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: 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)
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 (PAS)
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.

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 2015**

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, 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 103, BIO 208, BIO 215, BIO 227, BIO 228; CEM 111, CEM 122, CEM 211, CEM 222; 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 or 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, Communication, Criminal Justice, Dance, Drama, Economics, English, French, German, Health Science, History, Math, Music, Philosophy, Physics, Political Science, Psychology, Sociology or Spanish.

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
	Arts/Human. Elective(s)	3
	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:

** 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.*

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

WASHTENAW COMMUNITY COLLEGE

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:

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

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	Suzanne M. Albach	12/03/2014
Department Chair	Kathy Butcher	Kathleen Butcher	12/04/2014
Division Dean/Administrator	Kris Brandemuehl	Kristi S Brandemuehl	12/8/14
Vice President for Instruction	William Abernethy		1/21/15

Do not write in shaded area. Entered in: Banner 2/6/15 mo C&A Database 2/6/15 mo Log File 2/6 mo 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.

logged 12/8/14 sjr

ACADEMICS

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.

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:

Requirements

First Semester

Class	Title	Credits
	Composition I	4
	Concentration 2: select a course	3
	Math/Science concentration: select a course	3
		3
		3
Total		**16**

Second Semester

Class	Title	Credits
	Composition II	3
	MTH 191 or higher	4 - 5
		3
	Math/Science concentration: select a course	3
Total		**13 - 14**

Third Semester

Class	Title	Credits
		3
	Concentration 2: select a course	3
	Math/Science concentration: select a course	3
	Math/Science concentration: select a course	3
		4
Total		**16**

Fourth Semester

Class	Title	Credits
		3
	Concentration 2: select a course	3
	Math/Science concentration: select a course	3
		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.

Program Name:	General Studies in Math and Natural Science	**Program Code:** ASGSMS
Division and Department:	MNB – Math, Natural and Behavioral Sciences	
Type of Award:	☐ AA ☒ AS ☐ AAS ☐ Cert. ☐ Adv. Cert. ☐ Post-Assoc. Cert. ☐ Cert. of Comp.	
Effective Term/Year:	Fall 2009	**CIP Code:** 24.0102
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 a 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	Outcomes	Assessment method
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.	Students will successfully transfer to and successful performance at a four-year college in a related program.	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.

Curriculum

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.

1. Complete the General Education Requirements for the Associate in Science Degree. Transfer students are encouraged to complete the MACRAO requirements.

General Education Requirements: 30 - 31 credits

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

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
(A minimum of six (6) credits at the 200 level is strongly recommended)

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.

3. Complete a second concentration. 9 credits

9 credits from up to two disciplines listed below
(A minimum of three (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.

4. Electives to complete a minimum of 60 credits hours 5 – 6 credits

Minimum Credits Required for Associate Degree **60 credits**

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*
Students must meet the Computer and Information Literacy Graduation Requirement. See General Education Graduation Requirements in the WCC Bulletin.
Courses used to meet General Education Requirements cannot be counted toward the minimum of nine (9) credits for concentration #2

Budget

Specify program costs in the following areas, per academic year:

	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		
Department Chair/Area Director	David Shier	David Shier	2/19/09
Dean	Martha Showalter	Martha Showalter	2/12/09
Vice President for Instruction ☐ Approved for Development ☐ Final Approval	Roger Palay	Roger M. Palay	3/20/09
President	Larry Whitworth	Larry Whitworth	4/28/09
Board Approval			04/28/09

logged 2/12/09 SJV 3/27/09 JL
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 (ASCSCT)
Criminal Justice (AACJ)
Digital Video Production (AADVP)
Educaton, Elementary (AAELEM)
Education, Secondary (AASECO)
Exercise Science (ASESCI)
General Studies in Math and Natural Sciences (ASGSMS)
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 credits)
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.