

PROGRAM CHANGE OR DISCONTINUATION FORM

Program Code: **ASISPC** Program Name: **Information Systems: Programming in C++** Effective Term: **Winter 2013<sup>14</sup>**  
 Division Code: **BCT** Department: **Computer Instruction Dept. (CIS/CPS/etc.)**

**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): <b>CPS255 - IOS/Objective C – Apple Ipad/Iphone</b> | <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:**

Adding CPS255 (IOS/Objective C – Apple Ipad/Iphone) class to the program.

**Financial/staffing/equipment/space implications:**

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

**Signatures:**

Reviewer	Print Name	Signature	Date
Initiator	Clarence Hasselbach	<i>Clarence Hasselbach</i>	2/19/2013
Department Chair	John Trame	<i>John Trame</i>	2/19/2013
Division Dean/Administrator	Rosemary Wilson	<i>Rosemary Wilson</i>	2/20/13
Vice President for Instruction	William Hourihy	<i>William Hourihy</i>	3/22/13
President	N/A		

Do not write in shaded area. Entered in: Banner \_\_\_\_\_ C&A Database *2/20/13* Log File *2/20/13* Board Approval \_\_\_\_\_

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

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Program Information Report

**Information Systems: Programming in C++ (ASISPC)**

**Associate in Science Degree**

**Program Effective Term: Fall 2013**

This program prepares students to transfer to complete a bachelor's degree in Business Administration with a major in Computer Information Systems. Undergraduates and graduates of CIS programs are prepared to create and maintain information systems for organizations, manage information systems projects, and develop strategies for effective use of enterprise information resources.

**Articulation:**

Eastern Michigan University, several BS degrees.

Copies can be obtained from the Counseling Office, a program advisor, or from the Curriculum and Assessment Office Web site: <http://www.wccnet.edu/departments/curriculum/articulation.php?levelone=colleges>.

**Program Admission Requirements:**

Students need an Academic Math Level of 4 to enroll in MTH 176.

COM 225	Intercultural Communication*	3
CPS 171	Introduction to Programming with C++	4
ENG 111	Composition I	4
	Computer Lit. Elective(s)	3
CIS 121	Linux/UNIX I: Fundamentals	3
CPS 271	Object Features of C++	4
ENG 226	Composition II	3
	MTH 176 or higher 4 credit math course	4
	Arts/Human. 1 Elective(s)	3
CPS 276	Web Programming Using Apache, MySQL, and PHP	4
	Nat. Sci. Elective(s)**	4
	Soc. Sci. 1 Elective(s)***	3
	Electives Students must complete 100-level or above transferrable courses to reach a minimum of 60 credits. Possible CIS/CPS electives include: CIS 282, CPS 161, CPS 251, CPS 255, CPS 261, CPS 278	4
CPS 272	Data Structures with C++	4
	Arts/Human. 2 Elective(s)	3
	Soc. Sci. 2 Elective(s)***	3
	Soc. Sci. 3 Elective(s)***	3
	Electives Students must complete 100-level or above transferrable courses to reach a minimum of 60 credits. Possible CIS/CPS electives include: CIS 282, CPS 161, CPS 251, CPS 255, CPS 261, CPS 278	4

**Minimum Credits Required for the Program:**

**63**

**Notes:**

\*Satisfies EMU's Diverse World Requirement

\*\*Students transferring to a four-year institution should choose a lab-based, MACRAO-approved science course.

See an advisor to choose courses that meet the requirements of the program to which you are transferring.

\*\*\*Choose three courses from at least two disciplines.

*This course sequencing aligns with students starting in the Fall semester. Students starting the Winter semester should switch the order in which they take CPS 272 and CPS 276.*

# Information Systems: Programming in C++ (ASISPC)

Associate in Science Degree

2010 - 2011 2011 - 2012 2012 - 2013

## Description

This program prepares students to transfer to complete a bachelor's degree in Business Administration with a major in Computer Information Systems. Undergraduates and graduates of CIS programs are prepared to create and maintain information systems for organizations, manage information systems projects, and develop strategies for effective use of enterprise information resources.

## Articulation

Eastern Michigan University, several BS degrees.

Copies can be obtained from the Counseling Office, a program advisor, or from the Curriculum and Assessment Office Web site: [www.wccnet.edu/departments/curriculum/articulation.php?levelone=colleges](http://www.wccnet.edu/departments/curriculum/articulation.php?levelone=colleges).

## Admissions Requirements

Students need an Academic Math Level of 4 to enroll in MTH 176.

## Contact Information

- Division:** Business/Computer Technologies
- Department:** Computer Instruction Dept
- Advisors:** [Philip Geyer](#), [Clarence Hasselbach](#), [Khaled Mansour](#)

## Requirements

### First Semester

Class	Title	Credits
Elective(s)	Computer and Information Literacy	3
COM 225	Intercultural Communication *	3
CPS 171	Introduction to Programming with C++	4
ENG 111	Composition I	4
<b>Total</b>		<b>14</b>

### Second Semester

Class	Title	Credits
Elective(s)	Arts and Humanities 1	3
	MTH 176 or higher 4 credit math course	4
CIS 121	Linux/UNIX I: Fundamentals	3
CPS 271	Object Features of C++	4
ENG 226	Composition II	3
<b>Total</b>		<b>17</b>

### Third Semester

Class	Title	Credits
CPS 276	Web Programming Using Apache, MySQL, and PHP	4
Elective(s)	Natural Sciences **	4
Elective(s)	Social and Behavioral Science 1 ***	3
	Electives Students must complete 100-level or above transferrable courses to reach a minimum of 60 credits. Possible CIS/CPS electives include: CIS 282, CPS 161, CPS 251, CPS 261, CPS 278	4
<b>Total</b>		<b>15</b>

add to the list of electives  
CPS 255

### Fourth Semester

Class	Title	Credits
<a href="#">CPS 272</a>	<a href="#">Data Structures with C++</a>	4
<a href="#">Elective(s)</a>	<a href="#">Arts and Humanities 2</a>	3
<a href="#">Elective(s)</a>	<a href="#">Social and Behavioral Science 2 ***</a>	3
<a href="#">Elective(s)</a>	<a href="#">Social and Behavioral Science 3 ***</a>	3
	Electives Students must complete 100-level or above transferrable courses to reach a minimum of 60 credits. Possible CIS/CPS electives include: CIS 282, CPS 161, CPS 251, CPS 261, CPS 278	4
<b>Total</b>		<b>17</b>
	<b>Total Credits Required:</b>	<b>63</b>

Add to the list of electives CPS 255

**Footnotes**

- \*Satisfies EMU's Diverse World Requirement
- \*\*Students transferring to a four-year institution should choose a lab-based, MACRAO-approved science course. See an advisor to choose courses that meet the requirements of the program to which you are transferring.
- \*\*\*Choose three courses from at least two disciplines.

This course sequencing aligns with students starting in the Fall semester. Students starting the Winter semester should switch the order in which they take CPS 272 and CPS 276.

PROGRAM CHANGE OR DISCONTINUATION FORM

Program Code: ASISPC Program Name: Information Systems: Programming in C++ Effective Term: 201209
Division Code: BCTD Department: CIS

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
[X] Remove course(s): See program edits, attached.
[X] Add course(s): See program edits, attached.
[ ] 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)
[X] Other: Articulation notes.
Show all changes on the attached page from the catalog.

Rationale for proposed changes or discontinuation:
General education requirements for the ASISPC Programming in C++ degree have been changed to be consistent with the general education requirements for the ASCPJ Programming in Java degree. Required support courses have been eliminated in favor of electives that allow students more course options when tailoring this program to the requirements of different four year programs in computer information systems and computer science.

Financial/staffing/equipment/space implications:
None

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

Signatures:

Table with 4 columns: Reviewer, Print Name, Signature, Date. Rows include Initiator, Department Chair, Division Dean/Administrator, Vice President for Instruction, and President.

Do not write in shaded area. Entered in: Banner C&A Database Log File 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.

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Office of Curriculum & Assessment

## Program Information Report

OK

**School of Information Technology**

The School of Information Technology gathers the diverse areas that make up the computer technology of today. From basic programming languages to systems development through networking, these programs provide the core of information technology. Develop skills in computer networking or programming in the growing field of applied information technology.

Washtenaw Community College offers programs at several levels for students who want to begin new careers, or advance in their existing careers. The first level is the certificate, which can vary from nine to thirty-six credits, depending on the field. Certificates generally prepare students for entry-level jobs.

After completing a certificate, students can progress to the next level, the advanced certificate. The credit hours required for these programs also vary. This type of certificate provides a more specialized level of skill development, and often allows students to upgrade their positions at their places of employment.

The next level, an Associate in Applied Science, is available for some programs. For some career fields, it is possible to earn a certificate, advanced certificate, and an Associate in Applied Science degree in the same field. In these cases, the credit hours from the certificate and advanced certificate can be applied to the credit hours needed for the Associate in Applied Science degree.

Alternatively, students can earn an AAS in Occupational Studies by completing a certificate, advanced certificate and General Education requirements.

**Programming**

Learn the foundation of computer programming or specialize in a programming language through these programs.

**Information Systems: Programming in C++ (ASISPC)****Associate in Science Degree**

**Program Effective Term: Fall 2012**

This program prepares students to transfer to complete a bachelor's degree in Business Administration with a major in Computer Information Systems. Undergraduates and graduates of CIS programs are prepared to create and maintain information systems for organizations, manage information systems projects, and develop strategies for effective use of enterprise information resources.

**Articulation:**

Eastern Michigan University, several BS degrees.

Copies can be obtained from the Counseling Office, a program advisor, or from the Curriculum and Assessment Office Web site: <http://www.wccnet.edu/departments/curriculum/articulation.php?levelone=colleges>.

**Program Admission Requirements:**

Students need an Academic Math Level of 4 to enroll in MTH 176.

<b>First Semester</b>		<b>(14 credits)</b>
COM 225	Intercultural Communication*	3
CPS 171	Introduction to Programming with C++	4
ENG 111	Composition I	4
	Computer Lit. Elective(s)	3
<b>Second Semester</b>		<b>(17 credits)</b>
CIS 121	Linux/UNIX I: Fundamentals	3
CPS 271	Object Features of C++	4
ENG 226	Composition II	3
	MTH 176 or higher 4 credit math course	4
	Arts/Human. 1 Elective(s)	3
<b>Third Semester</b>		<b>(15 credits)</b>
CPS 276	Web Programming Using Apache, MySQL, and PHP	4
	Nat. Sci. Elective(s)**	4
	Soc. Sci. 1 Elective(s)	3
	Electives Students must complete 100-level or above transferrable courses to reach a minimum of 60 credits. Possible CIS/CPS electives include: CIS 282, CPS 161, CPS 251, CPS 261, CPS 278	4
<b>Fourth Semester</b>		<b>(17 credits)</b>
CPS 272	Data Structures with C++	4
	Arts/Human. 2 Elective(s)	3
	Soc. Sci. 2 Elective(s)	3

## Program Information Report

Soc. Sci. 3 Elective(s)	3
Electives Students must complete 100-level or above transferrable courses to reach a minimum of 60 credits. Possible CIS/CPS electives include: CIS 282, CPS 161, CPS 251, CPS 261, CPS 278	4

**Minimum Credits Required for the Program:****63****Notes:**

*\*Satisfies EMU's Diverse World Requirement*

*\*\*Students transferring to a four-year institution should choose a lab-based, MACRAO-approved science course.*

*See an advisor to choose courses that meet the requirements of the program to which you are transferring.*

*This course sequencing aligns with students starting in the Fall semester. Students starting the Winter semester should switch the order in which they take CPS 272 and CPS 276.*

## 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 (See Information Technology)  
Criminal Justice (AACJ)  
Education, Early Childhood (AAECE)  
Education, Elementary (AAELEM)  
Education, Secondary (AASECO)  
Environmental Science (ASENVS)  
Exercise Science (ASESCI)  
General Studies in Math and Natural Sciences (ASGSMS)  
Human Services (AAHUST)  
Information Systems: Programming in C++ (See Information Technology)  
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.

### Computer Science and Information Systems

Interested in a bachelor's degree in computer science or (business) information systems? This area provides the foundation you need to be successful.



## Program Information Report

### Information Systems: Programming in C++ (ASISPC)

#### Associate in Science Degree

**Program Effective Term: Fall 2012**

This program prepares students to transfer to complete a bachelor's degree in Business Administration with a major in Computer Information Systems. Undergraduates and graduates of CIS programs are prepared to create and maintain information systems for organizations, manage information systems projects, and develop strategies for effective use of enterprise information resources.

#### Articulation:

Eastern Michigan University, several BS degrees.

Copies can be obtained from the Counseling Office, a program advisor, or from the Curriculum and Assessment Office Web site:  
<http://www.wccnet.edu/departments/curriculum/articulation.php?levelone=colleges>.

#### Program Admission Requirements:

Students need an Academic Math Level of 4 to enroll in MTH 176.

<b>First Semester</b>		<b>(14 credits)</b>
COM 225	Intercultural Communication*	3
CPS 171	Introduction to Programming with C++	4
ENG 111	Composition I	4
	Computer Lit. Elective(s)	3

<b>Second Semester</b>		<b>(17 credits)</b>
CIS 121	Linux/UNIX I: Fundamentals	3
CPS 271	Object Features of C++	4
ENG 226	Composition II	3
	MTH 176 or higher 4 credit math course	4
	Arts/Human. 1 Elective(s)	3

<b>Third Semester</b>		<b>(15 credits)</b>
CPS 276	Web Programming Using Apache, MySQL, and PHP	4
	Nat. Sci. Elective(s)**	4
	Soc. Sci. 1 Elective(s)	3
	Electives Students must complete 100-level or above transferrable courses to reach a minimum of 60 credits. Possible CIS/CPS electives include: CIS 282, CPS 161, CPS 251, CPS 261, CPS 278	4

<b>Fourth Semester</b>		<b>(17 credits)</b>
CPS 272	Data Structures with C++	4
	Arts/Human. 2 Elective(s)	3
	Soc. Sci. 2 Elective(s)	3
	Soc. Sci. 3 Elective(s)	3
	Electives Students must complete 100-level or above transferrable courses to reach a minimum of 60 credits. Possible CIS/CPS electives include: CIS 282, CPS 161, CPS 251, CPS 261, CPS 278	4

#### Minimum Credits Required for the Program:

**63**

#### Notes:

\*Satisfies EMU's Diverse World Requirement

\*\*Students transferring to a four-year institution should choose a lab-based, MACRAO-approved science course.

See an advisor to choose courses that meet the requirements of the program to which you are transferring.

*This course sequencing aligns with students starting in the Fall semester. Students starting the Winter semester should switch the order in which they take CPS 272 and CPS 276.*

PROGRAM CHANGE OR DISCONTINUATION FORM

Program Code: **ASISPC** Program Name: **Information Systems/ C++ Programming** Effective Term: **201109**  
 Division Code: **BCT** Department: **CISD**

**Directions:**

1. Attach the current program listing from the WCC catalog or Web site and indicate any changes to be made.
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**Requested Changes:**

- |   |   |
|---|---|
| <input type="checkbox"/> Review   | <input type="checkbox"/> Program admission requirements   |
| <input checked="" type="checkbox"/> Remove course(s): <b>BMG 106</b>                    | <input type="checkbox"/> Continuing eligibility requirements  |
| <input checked="" type="checkbox"/> Add course(s): <b>CPS 276 MySQL/PHP Programming</b> | <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:**

BMG 106 is being discontinued by the BMG Department. CPS 276 MySQL/PHP is being substituted into the program in lieu of BMG 106. CPS 276 transfers into the CIS Program at the Eastern Michigan University College of Business at IS 247.

**Financial/staffing/equipment/space implications:**

None

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

CISD, BMGD

**Signatures:**

Reviewer	Print Name	Signature	Date
Initiator	Neil Gudsen		1-28-2011
Department Chair	Clarence Hasselbach		1-28-2011
Division Dean/Administrator	Rosemary Wilson		1/31/11
Vice President for Instruction	Stuart Blacklaw		2/21/11
President	Larry Whitworth		

Do not write in shaded area. Entered in: Banner \_\_\_\_\_ C&A Database \_\_\_\_\_ Log File 2/7/11 sjh Board Approval \_\_\_\_\_

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

*Done 2/28/11*  
 Office of Curriculum & Assessment  
 logged 2/7/11 *sjh*

Program Information Report

**School of Information Technology**

The School of Information Technology gathers the diverse areas that make up the computer technology of today. From basic programming languages to systems development through networking, these programs provide the core of information technology. Develop skills in computer security or data recovery analysis, the growing field of applied information technology is waiting for you.

Washtenaw Community College offers programs at several levels for students who want to begin new careers, or advance in their existing careers. The first level is the certificate, which can vary from nine to thirty-six credits, depending on the field. Certificates generally prepare students for entry-level jobs.

After completing a certificate, students can progress to the next level, the advanced certificate. The credit hours required for these programs also vary. This type of certificate provides a more specialized level of skill development, and often allows students to upgrade their positions at their places of employment.

The next level, an Associate in Applied Science, is available for some programs. For some career fields, it is possible to earn a certificate, advanced certificate, and an Associate in Applied Science degree in the same field. In these cases, the credit hours from the certificate and advanced certificate can be applied to the credit hours needed for the Associate in Applied Science degree.

Alternatively, students can earn an AAS in Occupational Studies by completing a certificate, advanced certificate and General Education requirements.

**Programming**

Learn the foundation of computer programming or specialize in a programming language through these programs.

**Information Systems: Programming in C++ (ASISPC)**

**Associate in Science Degree**

**Program Effective Term: Fall 2011**

This program prepares students to transfer to complete a bachelor's degree in Business Administration with a major in Computer Information Systems. Undergraduates and graduates of CIS programs are prepared to create and maintain information systems for organizations, manage information systems projects, and develop strategies for effective use of enterprise information resources.

**Articulation:**

Articulation

Eastern Michigan University, several BS degrees.

Copies can be obtained from the Counseling Office, a program advisor, or from the Curriculum and Assessment Office Web site: <http://www.wccnet.edu/departments/curriculum/articulation.php?levelone=colleges>.

**Program Admission Requirements:**

Students need an Academic Math Level of 4 to enroll in MTH 181.

<b>General Education Requirements</b>		<b>(36 credits)</b>
ENG 111 and	Composition I	4
ENG 226	Composition II	3
Speech	Elective(s)*	3
MTH 181	Mathematical Analysis I**	4
Nat. Sci.	Elective(s)***	4
ECO 211 and	Principles of Economics I	3
ECO 222	Principles of Economics II	3
Soc. Sci.	Elective(s)***	3
Arts/Human.	Elective(s)****	6
CIS 110	Introduction to Computer Information Systems	3
<b>Major/Area Requirements</b>		<b>(19 credits)</b>
CIS 121	Linux/UNIX I: Fundamentals	3
CPS 171	Introduction to Programming with C++	4
CPS 271	Object Features of C++	4
CPS 272	Data Structures with C++	4
CPS 276	Web Programming Using Apache, MySQL, and PHP	4
<b>Required Support Courses</b>		<b>(6 credits)</b>
BMG 140	Introduction to Business	3
BMG 200	Human Relations in Business	3

## Program Information Report

### Minimum Credits Required for the Program:

61

#### Notes:

*\*See the EMU Diverse World Requirement list.*

*\*\*MTH 181 should be completed at WCC to satisfy EMU's Quantitative Reasoning Requirement. If completed at EMU, MATH 110 will be required unless waived by ACT/SAT or math placement score.*

*\*\*\*Students transferring to a four-year institution: choose a lab-based, MACRAO-approved natural science course; choose a social science elective in a discipline other than ECO. See the MACRAO list in the WCC Bulletin for a list of choices.*

*\*\*\*\*PHL 205 or PHL 250 is strongly recommended.*

*Students intending to transfer into the EMU College of Business may want to take BMG 111 in addition to the courses required in this program. BMG 111 will transfer to the EMU College of Business as LAW 293.*

Washtenaw Community College.

**Certificates and Degrees.**

<http://www4.wccnet.edu/academicinfo/creditofferings/programs/degree.php?code=ASISPC>

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**Information Systems: Programming in C++ (ASISPC)**

Associate in Science Degree

Program requirements shown below are for catalog year: 2010 - 2011 Change Year

**Description:**

This program prepares students to transfer to complete a bachelor's degree in Business Administration with a major in Computer Information Systems. Undergraduates and graduates of CIS programs are prepared to create and maintain information systems for organizations, manage information systems projects, and develop strategies for effective use of enterprise information resources.

**Contact Information:**

Division: Business and Computer Technologies  
 School: [Transfer and University Parallel Programs](#)  
 Department: [Computer Instruction](#)  
 Advisors: [Philip Geyer](#), [Clarence Hasselbach](#), [Khaled Mansour](#)

**Articulation:**

Articulation  
 Eastern Michigan University, several BS degrees.

Copies can be obtained from the Counseling Office, a program advisor, or from the Curriculum and Assessment Office Web site: <http://www.wccnet.edu/departments/curriculum/articulation.php?levelone=colleges>

**Admission Requirements:**

Students need an Academic Math Level of 4 to enroll in [MTH 181](#).

**General Education Requirements**

**(36 Credits)**

<a href="#">ENG 111</a> and	Composition I	4
<a href="#">ENG 226</a>	Composition II	3
<a href="#">Speech</a>	* Elective(s)	3
<a href="#">MTH 181</a>	** Mathematical Analysis I	4
<a href="#">Nat. Sci.</a>	*** Elective(s)	4
<a href="#">ECO 211</a> and	Principles of Economics I	3
<a href="#">ECO 222</a>	Principles of Economics II	3
<a href="#">Soc. Sci.</a>	*** Elective(s)	3
<a href="#">Arts/Hum.</a>	**** Elective(s)	6
<a href="#">CIS 110</a>	Introduction to Computer Information Systems	3

**Major/Area Requirements**

**19  
(15 Credits)**

<a href="#">CIS 121</a>	Linux/UNIX I: Fundamentals	3
<a href="#">CPS 171</a>	Introduction to Programming with C++	4
<a href="#">CPS 271</a>	Object Features of C++	4
<a href="#">CPS 272</a>	Data Structures with C++	4

**Required Support Courses**

**6  
(6 Credits)**

<del><a href="#">BMG 106</a></del>	<del>Legal Basics in Business</del>	<del>3</del>
<a href="#">CPS 276</a>	Web Programming with MySQL & PHP	4

<u>BMG 140</u>	Introduction to Business	3
<u>BMG 200</u>	Human Relations in Business	3

**Minimum Credits Required for the Program:**

~~60~~ <sup>61</sup> Credits

**Footnotes:**

\*See the EMU Diverse World Requirement list.

\*\*MTH 181 should be completed at WCC to satisfy EMU's Quantitative Reasoning Requirement. If completed at EMU, MATH 110 will be required unless waived by ACT/SAT or math placement score.

\*\*\*Students transferring to a four-year institution: choose a lab-based, MACRAO-approved natural science course; choose a social science elective in a discipline other than ECO. See the MACRAO list in the WCC Bulletin for a list of choices.

\*\*\*\*PHL 205 or PHL 250 are strongly recommended.

~~BMG III IS HEAVILY RECOMMENDED~~

This website is for informational purposes only and is not to be construed as a binding offer or contract between WCC and the student. The information presented here is believed accurate, but is NOT guaranteed and is subject to change without notice.

For official information, see an Advisor.

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STUDENTS INTENDING TO TRANSFER INTO THE EMU COLLEGE OF BUSINESS MAY WISH TO TAKE BMG III IN ADDITION TO THE COURSES REQUIRED IN THIS PROGRAM. BMG III WILL TRANSFER TO THE EMU COB. AS LAW 293.

2/15/11 CC mtg.  
 CPS 276 should be added under major area requirements