | NASC I                  |
| AH 2                                     | COMM II                    | SSP 2  | HIST II                       | MST 2  | NASC II                 |
| AH 3                                     | COMM III                   | SSP 3  | SOSC I                        | MST 3  | MATH I                  |
| 4H 4                                     | HUM I                      | SSP 4  | SOSC II                       | MST 4  | STS                     |
| AH 5                                     | HUM II                     | SSP 5  | PHLO I                        | MST 5  | Biotechnology & Society |
| AH 6                                     | Visual Comm & Society      | SSP 6  | Wika at PagkaPilipino         | MST 6  | Biodiversity Challenge  |
| AH 7                                     | Significant Themes in Lit. | SSP 7  | Hitchiker's Guide to Mindanao |  |                         |

#### ELECTIVES:

| Course No. | Course Description   | Lecture | Lab | Units | Prerequisite/s          |
|------------|--|---------|-----|-------|-------------------------|
| AMAT 168   | Mathematical Models in Operations Research II                  |         |     |       | AMAT 110 & AMAT 160     |
| BIO 151    | Environmental Management                                       | 3       |     | 3     | BIO 150 or COI          |
| MATH 152   | Partial Differential Equations                                 | 3       |     | 3     | MATH 151                |
| MGT 101    | Concepts & Dynamics of Management                              | 3       |     | 3     | COI                     |
| MGT 111    | Principles of Accounting                                       | 3       |     | 3     | COI                     |
| MGT 121    | Quantitative Business Analysis                                 | 3       |     | 3     | MGT 101 or COI & STAT 1 |
| MGT 131    | Introduction to Human Relations & Behavior<br>in Organizations | 3       |     | 3     | COI                     |