

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.

Program Name:	<u>General Studies in Math and Natural Science</u>		Program Code: <u>ASGSMS</u> CIP Code: <u>24.0102</u>
Division and Department:	<u>MNB – Math, Natural and Behavioral Sciences</u>		
Type of Award:	<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.		
Effective Term/Year:	<u>Fall 2009</u>		
Initiator:	_____		
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.	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. This program utilizes existing courses that have already been reviewed and articulated to 4-year colleges. No special criteria are required for enrollment in this program. 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.		
Need Need for the program with evidence to support the stated need.	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. 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.		
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.	<u>Outcomes</u> Students will successfully transfer to and successful performance at a four-year college in a related program.	<u>Assessment method</u> WCC follow-up graduation survey data. Transfer data from EMU.	

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;">General Education Requirements: 30 - 31 credits</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 30%;">ENG 111</td><td style="width: 40%;">Composition I</td><td style="width: 30%; 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>	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
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

15

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

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.