

Program Information Report

Science, Computer Technology, Engineering & Math

General Studies in Math and Natural Sciences (ASGSMS)

Associate in Science Degree

Program Effective Term: Fall 2021

Program is also available online

This program allows students to design a program of study to meet their individual needs. This may be a good option if students are undecided about a major and want to explore a variety of discipline areas with a concentration in math and natural sciences. The program also allows students to customize their coursework to the requirements of the senior college or university to which they are transferring. Students should begin by meeting with a counselor who will assist them in developing a program of study that meets all of the College's graduation requirements. A counselor can also help students determine their interests and career and educational goals as well as provide transfer and career information.

Math/Science Concentration

Complete a concentration in math or science 15 credit hours from no more than two disciplines chosen from Biology, Chemistry, Environmental Science, Geology, Math or Physics (A minimum of 6 credits at the 200 level is strongly recommended). Students transferring to EMU should select from the following WCC courses: BIO 161, BIO 162, BIO 208, BIO 215, BIO 227; CEM 105, CEM 111, CEM 122, CEM 140, CEM 211, CEM 222; ENV 101, ENV 105; GLG 100, GLG 103, GLG 104, GLG 114, GLG 276; MTH 191, MTH 192, MTH 197, MTH 293, MTH 295; PHY 111, PHY 122, PHY 211, PHY 222. Please see an advisor to select courses that will meet the requirements of the college to which you are transferring.

Concentration 2

Complete a second concentration. Select 9 credits from no more than two disciplines listed below (A minimum of 3 credits at the 200 level is strongly recommended). Select from Anthropology, Arabic, Art, Astronomy, Biology, Chemistry, Chinese, Communication, Computer Information Systems, Computer Networking Technology, Computer Science, Computer Systems Security, Computer Systems Technology, Criminal Justice, Dance, Drama, Economics, English, Environmental Science, French, Geography, Geology, German, Health Science, History, Humanities, Math, Music, Philosophy, Physics, Political Science, Psychology, Sociology or Spanish.

Articulation:

Eastern Michigan University, Technology Management BS

| | | |
|------------------------|---|---------------------|
| First Semester | | (16 credits) |
| ENG 111 | Composition I | 4 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Soc. Sci. Elective(s) 1 | 3 |
| | Nat. Sci. Elective(s) | 3 |
| Second Semester | | (13 credits) |
| | Speech/Comp. Elective(s) | 3 |
| | MTH 191 or higher | 4 |
| | Arts/Human. Elective(s) 1 | 3 |
| | Math/Science concentration: select a course | 3 |
| Third Semester | | (15 credits) |
| | Elective(s) to reach a minimum 60 credits | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Nat. Sci. Lab Elective(s) | 3 |
| Fourth Semester | | (16 credits) |
| | Arts/Human. Elective(s) 2 | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Soc. Sci. Elective(s) 2 | 3 |

Program Information Report

| | |
|---|---|
| General Education Elective(s) (0-1 credits) to reach a minimum 30 General Education Credits | 1 |
| Elective(s) to reach a minimum 60 credits | 3 |

Minimum Credits Required for the Program: **60**

Notes:

Courses used to meet General Education Requirements cannot be counted toward the minimum credits for the concentrations.

Program Information Report

Transfer

General Studies in Math and Natural Sciences (ASGSMS)**Associate in Science Degree****Program Effective Term: Fall 2021****Program is also available online**

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Articulation:

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| | | |
|------------------------|---|---------------------|
| First Semester | | (16 credits) |
| ENG 111 | Composition I | 4 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Soc. Sci. Elective(s) 1 | 3 |
| | Nat. Sci. Elective(s) | 3 |
| Second Semester | | (13 credits) |
| | Speech/Comp. Elective(s) | 3 |
| | MTH 191 or higher | 4 |
| | Arts/Human. Elective(s) 1 | 3 |
| | Math/Science concentration: select a course | 3 |
| Third Semester | | (15 credits) |
| | Elective(s) to reach a minimum 60 credits | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Nat. Sci. Lab Elective(s) | 3 |
| Fourth Semester | | (16 credits) |
| | Arts/Human. Elective(s) 2 | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Soc. Sci. Elective(s) 2 | 3 |

Program Information Report

| | |
|---|---|
| General Education Elective(s) (0-1 credits) to reach a minimum 30 General Education Credits | 1 |
| Elective(s) to reach a minimum 60 credits | 3 |

Minimum Credits Required for the Program: **60**

Notes:
Courses used to meet General Education Requirements cannot be counted toward the minimum credits for the concentrations.

WCC General Education Requirements
Effective Fall 2018

Associate degree programs were updated to meet the revised WCC general education requirements below.

Course Distribution Requirements

Associate degree students must complete courses from each of six General Education content areas. The requirements vary, depending on which degree is being earned. The number of general education credit hours required for each degree is as follows.

| | AA | AS | AAS |
|---|-------------|-------------|-------------|
| Writing/Composition | 3-4 credits | 3-4 credits | 3-4 credits |
| 2nd Writing/Composition or Communication | 3-4 credits | 3 credits | 3 credits |
| Mathematics | 3-4 credits | 3-4 credits | 3-4 credits |
| Natural Sciences ¹ | 7-8 credits | 7-8 credits | 3-4 credits |
| Social & Behavioral Science ² | 6 credits | 6 credits | 3 credits |
| Arts and Humanities ³ | 6 credits | 6 credits | 3 credits |
| General Education Electives to reach 30 credits | 0-2 credits | 0-2 credits | N/A |
| Minimum | 30 credits | 30 credits | 18 credits |

¹ Two courses in Natural Science including one with laboratory experience (from two disciplines)

² From two disciplines

³ From two disciplines

Program Information Report

Transfer and University Parallel Programs

If your goal is to continue your education toward a baccalaureate degree, then transfer and university parallel programs is the track for you. Complete the first two years of study in a supportive environment with small classes and personal attention.

Before beginning any transfer program, a student should consult with an academic advisor or counselor to obtain a program articulation agreement or a transfer guide. Early in the program, the student should contact an undergraduate advisor at the transfer college for specific admission and curriculum requirements and, if available, an unofficial transfer-credit evaluation.

Copies of articulation agreements and transfer guides are available in the Counseling Office on the second floor of the Student Center Building. Computers with access to the Internet Web sites of four-year colleges and universities are also available there.

Math and Science

Learn more about math or science through this associate degree program.

General Studies in Math and Natural Sciences (ASGSMS)

Associate in Science Degree

Program Effective Term: Fall 2018

Program is also available online

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| First Semester | | (16 credits) |
|------------------------|---|---------------------|
| ENG 111 | Composition I | 4 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Soc. Sci. Elective(s) 1 | 3 |
| | Nat. Sci. Elective(s) | 3 |
| Second Semester | | (13 credits) |
| | Speech/Comp. Elective(s) | 3 |
| | MTH 191 or higher | 4 |
| | Arts/Human. Elective(s) 1 | 3 |
| | Math/Science concentration: select a course | 3 |
| Third Semester | | (15 credits) |
| | Elective(s) to reach a minimum 60 credits | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Math/Science concentration: select a course | 3 |

Program Information Report

Nat. Sci. Lab Elective(s) 3

Fourth Semester (16 credits)

| | |
|---|---|
| Arts/Human. Elective(s) 2 | 3 |
| Concentration 2: select a course | 3 |
| Math/Science concentration: select a course | 3 |
| Soc. Sci. Elective(s) 2 | 3 |
| General Education Elective(s) (0-1 credits) to reach a minimum 30 General Education Credits | 1 |
| Elective(s) to reach a minimum 60 credits | 3 |

Minimum Credits Required for the Program: 60

Notes:

Courses used to meet General Education Requirements cannot be counted toward the minimum credits for the concentrations.

Done 1/11/18
NW

**WASHTENAW COMMUNITY COLLEGE
GENERAL EDUCATION REVISION PROGRAM CHANGE FORM
FOR AA AND AS PROGRAMS 2018-2019**

| | |
|-----------------------------|--|
| Program Code: ASGSMS | Program Name: General Studies in Math + Science |
| Division Code: A MSE | Department: — |

This form is to be used only for General Education Revision Program Changes for Associate in Arts (AA) and Associate in Science (AS) programs. Any other program changes should be submitted separately using a standard Program Change Form.

Directions:

- Review each general education area under **Requested Changes** below and respond as needed.
- Attach the semester program layout showing the current program listing from the WCC catalog.
 - Indicate any changes to be made on the semester layout.
 - Draw a line through any courses that should be removed on the semester layout.
 - Write in any courses that need to be added on the semester layout.
- Submit this form and semester program layout to the Office of Curriculum and Assessment (SC 257).

| Current General Education Requirements AA and AS | | Revised General Education Requirements 2018-2019 AA and AS | |
|---|-----------------|--|---------------|
| Writing | 6 - 7 credits | English Composition | 3 - 4 credits |
| Speech | 3 credits | 2 nd Course in English Composition or one course in Communication | 3 - 4 credits |
| Mathematics | 3 - 4 credits | Mathematics | 3 - 4 credits |
| Natural Sciences | 3 - 4 credits | Natural Sciences from 2 disciplines including one lab course | 7 - 9 credits |
| Social & Behavioral Sciences | 6 credits | Social & Behavioral Sciences from 2 disciplines | 6 credits |
| Arts & Humanities | 6 credits | Arts & Humanities from 2 disciplines | 6 credits |
| Critical Thinking | 0 credits | Elective Credits to reach a minimum of 30 credit hours | 0 - 3 credits |
| Computer & Information Literacy | 3 credits | Total | 30 credits |
| Total | 30 - 33 credits | | |

Please review each General Education Area in the chart below, and record the needed changes in the chart and on the attached semester layout.

| REQUESTED CHANGES | |
|---|---|
| General Education Area | |
| English Composition – The requirement for one writing/English composition course remains the same. No changes will be made unless specifically requested below. (Use Writing Elective or ENG 111) | |
| Optional Change: | — |
| 2nd Course in English Composition or one course in Communication | |
| WCC previously required both a second composition/writing course and a communication course. Your options are: | |
| <ol style="list-style-type: none"> Allow students to select any course that meets composition/writing or communication (<i>recommended</i>). Require students to take a specific composition course (identify course below and on semester layout). Require students to take a specific communication course (identify course below and on semester layout). | |
| Requested Change: | In semester 1, delete "Speech" in semester 2 add "OR speech" after ENG 226 |

Program Information Report

(ASG-SMS)

Transfer and University Parallel Programs

If your goal is to continue your education toward a baccalaureate degree, then transfer and university parallel programs is the track for you. Complete the first two years of study in a supportive environment with small classes and personal attention.

- Business (AABAS)
- Computer Science: Programming in Java (ASCSPJ) See School of Information Technology
- Criminal Justice (AACJ)
- Education, Early Childhood (AAECE)
- Education, Elementary (AAELEM)
- Education, Secondary (AASECO)
- Environmental Science (ASENVS)
 - 1. Environmental Science (ENV1)
 - 2. Environmental Science and Society (ENV2)
- Exercise Science (ASESCI)
- General Studies in Math and Natural Sciences (ASGSMS)
- Honors in the Liberal Arts (AAHLA)
- Human Services (AAHUST)
- Information Systems: Programming in C++ (ASISPC) See School of Information Technology
- Liberal Arts Transfer (AALAT)
- Math and Science (ASMSAS)
 - 1. Pre-Medicine Concentration (BMED or CMED)
 - 2. Mathematics Concentration (MATH)
 - 3. Physics/Pre-Engineering Concentration (PHYS)
 - 4. Pre-Actuarial Science Concentration (PPAS)
 - 5. Pre-Pharmacy Concentration (PPHA)

Before beginning any transfer program, a student should consult with an academic advisor or counselor to obtain a program articulation agreement, or a transfer guide. Early in the program, the student should contact an undergraduate advisor at the transfer college for specific admission and curriculum requirements and, if available, an unofficial transfer-credit evaluation.

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Associate in Science Degree

Program Effective Term: Fall 2015

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| First Semester | | 4 credits |
|-----------------|---|-----------|
| ENG 111 | Composition I | 4 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Soc. Sci. Elective(s) | 3 |
| | Speech Elective(s) | 3 |
| Second Semester | | 3 |
| ENG 226 | Composition II | 3 |
| | MTH 191 or higher | 4-5 |
| | Arts/Human. Elective(s) | 3 |
| | Math/Science concentration: select a course | 3 |
| Third Semester | | 3 |
| | Computer Lit. Elective(s) | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Nat. Sci. Elective(s)* | 4 |
| Fourth Semester | | 3 |
| | Arts/Human. Elective(s) | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Soc. Sci. Elective(s) | 3 |
| | Electives for total of 60 credits | 3 |

Minimum Credits Required for the Program: 60

Notes:

* Students following the Michigan Transfer Agreement (MTA) should complete two natural science courses from two different disciplines. One course must have a lab component. See WCC catalog for eligible courses.

Program Information Report

Courses used to meet General Education Requirements cannot be counted toward the minimum credits for the concentrations.

General Studies in Math and Natural Sciences (ASGSMS) Associate in Science Degree. Program is also available online.

Description

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Contact Information

Division

Math, Science & Health

Department

Physical Sciences Dept

Advisors

Jerrell McCowin

Requirements

Done 3/24/15 mw

(Items marked in orange are available online.)

First Semester

| Class | Title | Credits |
|--------------------|---|----------------|
| <u>ENG 111</u> | Composition I | 4 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| <u>Elective(s)</u> | <u>Social and Behavioral Science</u> | 3 |
| <u>Elective(s)</u> | <u>Speech</u> | 3 |
| Total | | 16 |

Second Semester

| Class | Title | Credits |
|--------------------|---|----------------|
| <u>ENG 226</u> | Composition II | 3 |
| | MTH 191 or higher | 4 - 5 |
| <u>Elective(s)</u> | <u>Arts and Humanities</u> | 3 |
| | Math/Science concentration: select a course | 3 |
| Total | | 13 - 14 |

Third Semester

| Class | Title | Credits |
|--------------------|---|----------------|
| <u>Elective(s)</u> | <u>Computer and Information Literacy</u> | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| <u>Elective(s)</u> | <u>Natural Sciences *</u> | 4 |
| Total | | 16 |

Fourth Semester

| Class | Title | Credits |
|------------------------|---|----------------|
| <u>Elective(s)</u> | <u>Arts and Humanities</u> | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| <u>Elective(s)</u> | <u>Social and Behavioral Science</u> | 3 |
| | Electives for total of 60 credits | 3 |
| Total | | 15 |
| Total Credits Required | | 60 - 61 |

Footnotes

* Students following the Michigan Transfer Agreement (MTA) should complete two natural science courses from two different disciplines. One course must have a lab component. See WCC catalog for eligible courses.

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Criminal Justice (AACJ)

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Education, Secondary (AASECO)

Environmental Science (ASENVS)

1. Environmental Science (ENV1)

2. Environmental Science and Society (ENV2)

Exercise Science (ASESCI)

General Studies in Math and Natural Sciences (ASGSMS)

Human Services (AAHUST)

Information Systems: Programming in C++ (ASISPC) See School of Information Technology

Liberal Arts Transfer (AALAT)

Math and Science (ASMSAS)

1. Pre-Medicine Concentration (BMED or CMED)

2. Mathematics Concentration (MATH)

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| | | |
|---------|---|-----|
| ENG 111 | Composition I | 4 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Soc. Sci. Elective(s) | 3 |
| | Speech Elective(s) | 3 |
| ENG 226 | Composition II | 3 |
| | MTH 191 or higher | 4-5 |
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| | Math/Science concentration: select a course | 3 |
| | Computer Lit. Elective(s) | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Nat. Sci. Elective(s)* | 4 |
| | Arts/Human. Elective(s) | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Soc. Sci. Elective(s) | 3 |
| | Electives for total of 60 credits | 3 |

Minimum Credits Required for the Program: 60

Notes:

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PROGRAM CHANGE OR DISCONTINUATION FORM

Program Code:
ASGSMS

Program Name: General Studies in Math and Natural Sciences

Effective Term: Fall 2015

Division Code: MSH Department: Physical Sciences

Directions:

1. Attach the current program listing from the WCC catalog or Web site and indicate any changes to be made.
2. Draw lines through any text that should be deleted and write in additions. Extensive narrative changes can be included on a separate sheet.
3. Check the boxes below for each type of change being proposed. Changes to courses, discontinuing a course, or adding new courses as part of the proposed program change, must be approved separately using a Master Syllabus form, but should be submitted at the same time as the program change form.

Requested Changes:

- | | |
|--|---|
| <input type="checkbox"/> Review | <input type="checkbox"/> Program admission requirements |
| <input type="checkbox"/> Remove course(s): _____ | <input type="checkbox"/> Continuing eligibility requirements |
| <input checked="" type="checkbox"/> Add course(s): GLG 100, GLG 103, GLG 104, GLG 110, GLG 114, GLG 276 for concentration in Geology | <input type="checkbox"/> Program outcomes |
| <input type="checkbox"/> Program title (title was _____) | <input type="checkbox"/> Accreditation information |
| <input type="checkbox"/> Description | <input type="checkbox"/> Discontinuation (attach program discontinuation plan that includes transition of students and timetable for phasing out courses) |
| <input type="checkbox"/> Type of award | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Advisors | |
| <input type="checkbox"/> Articulation information | |

Show all changes on the attached page from the catalog.

Rationale for proposed changes or discontinuation:

Following the development of additional Geology courses, it is now possible to complete enough GLG credits for a concentration.

Financial/staffing/equipment/space implications:

None

List departments that have been consulted regarding their use of this program.

Signatures:

| Reviewer | Print Name | Signature | Date |
|--------------------------------|-------------------|--------------------------|------------|
| Initiator | Suzanne Albach | <i>Suzanne M. Albach</i> | 12/03/2014 |
| Department Chair | Kathy Butcher | <i>Kathy Butcher</i> | 12/04/2014 |
| Division Dean/Administrator | Kris Brandemuehl | <i>Kris Brandemuehl</i> | 12/18/14 |
| Vice President for Instruction | William Abernethy | <i>William Abernethy</i> | 1/21/15 |

Do not write in shaded area. Entered in: Banner *2/6/15* & A Database *2/6/15* Log File *2/6/15* Board Approval

Please submit completed form to the Office of Curriculum and Assessment and email an electronic copy to sjohn@wccnet.edu for posting on the website.

ACADEMICS

Associate in Science Degree (General Studies in Math and Natural Sciences)

Associate in Science Degree

2012 - 2013 2013 - 2014 2014 - 2015

Description

This program allows students to design a program of study to meet their individual needs. This may be a good option if students are undecided about a major and want to explore a variety of discipline areas with a concentration in math and natural sciences. The program also allows students to customize their coursework to the requirements of the senior college or university to which they are transferring. Students should begin by meeting with a counselor who will assist them in developing a program of study that meets all of the College's graduation requirements. A counselor can also help students determine their interests and career and educational goals as well as provide transfer and career information.

Math/Science Concentration

Complete a concentration in math or science 15 credit hours from no more than two disciplines chosen from Biology, Chemistry, Math or Physics (A minimum of 6 credits at the 200 level is strongly recommended). Students transferring to EMU should select from the following WCC courses: BIO 103, BIO 208, BIO 215, BIO 227, BIO 228; CEM 111, CEM 122, CEM 211, CEM 222; MTH 191, MTH 192, MTH 197, MTH 293, MTH 295; PHY 111, PHY 122, PHY 211, PHY 222 or see an advisor to select courses that will meet the requirements of the college to which you are transferring.

Geology

GLG100, 103, 104, 114; 276;

Concentration 2

Complete a second concentration. Select 9 credits from no more than two disciplines listed below (A minimum of 3 credits at the 200 level is strongly recommended). Select from Anthropology, Arabic, Art, Astronomy, Biology, Chemistry, Communication, Criminal Justice, Dance, Drama, Economics, English, French, German, Health Science, History, Math, Music, Philosophy, Physics, Political Science, Psychology, Sociology or Spanish.

Contact Information

Division: Math, Science & Health
Department: Physical Sciences Dept
Advisors: general@wccnet.edu

Requirements

First Semester

| Class | Title | Credits |
|--------------|---|-----------|
| WCC 111 | Composition I | 4 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| PHYS 101 | Physics I (Honors or General) | 3 |
| CEM 111 | Chemistry I | 3 |
| Total | | 16 |

Second Semester

| Class | Title | Credits |
|--------------|---|----------------|
| WCC 121 | Composition II | 3 |
| | MTH 191 or higher | 4 - 5 |
| PHYS 102 | Physics II (Honors or General) | 3 |
| | Math/Science concentration: select a course | 3 |
| Total | | 13 - 14 |

Third Semester

| Class | Title | Credits |
|--------------|---|-----------|
| WCC 131 | Composition III (Honors or General) | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| PHYS 201 | Physics III (Honors or General) | 4 |
| Total | | 16 |

Fourth Semester

| Class | Title | Credits |
|--------------|---|-----------|
| WCC 141 | Composition IV (Honors or General) | 3 |
| | Concentration 2: select a course | 3 |
| | Math/Science concentration: select a course | 3 |
| WCC 142 | Mathematical Modeling (Honors or General) | 3 |
| | Electives for total of 60 credits | 3 |
| Total | | 15 |

Total Credits Required: 60 - 61*Footnotes*

* Students following the Michigan Transfer Agreement (MTA) should complete two natural science courses from two different disciplines. One course must have a lab component. See WCC catalog for eligible courses.

~~Transfer students attempting to satisfy MACRAO should complete an additional 2-3 credit hours in Social Science courses.~~

Courses used to meet General Education Requirements cannot be counted toward the minimum credits for the concentrations.

PROGRAM PROPOSAL FORM

- Preliminary Approval** – Check here when using this form for preliminary approval of a program proposal, and respond to the items in general terms.
- Final Approval** – Check here when completing this form after the Vice President for Instruction has given preliminary approval to a program proposal. For final approval, complete information must be provided for each item.

| | | |
|---|---|---|
| <p>Program Name:</p> <p>Division and Department:</p> <p>Type of Award:</p> <p>Effective Term/Year:</p> <p>Initiator:</p> | <p><u>General Studies in Math and Natural Science</u></p> <p><u>MNB – Math, Natural and Behavioral Sciences</u></p> <p> <input type="checkbox"/> AA <input checked="" type="checkbox"/> AS <input type="checkbox"/> AAS <input type="checkbox"/> Cert. <input type="checkbox"/> Adv. Cert. <input type="checkbox"/> Post-Assoc. Cert. <input type="checkbox"/> Cert. of Comp. </p> <p><u>Fall 2009</u></p> <p>_____</p> | <p>Program Code:</p> <p><u>ASGSMS</u></p> <p>CIP Code:</p> <p><u>24.0102</u></p> |
| <p>Program Features Program's purpose and its goals. Criteria for entry into the program, along with projected enrollment figures. Connection to other WCC programs, as well as accrediting agencies or professional organizations. Special features of the program.</p> | <p>This request is for a reactivation and modification of the General Studies in Math and Natural Science degree program. The goal of the General Studies in Math and Natural Science is to provide a more flexible A.S. degree option for transfer students pursuing general math and science programs. Students complete general education requirements, fifteen (15) credits toward a major and nine (9) credits toward a minor in preparation for transfer to a 4-year institution.</p> <p>This program utilizes existing courses that have already been reviewed and articulated to 4-year colleges.</p> <p>No special criteria are required for enrollment in this program.</p> <p>Potential Enrollment: Between 2002-03 and 2006-07, there was an average of 32 graduates per academic year in the original version of this program.</p> | |
| <p>Need Need for the program with evidence to support the stated need.</p> | <p>Based on evidence provided by Eastern Michigan University, a number of students are transferring without completing their WCC Associate Degree. The existing WCC program, the Associate in Science in Math and Science, was designed to articulate with specific programs (Computer Science, Math, Pre-Engineering/Physics and Pre-Medicine/Biology or Chemistry). We find that students interested in transferring into EMU programs such as General Biochemistry or General Chemistry are required to complete unnecessary courses to complete the existing WCC degree.</p> <p>This program provides flexibility without sacrificing academic rigor. Preparation for a major and minor at a 4-year school is essential to completing a baccalaureate degree in a 2 + 2 scenario.</p> | |
| <p>Program Outcomes/Assessment State the knowledge to be gained, skills to be learned, and attitudes to be developed by students in the program. Include assessment methods that will be used to determine the effectiveness of the program.</p> | <p><u>Outcomes</u> Students will successfully transfer to and successful performance at a four-year college in a related program.</p> | <p><u>Assessment method</u> WCC follow-up graduation survey data. Transfer data from EMU.</p> |

Please return completed form to the Office of Curriculum & Assessment and email an electronic copy to sjohn@wccnet.edu for posting on the website.

| <p>Curriculum</p> <p>List the courses in the program as they should appear in the catalog. List minimum credits required. Include any notes that should appear below the course list.</p> | <p>1. Complete the General Education Requirements for the Associate in Science Degree. Transfer students are encouraged to complete the MACRAO requirements.</p> <p style="text-align: right;">30 - 31 credits</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">General Education Requirements:</td> <td style="width: 70%;"></td> </tr> <tr> <td>ENG 111</td> <td>Composition I</td> <td style="text-align: right;">4</td> </tr> <tr> <td>ENG 226</td> <td>Composition II</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Speech</td> <td>Elective(s)</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Math 191 or above</td> <td>Elective(s)</td> <td style="text-align: right;">5-4</td> </tr> <tr> <td>Nat. Sci.</td> <td>Elective(s)*</td> <td style="text-align: right;">3-4</td> </tr> <tr> <td>Soc. Sci.</td> <td>Elective(s)**</td> <td style="text-align: right;">6</td> </tr> <tr> <td>Arts/Human.</td> <td>Elective(s)</td> <td style="text-align: right;">6</td> </tr> </table> <p>2. Complete a concentration in Math or Science 15 credits 15 credit hours from up to two disciplines chosen from Biology, Chemistry, Math or Physics <i>(A minimum of six (6) credits at the 200 level is strongly recommended)</i></p> <p style="text-align: center;"><i>Students transferring to EMU should select from the following WCC courses: BIO 103, 208, 215, 227, 228; CEM 111, 122, 211, 222; MTH 191, 192, 197, 293, 295; PHY 111, 122, 211, 222 or see an advisor to select courses that will meet the requirements of the college to which you are transferring.</i></p> <p>3. Complete a second concentration. 9 credits 9 credits from up to two disciplines listed below <i>(A minimum of three (3) credits at the 200 level is strongly recommended)</i></p> <p style="text-align: center;">Select from Anthropology, Art, Astronomy, Biology, Chemistry, Communication, Criminal Justice, Dance, Drama, Economics, English, French, Health Science, History, Math, Music, Philosophy, Physics, Political Science, Psychology, Sociology, or Spanish.</p> <p>4. Electives to complete a minimum of 60 credits hours 5 - 6 credits</p> <p style="text-align: right;">Minimum Credits Required for Associate Degree 60 credits</p> <p>Notes:</p> <p><i>*Transfer students should select a lab-based, MACRAO-approved science course. See WCC catalog for eligible courses.</i></p> <p><i>**Transfer students attempting to satisfy MACRAO should complete an additional 2-3 credit hours in Social Science courses</i></p> <p><i>Students must meet the Computer and Information Literacy Graduation Requirement. See General Education Graduation Requirements in the WCC Bulletin.</i></p> <p><i>Courses used to meet General Education Requirements cannot be counted toward the minimum of nine (9) credits for concentration #2</i></p> | General Education Requirements: | | ENG 111 | Composition I | 4 | ENG 226 | Composition II | 3 | Speech | Elective(s) | 3 | Math 191 or above | Elective(s) | 5-4 | Nat. Sci. | Elective(s)* | 3-4 | Soc. Sci. | Elective(s)** | 6 | Arts/Human. | Elective(s) | 6 |
|--|--|---------------------------------|----------------|---------------|---------------|--------|---------|-----------------|-----|--------|---------------------|-----|-------------------|----------------------|-----|-----------|--------------|-----|-----------|----------------|---------------|---------------|-------------|---|
| General Education Requirements: | | | | | | | | | | | | | | | | | | | | | | | | |
| ENG 111 | Composition I | 4 | | | | | | | | | | | | | | | | | | | | | | |
| ENG 226 | Composition II | 3 | | | | | | | | | | | | | | | | | | | | | | |
| Speech | Elective(s) | 3 | | | | | | | | | | | | | | | | | | | | | | |
| Math 191 or above | Elective(s) | 5-4 | | | | | | | | | | | | | | | | | | | | | | |
| Nat. Sci. | Elective(s)* | 3-4 | | | | | | | | | | | | | | | | | | | | | | |
| Soc. Sci. | Elective(s)** | 6 | | | | | | | | | | | | | | | | | | | | | | |
| Arts/Human. | Elective(s) | 6 | | | | | | | | | | | | | | | | | | | | | | |
| <p>Budget</p> <p>Specify program costs in the following areas, per academic year:</p> | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 30%; text-align: center;">START-UP COSTS</th> <th style="width: 30%; text-align: center;">ONGOING COSTS</th> </tr> </thead> <tbody> <tr> <td>Faculty</td> <td style="text-align: center;">\$ 0 .</td> <td style="text-align: center;">\$ 0 .</td> </tr> <tr> <td>Training/Travel</td> <td style="text-align: center;">0 .</td> <td style="text-align: center;">0 .</td> </tr> <tr> <td>Materials/Resources</td> <td style="text-align: center;">0 .</td> <td style="text-align: center;">0 .</td> </tr> <tr> <td>Facilities/Equipment</td> <td style="text-align: center;">0 .</td> <td style="text-align: center;">0 .</td> </tr> <tr> <td>Other</td> <td style="text-align: center;">0 .</td> <td style="text-align: center;">0 .</td> </tr> <tr> <td style="text-align: right;">TOTALS:</td> <td style="text-align: center;">\$ 0 .</td> <td style="text-align: center;">\$ 0 .</td> </tr> </tbody> </table> | | START-UP COSTS | ONGOING COSTS | Faculty | \$ 0 . | \$ 0 . | Training/Travel | 0 . | 0 . | Materials/Resources | 0 . | 0 . | Facilities/Equipment | 0 . | 0 . | Other | 0 . | 0 . | TOTALS: | \$ 0 . | \$ 0 . | | |
| | START-UP COSTS | ONGOING COSTS | | | | | | | | | | | | | | | | | | | | | | |
| Faculty | \$ 0 . | \$ 0 . | | | | | | | | | | | | | | | | | | | | | | |
| Training/Travel | 0 . | 0 . | | | | | | | | | | | | | | | | | | | | | | |
| Materials/Resources | 0 . | 0 . | | | | | | | | | | | | | | | | | | | | | | |
| Facilities/Equipment | 0 . | 0 . | | | | | | | | | | | | | | | | | | | | | | |
| Other | 0 . | 0 . | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS: | \$ 0 . | \$ 0 . | | | | | | | | | | | | | | | | | | | | | | |

| | |
|---|--|
| Program Description for Catalog and Web site | This program allows students to design a program of study to meet their individual needs. This may be a good option if students are undecided about a major and want to explore a variety of discipline areas with a concentration in math and natural sciences. The program also allows students to customize their coursework to the requirements of the senior college or university to which they are transferring. Students should begin by meeting with a counselor who will assist them in developing a program of study that meets all of the College's graduation requirements. A counselor can also help students determine their interests and career and educational goals as well as provide transfer and career information. |
| Program Information | Accreditation/Licensure - None Advisors – Math and Science Advisors Advisory Committee - None Admission requirements – No Additional Requirements Articulation agreements – In progress with EMU Continuing eligibility requirements - None |

Assessment plan:

| Program outcomes to be assessed | Assessment tool | When assessment will take place | Courses/other populations | Number students to be assessed |
|---|--|---|--|-------------------------------------|
| Students will successfully transfer to a four-year college in a related program | WCC follow-up graduation survey data. Transfer data from EMU. | Winter 2011 and every three years thereafter. | Random selection from students who completed the program within the past three years | Approximately 50% of the graduates. |
| Students will perform successfully at a four-year college in a related program | WCC follow-up graduation survey data. Transfer data from EMU. | Winter 2011 and every three years thereafter. | Random selection from students who completed the program within the past three years | Approximately 50% of the graduates. |

Scoring and analysis plan:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, other). Attach the rubric.

EMU transfer data will be generated by Eastern Michigan University. Faculty in the Math and Science departments at WCC will review the data to determine transfer rate and transfer success statistics. Graduate survey data is collected and generated by Institutional Research. This self-reported, supplemental data will be used to identify students who successfully transfer to institutions other than EMU.

2. Indicate the standard of success to be used for this assessment.

70% of the students will have enrolled in further education within two years.

70% of the students who transfer to EMU will demonstrate success (earn a grade of "C" or better) in courses in the area of math and science.

3. Indicate who will score and analyze the data.

Faculty volunteers from the Math and Science departments

4. Explain how and when the assessment results will be used for program improvement.

Assessment data will be reviewed during divisional meetings. Areas of weakness will be identified and changes made to course or program requirements will be implemented as needed.

| REVIEWER | PRINT NAME | SIGNATURE | DATE |
|--|------------------|-------------------------|----------|
| Department Chair/Area Director | Lisa Rombes | <i>Lisa Rombes</i> | |
| Department Chair/Area Director | David Shier | <i>David Shier</i> | 2/19/09 |
| Dean | Martha Showalter | <i>Martha Showalter</i> | 2/12/09 |
| Vice President for Instruction <input type="checkbox"/> Approved for Development <input type="checkbox"/> Final Approval | Roger Palay | <i>Roger M. Palay</i> | 3/20/09 |
| President | Larry Whitworth | <i>Larry Whitworth</i> | 4/28/09 |
| Board Approval | | | 04/28/09 |

logged 2/12/09 sjw 3/27/09
Office of Curriculum & Assessment

Program Information Report

Transfer and University Parallel Programs

If your goal is to continue your education toward a baccalaureate degree, then transfer and university parallel programs is the track for you. Complete the first two years of study in a supportive environment with small classes and personal attention.

Business (AABAS)
Computer Science Transfer (ASCST)
Criminal Justice (AACJ)
Digital Video Production (AADVP)
Education, Elementary (AAELEM)
Education, Secondary (AASECO)
Exercise Science (ASESCI)
General Studies in Math and Natural Sciences (ASGMS)
Human Services (AAHUST)
Information Systems Transfer (ASIST)
Internet Professional (AAINP)
Liberal Arts Transfer (AALAT)
Math and Science (ASMSAS)
 1. Pre-Medicine Concentration (BMED) or (CMED)
 2. Computer Science Concentration (COMS)
 3. Mathematics Concentration (MATH)
 4. Physics/Pre-Engineering Concentration (PHYS)

Before beginning any transfer program, a student should consult with an academic advisor or counselor to obtain a program articulation agreement, or a transfer guide. Early in the program, the student should contact an undergraduate advisor at the transfer college for specific admission and curriculum requirements and, if available, an unofficial transfer-credit evaluation.

Copies of articulation agreements and transfer guides are available in the Counseling Office on the second floor of the Student Center Building. Computers with access to the Internet Web sites of four-year colleges and universities are also available there.

Math and Science

Learn more about Math or Science through this associate degree program.

Program Information Report

General Studies in Math and Natural Sciences (ASGSMS)

Associate in Science Degree

Program Effective Term: Fall 2009

This program allows students to design a program of study to meet their individual needs. This may be a good option if students are undecided about a major and want to explore a variety of discipline areas with a concentration in math and natural sciences. The program also allows students to customize their coursework to the requirements of the senior college or university to which they are transferring. Students should begin by meeting with a counselor who will assist them in developing a program of study that meets all of the College's graduation requirements. A counselor can also help students determine their interests and career and educational goals as well as provide transfer and career information.

General Studies Program Requirements (60 credit)

1. Complete the General Education Requirements for the Associate in Science degree. Transfer students are encouraged to complete the MACRAO requirements. 30-31

General Education Requirements:

ENG 111 Composition I 4
 ENG 226 Composition II 4

Speech Elective(s) 3
 Math 191 or higher Elective(s) 4
 Nat. Sci. Elective(s)* 3-4
 Soc. Sci. Elective(s)** 6
 Arts/Human. Elective(s) 6

2. Complete a concentration in math or science

15 credit hours from up to two disciplines chosen from Biology, Chemistry, Math or Physics (A minimum of 6 credits at the 200 level is strongly recommended).

Students transferring to EMU should select from the following WCC courses: BIO 103, BIO 208, BIO 215, BIO 227, BIO 228; CEM 111, CEM 122, CEM 211, CEM 222; MTH 191, MTH 192, MTH 197, MTH 293, MTH 295; PHY 111, PHY 122, PHY 211, PHY 222

or see an advisor to select courses that will meet the requirements of the college to which you are transferring. 15

3. Complete a second concentration. Select 9 credits from up to two disciplines listed below (A minimum of 3 credits at the 200 level is strongly recommended).

Select from Anthropology, Art, Astronomy, Biology, Chemistry, Communication, Criminal Justice, Dance, Drama, Economics, English, French, Health Science, History, Math, Music, Philosophy, Physics, Political Science, Psychology, Sociology or Spanish 9

4. Electives to complete a minimum of 60 credit hours 6-5

Minimum Credits Required for the Program: 60

Notes:

*Transfer students should select a lab-based, MACRAO-approved science course. See WCC catalog for eligible courses.

**Transfer students attempting to satisfy MACRAO should complete an additional 2-3 credit hours in Social Science courses.

Courses used to meet General Education Requirements cannot be counted toward the minimum credits for the concentrations.

Students must meet the Computer and Information Literacy Graduation Requirement. See General Education Graduation Requirements in the WCC Bulletin.