

## Associate of Applied Science – Information Technology (Programming Option)

Name: \_\_\_\_\_ ID#: \_\_\_\_\_ Date: \_\_\_\_\_

Computer programmers are the unsung heroes in the IT field. Every system must run at its optimum performance to deliver information vital to doing business. Programmers provide the means to retrieve that data. MACC trains programmers in several languages to meet the world’s IT needs. C++, Java and C# are the core languages. Individuals also learn SQL, a database query language used in database management and more. Concepts are delivered to provide maximum transfer of knowledge to other languages. Programming graduates are prepared to enter the field as entry-level programmers or transfer to a four-year institution. MACC also offers a 32 credit hour certificate and multiple Certificates of Specialization in this field. This academic map is a suggested semester-by-semester schedule of courses based upon the AAS degree requirements as outlined in the academic catalog.

| Taken                             | Course   | Semester  | Hours        | Milestone*                 |
|-----------------------------------|--|---|--------------|----------------------------|
| <b>First Semester (Fall)</b>      |  |   |              |                            |
|                                   | BUS150 <u>or</u><br>LAL101                     | ^Business Communication <u>or</u><br>^Composition I   | 3            | BUS150 <u>or</u><br>LAL101 |
|                                   | ITC106   | IT Essentials   | 3            |                            |
|                                   | ITC120   | ^Programming I  | 3            | ITC120                     |
|                                   | MTH140 <u>or</u><br>MTH201                     | ^Precalculus Algebra <u>or</u><br>^Analytic Geometry and Calculus I   | 3-5          | MTH140 <u>or</u><br>MTH201 |
|                                   | SKL101   | College Orientation   | 1            | SKL101                     |
|                                   | SPK101   | Public Speaking   | 3            |                            |
|                                   |  |   | <b>16-18</b> |                            |
| <b>Second Semester (Spring)</b>   |  |   |              |                            |
|                                   | HST105 <u>or</u><br>HST106 <u>or</u><br>PSC105 | American History to 1865 <u>or</u><br>American History from 1865 <u>or</u><br>Introduction to American Government | 3            |                            |
|                                   | ITC130   | Introduction to Networks  | 5            |                            |
|                                   | ITC145   | Web Design I  | 3            |                            |
|                                   | ITC150   | Linux Administration I  | 3            |                            |
|                                   | ITC220   | ^Programming II – <b>Spring Only</b>  | 3            |                            |
|                                   |  |   | <b>17</b>    |                            |
| <b>Third Semester (Fall)</b>      |  |   |              |                            |
|                                   |  | <u>Biological or Physical Science</u> (with lab)  | 4-5          |                            |
|                                   | ITC125   | ^Object Oriented Programming I  | 3            |                            |
|                                   | ITC201   | ^Relational Database Systems – <b>Fall Only</b>   | 3            |                            |
|                                   | ITC245   | ^Web Design II – <b>Fall Only</b>   | 3            |                            |
|                                   |  | Programming Language Elective (See next page)   | 3            |                            |
|                                   |  |   | <b>16-17</b> |                            |
| <b>Fourth Semester (Spring)</b>   |  |   |              |                            |
|                                   |  | <u>Humanities</u> (Ethics or Logic recommended)***  | 3            |                            |
|                                   | ITC250   | ^Linux Administration II – <b>Spring Only</b>   | 3            |                            |
|                                   | ITC255   | ^Cyber Security – <b>Spring Only</b>  | 3            |                            |
|                                   | ITC281   | ^Systems Project: Programming   | 3            |                            |
|                                   | ITC295 <u>or</u><br>SKL250                     | ^Information Technology Internship <u>or</u><br>^Employment Seminar   | 1-2          |                            |
|                                   |  | Programming Language Elective (See next page)   | 3            |                            |
|                                   |  |   | <b>16-17</b> |                            |
| Minimum Required Hours for Degree |  |   | <b>65</b>    |                            |

**\*It is strongly recommended that students successfully complete the Milestone courses as planned on the academic map to ensure completion of the degree in two years. In addition, if students do not successfully complete the Milestone course(s), they are strongly encouraged to re-enroll in the course(s) the following semester.**

**\*\*Note for all Information Technology AAS degrees and certificates (32 credit hour and Certificates of Specialization): A grade of "C" or better must be achieved in all required ITC courses (course prefix "ITC") to earn an AAS degree, 32 credit hour certificate, or Certificate of Specialization.**



**\*\*\* Core 42 approved humanities courses are located on the course description web pages for Art, Drama, Foreign Language, History, Language and Literature, Music, and Philosophy.**

**Programming Language Elective (Complete 2 courses):**

ITC221: ^COBOL Programming or

ITC243: ^Object Oriented Programing II (Java) or

ITC244: ^Object Oriented Programming II (C#) – **Spring Only** or

ITC247: ^Python Programming

**^Please refer to the course descriptions for pre/co-requisite and placement information. You can only register for these courses if you have met the prerequisite, placed into the course and/or enroll in the co-requisite course(s).**

**Additional Graduation Requirement**

**Missouri law, included in Senate Bill 807, requires every college student pursuing an associate's or bachelor's degree at a public institution to pass the Missouri Higher Education Civics Achievement Examination with at least a 70 percent to graduate. The rule will apply to the incoming class of first-time college students in the fall of 2019 and all students thereafter.**