

**LIBERAL ARTS AND SCIENCES**  
**LIBERAL ARTS AND SCIENCES - MATHEMATICS (LAM)**  
**(HEGIS 5617)**

This program of study is recommended for transfer students planning to earn a baccalaureate degree with a major in mathematics. It is recommended that students entering the program have four units of high school academic math.

The Associate in Arts (A.A.) degree is awarded upon completion of the requirements for this program.

Students who complete the LAM program will:

- successfully transfer to a four-year institution of higher learning to earn a baccalaureate degree in mathematics or mathematics education;
- have a broad and enriched background in the liberal arts;
- use contemporary technology to explore mathematical ideas and effectively communicate their observations.
- use mathematics in a non-trivial way in physics.

Courses should be selected in consultation with an advisor

| <u>Course No.</u>              | <u>Descriptive Title</u>                           | <u>Cr.Hrs.</u> |
|--------------------------------|--|----------------|
| <u>FIRST SEMESTER</u>          |  |                |
| LAM 100<br>or LAH 100 (a)      | Mathematics Introductory Seminar                   | 1              |
| CPS 141                        | Introduction to Computer Science (c)               | 4              |
| ENG 101                        | Composition I                                      | 3              |
| MAT 221                        | Analytic Geometry and Calculus I                   | 4              |
| WFE 101                        | Lifetime Wellness and Fitness                      | <u>3</u>       |
|                                | TOTAL  | 15             |
| <u>SECOND SEMESTER</u>         |  |                |
| ENG 102                        | Composition II                                     | 3              |
| HIS 104, HIS 108, or HIS 121   |  | 3              |
| MAT 222                        | Analytic Geometry and Calculus II                  | 4              |
| PHY 151                        | Engineering Physics I (b)                          | 4              |
| General Education Elective (d) |  | <u>3</u>       |
|                                | TOTAL  | 17             |
| <u>THIRD SEMESTER</u>          |  |                |
| BHS 103                        | Social Problems in Today's World                   | 3              |
| MAT 223                        | Analytic Geometry and Calculus III                 | 4              |
|                                | General Education Elective (d)                     | 3              |
| MAT 214<br>or 217              | Discrete Mathematics<br>Introduction to Proofs (g) | 3              |
| PHY 152                        | Engineering Physics II (b)                         | <u>4</u>       |
|                                | TOTAL  | 17             |
| <u>FOURTH SEMESTER</u>         |  |                |
| MAT 215                        | Introduction to Linear Algebra                     | 3              |
| MAT 224                        | Differential Equations                             | 4              |
| Electives (e)                  | (4-6 credits)                                      |                |
| Free Elective (f)              | (3-4 credits)                                      | <u>8-10</u>    |
|                                | TOTAL  | 15-17          |
|                                | TOTAL CREDIT HOURS                                 | 64             |

- a. LAM students enrolled in MAT 185, 215, 221, 223 or 224 take LAM 100. All others take LAH 100.
- b. PHY 121/122 is an acceptable alternative to PHY 151/152 at some transfer colleges. Check with your advisor concerning a waiver.
- c. Two of the following courses CIS 112, 114, 214, may be substituted for CPS 141.
- d. General Education Elective: Courses applicable to this program are listed in the General Education Appendices D, E, F, G, H and I. Students may select a course from Appendix D only if HIS 104 or HIS 121 have not been previously taken. Students may select a course from Appendix F only if HIS 108 has not been previously taken. See page 99 for the list of the General Education Appendices.
- e. Courses applicable to this program are: (a) specific courses listed above; (b) courses applicable in all programs, See page 97; CPS 142, CPS 231 with department approval. A minimum of 8 elective credits including the free elective is required.
- f. See page 98 for a full discussion of the free elective requirement. The subject area for Mathematics includes all courses labeled MAT.
- g. Students should select either MAT 214 or MAT 217 based on the requirements of their prospective transfer colleges.