

**Articulation Agreement  
between  
Washtenaw Community College  
Information Systems Programming in C++  
and  
Madonna University  
Computer Science/C++**

| <b>MTA Requirements</b>  |                             |    |                           |                                 |    |
|--|-----------------------------|----|---------------------------|---------------------------------|----|
| <b>Washtenaw Community College</b>   |                             |    | <b>Madonna University</b> |                                 |    |
| <i>English Composition – 2 courses (Goal CC-1A)</i>                                      |                             |    |                           |                                 |    |
| ENG 111  | Communication Skills 1      | 4  | WRT 1010                  | College Composition 1           | 3  |
| ENG 226  | Composition 2               | 3  | WRT 1020                  | College Composition 2           | 3  |
| <i>Mathematics – 1 course (Goal CC-5)</i>  |                             |    |                           |                                 |    |
| MTH 176  | College Algebra             | 4  | MTH 1050                  | College Algebra                 | 4  |
| MTH 180  | Precalculus                 | 5  | MTH 1210                  | Precalculus                     | 5  |
| MTH 191***   | Calculus 1                  | 5  | MTH 2510                  | Calc with Analytic Geometry 1   | 5  |
| MTH 192***   | Calculus 2                  | 4  | MTH 2520                  | Calc with Analytic Geometry 2   | 4  |
| <i>Social Science – 2 courses from different disciplines</i>                             |                             |    |                           |                                 |    |
| PLS 112  | American Government         | 3  | PSC 1510                  | American Government(CC-3)       | 3  |
| PSY 100  | Intro Psychology            | 3  | PSY 1010                  | General Psychology(CC-4)        | 3  |
| SOC 100  | Principles of Sociology     | 3  | SOC 1020                  | Intro to Sociology(CC-4)        | 3  |
| SOC 205  | Race/Ethnic Relations       | 3  | SOC 3120                  | Diversity/Discrimination(SC-9)  | 3  |
| SOC 207  | Social Issues/Movement      | 3  | SOC 2020                  | Social Problems(CC-4)           | 3  |
| <i>Humanities and Fine Arts – 2 courses from different disciplines</i>                   |                             |    |                           |                                 |    |
| ART 150  | Monuments from World        | 3  | AHIS 2020                 | Monuments,Media(CC-2)           | 3  |
| COM 101  | Fundamentals of Speaking    | 3  | COM 2350                  | Public Speaking(CC-1B)          | 3  |
| COM 102  | Interpersonal Communication | 3  | COM 2120                  | Interpersonal Comm(CC-1B)       | 3  |
| ENG 223  | British Lit After 1800      | 3  | ENG 2230                  | Ideas in World Literature(CC-2) | 3  |
| ENG 224  | World Literature 2          | 3  | ENG 2230                  | Ideas in World Literature(CC-2) | 3  |
| HUM 101  | Ancient to Medieval Times   | 3  | HUM 2040                  | Expressive Thinking(CC-2)       | 3  |
| HUM 102  | Renaissance to Modern Times | 3  | HUM 2040                  | Expressive Thinking(CC-2)       | 3  |
| HUM 145  | Comparative Religions       | 3  |                           | Core Curriculum Credit(SC-8B)   | 3  |
| HUM 175  | Arts/Culture of Middle East | 3  | HUM 2040                  | Expressive Thinking(CC-2)       | 3  |
| MUS 180  | Music Appreciation          | 3  | MUS 2020                  | Music Through the Ages(CC-2)    | 3  |
| PHL 101  | Intro to Philosophy         | 3  | PHL 1010                  | Intro to Philosophy(CC-3)       | 3  |
| <i>Natural Sciences – 2 courses from different disciplines, 1 course must have a lab</i> |                             |    |                           |                                 |    |
| BIO 101  | Concepts of Biology         | 4  | BIO 1010                  | Intro Biology(CC-6A)*           | 4  |
| BIO 102  | Human Biology               | 4  | BIO 2250                  | Basic Human Physiology*         | 3  |
| BIO 109  | Essentials of A&P           | 4  | BIO 2250                  | Basic Human Physiology*         | 3  |
| BIO 161  | General Biology 1           | 4  | BIO 1040                  | General Biology 2*              | 4  |
| CEM 105  | Introductory Chemistry      | 4  | CHM 1010                  | Intro Principles Chem(CC-6B)**  | 4  |
| CEM 111  | General Chemistry 1         | 4  | CHM 1110                  | General Chemistry 1**           | 4  |
| Washtenaw Community College  |                             | 32 |                           | Madonna University              | 31 |
| <b>Minimum 30 credits</b>  |                             |    |                           |                                 |    |

\*\*\*Also fulfills major requirement

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| <b>Additional Transferrable Requirements</b>                    |  |           |  |                             |           |
|---|--|-----------|--|-----------------------------|-----------|
| <b>Washtenaw Community College</b>                              |  |           | <b>Madonna University</b>                |                             |           |
| <b>Computer Science (C++ Concentration) Degree Requirements</b> |  |           |  |                             |           |
| CPS 171   | Introduction to Programming w/C++                        | 4         | CSC 2080                                 | Computer Science I          | 3         |
| CPS 271   | Object Features of C++                                   | 4         | CSC 3350                                 | Object-Oriented Programming | 3         |
| CPS 272   | Data Structures with C++                                 | 4         | CSC 2480                                 | Computer Science II         | 3         |
| MTH 191   | Calculus I   | 5         | MTH 2510                                 | Calculus I                  | 5         |
| MTH 192   | Calculus II  | 4         | MTH 2520                                 | Calculus II                 | 4         |
|   | Select <b>Two</b> CPS or CIS courses*                    | 8         | CSC                                      | <b>Two</b> CSC Electives    | 8         |
| CPS 161*  | An Intro to Programming w/Java                           | 4         |  |                             |           |
| CPS 192*  | Introduction to C#.Net                                   | 4         |  |                             |           |
| CPS 251*  | Android Programming Using Java                           | 4         |  |                             |           |
| CPS 261*  | Advanced Java Concepts                                   | 4         |  |                             |           |
| CPS 276*  | Web Programming  | 4         |  |                             |           |
| CPS 278*  | Java Server Programming                                  | 4         |  |                             |           |
| CPS 292*  | Intermediate and Advanced C#.Net                         | 4         |  |                             |           |
| CPS 293*  | C#.NET   | 4         |  |                             |           |
| CPS 295*  | Advanced C#.Net and ASP.Net                              | 4         |  |                             |           |
| CIS 221*  | Linux/UNIX Programming & Scripting                       | 4         |  |                             |           |
| CIS 282*  | Database Principles and Application                      | 4         |  |                             |           |
| CSS 200*  | Introduction to Network Security                         | 4         |  |                             |           |
| CST 270*  | Computer Forensics I                                     | 4         |  |                             |           |
| CST 275*  | Computer Forensics II                                    | 4         |  |                             |           |
| <b>Credits From Washtenaw Community College</b>                 |  | <b>27</b> | <b>Madonna University Credit</b>         |                             | <b>27</b> |
| <b>Additional Transferrable Credits at WCC</b>                  |  |           |  |                             |           |
| Elective Credit   |  | 29/34     | Elective Credit                          |                             | 29/34     |
| <b>Total Washtenaw Credit Hours</b>                             |  | <b>90</b> | <b>Total Credits Accepted at Madonna</b> |                             | <b>90</b> |
| <b>Bachelor Degree Requirements at Madonna University</b>       |  |           |  |                             |           |
| CSC 3030  | Operating Systems  |           |  |                             | 3         |
| CSC 3050  | Computer Architecture                                    |           |  |                             | 3         |
| CSC 3280  | Analysis of Algorithms                                   |           |  |                             | 3         |
| CSC 3290  | Programming Language Concepts                            |           |  |                             | 3         |
| CSC 3910  | Cooperative Education in Software                        |           |  |                             | 3         |
| CSC 4850  | Seminar: Computers & Society                             |           |  |                             | 2         |
| MTH 2450  | Discrete Mathematics                                     |           |  |                             | 3         |
| SC-7  | Literature and Informational Fluency                     |           |  |                             | 3         |
| SC-8A   | The Madonna Heritage                                     |           |  |                             | 3         |
|   | Elective Credit (See Madonna advisor for course options) |           |  |                             | 4         |
| <b>Madonna University Credit Hours</b>                          |  |           |  |                             | <b>30</b> |

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- The Michigan Transfer Agreement (MTA) will satisfy all Madonna University Core Courses. MTA does not satisfy Madonna University Signature Courses.
- Madonna University will transfer a maximum of 74 credits from community colleges towards the minimum total of 120 semester hours needed for a first Bachelor degree unless noted otherwise in the articulated agreement. Courses must be approved for transfer, non-remedial and have a grade above a 2.0 ("C") or higher. Students pursuing a course of study under an existing articulation agreement should contact Madonna University's Articulation Specialist, kardanowski@madonna.edu in the Office of the Registrar to discuss approved and maximum credit allowances.
- Madonna University requires all incoming students to complete a writing assessment scored by MU writing faculty
- Students who are pursuing or who have earned the MACRAO Transfer Agreement should contact Madonna University as the requirements in the Core Curriculum will vary.
- Contact Washtenaw Community College for any questions regarding MTA or MACRAO at 734-677-5102.
- Contact Madonna University for questions regarding the Computer Science Major, admission requirements or to set up an appointment with an advisor at 734-432-5339 or admissions@madonna.edu.