

LANSING COMMUNITY COLLEGE

CURRICULUM GUIDE

Mathematics/Physics
Associate in Science Degree

Curriculum Code: 0200 (Effective Fall 2006 – Summer 2011)

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the MACRAO Transfer Agreement between two-year and four-year institutions in Michigan. General education and subject area requirements vary from one college or university to another.

Prior to beginning this curriculum, students should contact the Counseling and Advising Center, Suite 2300, Gannon (GVT) Building, telephone number (517) 483-1904, to consult with an academic advisor or counselor and obtain an appropriate transfer guide. They are also available on the web at www.lcc.edu/transfer/guides. Students should also contact the school to which they will transfer for specific transfer institution requirements. (See *Transfer Opportunities* for a list of institutions for which transfer guides are available.)

PREREQUISITES

Students should see *Course Descriptions* or *Course Offerings* for course prerequisite information. See the *Assessment and Placement Testing* section for skills assessment and advising information.

INFORMATION

Contact the Mathematics and Computer Science Department, Arts and Sciences Building, Room 301, telephone number (517) 483-1087 (Website: <http://www.lcc.edu/mcs/>) or Counseling and Advising Centers, Gannon Vocational-Technical Center, Room 204, telephone number (517) 483-1904.

REQUIREMENTS

| CODE | TITLE | TOTAL: 20 CREDITS CREDIT HOURS |
|---------|---|-----------------------------------|
| MATH253 | Calculus III | 4 |
| MATH254 | Introduction to Differential Equations | 3 |
| MATH260 | Linear Algebra | 3 |
| PHYS251 | Physics I: Mechanics | 5 |
| PHYS252 | Physics II: Electromag, Waves and Optic | 5 |

LIMITED CHOICE REQUIREMENTS

TOTAL: 40-48 CREDITS

Complete the indicated number of credits from **EACH CHOICE** listed below.

CHOICE 1: General Education MACRAO Requirements

16 Credits

(See *Transfer Information/MACRAO Transfer Agreement* for approved courses in each area.)

| | |
|--------------------------------------|---|
| English Composition (see Note 2) | 0 |
| Science and Mathematics (see Note 1) | 0 |
| Social Science (see Note 3) | 8 |
| Humanities (see Note 3) | 8 |

CHOICE 2: General Education Core Requirements **0–8 Credits**
 (See *General Education Core Requirements* for information on how to fulfill these requirements. Core area proficiency exams, where appropriate, are available for each core area. Meeting Core with a proficiency test may require additional MACRAO credits.)

| | |
|--|-----|
| Communication Core Area (see Note 3) | 0–4 |
| Global Perspectives and Diversity Core Area (see Note 3) | 0–4 |
| Mathematics Core Area (see Note 1) | 0 |
| Science Core Area (see Note 1) | 0 |
| Writing Core Area (see Note 2) | 0 |

CHOICE 3: Writing (Complete one course from each subchoice) **8 Credits**

Subchoice 3A

| | | |
|---------|----------------------|---|
| WRIT121 | Composition I | 4 |
| WRIT131 | Honors Composition I | 4 |

Subchoice 3B

| | | |
|---------|---------------------------------------|---|
| ENGL122 | Writing About Literature and Ideas | 4 |
| ENGL132 | Honors Writing – Literature and Ideas | 4 |
| WRIT122 | Composition II | 4 |
| WRIT132 | Honors Composition II | 4 |

CHOICE 4: Mathematics (Complete one course from each subchoice) **8 Credits**

Subchoice 4A

| | | |
|---------|-------------------|---|
| MATH151 | Calculus I | 4 |
| MATH161 | Honors Calculus I | 4 |

Subchoice 4B

| | | |
|---------|--------------------|---|
| MATH152 | Calculus II | 4 |
| MATH162 | Honors Calculus II | 4 |

CHOICE 5: Related Courses **8 Credits**

| | | |
|---------|-------------------------------------|---|
| CHEM151 | General Chemistry Lecture I | 4 |
| CHEM161 | General Chemistry Lab I | 1 |
| CPSC230 | Algorithms and Computing With C++ | 4 |
| CPSC231 | Computing and Data Structures | 4 |
| CPSC260 | Computer Science Structures | 4 |
| MATH162 | Honors Calculus II | 4 |
| MATH281 | Honors Math Seminar I | 1 |
| MATH282 | Honors Math Seminar II | 1 |
| STAT215 | Intro to Probability and Statistics | 4 |

MINIMUM TOTAL **60**

NOTES:

1. Students completing “REQUIREMENTS” have fulfilled the requirements for this Core area.
2. Students completing CHOICE 3 have fulfilled the requirements for these Core and MACRAO areas.
3. Certain Core courses may also be used to meet MACRAO requirements. See the *Transfer Information/LCC Core–MACRAO Crosswalk* for suggested courses.

SUGGESTED COURSE SEQUENCE (Students should see course descriptions to find out when departments plan to offer courses).

Students who are unable to follow the course sequence suggested below (for example, those who are part-time, have transferred in courses from another school, or have prerequisites to fulfill) should contact an academic advisor or counselor for help with adjustments.

The following is a suggested course sequence for required courses. If you are unable to follow this sequence, contact an academic advisor or counselor for help with adjustments.

| I | II | III | IV |
|-------------|-------------|---------|---------|
| Lim. Ch. 3A | MATH152 | MATH253 | MATH254 |
| Lim. Ch. 4 | PHYS251 | PHYS252 | MATH260 |
| | Lim. Ch. 3B | | |