

## DIPLOMA COMPUTER SYSTEMS TECHNOLOGY

Program Matrix for students started CST prior to Sept 2018

| First Year – Level 1        |  | Credits        |
|-----------------------------|--|----------------|
| <b>COMM 1116</b>            | Business Communications 1                  | 4.0            |
| <b>COMP 1100</b>            | CST Program Fundamentals                   | 1.0            |
| <b>COMP 1111</b>            | Essential Skills for Computing             | 4.0            |
| <b>COMP 1113</b>            | Applied Mathematics                        | 4.0            |
| <b>COMP 1510</b>            | Programming Methods                        | 7.0            |
| <b>COMP 1536</b>            | Introduction to Web Development            | 4.0            |
| <b>BUSA 2720</b>            | Business in a Networked Economy            | 4.0            |
| <b>First Year – Level 2</b> |  | <b>Credits</b> |
| <b>COMM 2216</b>            | Business Communications 2                  | 4.0            |
| <b>COMP 2121</b>            | Discrete Mathematics                       | 4.0            |
| <b>COMP 2510</b>            | Procedural Programming                     | 5.0            |
| <b>COMP 2522</b>            | Object Oriented Programming 1 <sup>1</sup> | 5.0            |
| <b>COMP 2526</b>            | Object-Oriented Programming with Java      | 4.0            |
| <b>COMP 2714</b>            | Relational Database Systems                | 5.0            |
| <b>COMP 2721</b>            | Computer Organization/Architecture         | 4.0            |
| <b>COMP 2910</b>            | Projects 2 * **                            | 6.0            |

Note: Effective September 2018, COMP 2910 will be changed to COMP 2930.

<sup>1</sup> Effective January 2019, COMP 2522 replaces COMP 2526.

Note: At the end of the first year, students apply to an option.

| <b>Second Year – Level 3</b>  |  | <b>Credits</b> |
|---|--|----------------|
| <b>Common courses:</b>  |  |                |
| <b>COMP 3512</b>  | Object Oriented Programming in C++               | 6.0            |
| <b>COMP 3522</b>  | Object Oriented Programming 2 <sup>2</sup>       | 6.0            |
| <b>COMP 3711</b>  | Object Oriented Analysis and Design              | 4.0            |
| <b>COMP 3712</b>  | Object Oriented Analysis and Design <sup>2</sup> | 4.0            |
| <b>COMP 3721</b>  | Introduction to Data Communication               | 4.0            |
| <b>COMP 3760</b>  | Algorithm Analysis and Design                    | 4.0            |
| <b>COMP 3900</b>  | Computer Projects Practicum 1                    | 5.0            |
| <sup>2</sup> Effective September 2019, COMP 3522 replaces COMP 3512 and COMP 3712 replaces COMP 3711. |  |                |
| and   |  |                |
| <b>Artificial Intelligence and Machine Learning Option:</b>   |  |                |
| <b>COMP 3717</b>  | Mobile Application Development with Android      | 4.0            |
| <b>COMP 3981</b>  | Introduction to Artificial Intelligence          | 5.0            |
| or  |  |                |
| <b>Client/Server Option:</b>  |  |                |
| <b>COMP 3717</b>  | Mobile Application Development with Android      | 4.0            |
| <b>COMP 3940</b>  | Client/Server Computing 1                        | 5.0            |
| or  |  |                |
| <b>Cloud Computing Option:</b>  |  |                |
| <b>COMP 3717</b>  | Mobile Application Development with Android      | 4.0            |
| <b>COMP 3962</b>  | Cloud Computing Platforms                        | 5.0            |

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| or   |   |     |
| <b>Combined (Web and Mobile) Option:</b>               |   |     |
| <b>COMP 3717</b>                                       | Mobile Application Development with Android | 4.0 |
| <b>COMP 3975</b>                                       | Server-Side Web Scripting with PHP          | 5.0 |
| or   |   |     |
| <b>Database Option:</b>                                |   |     |
| <b>COMP 3920</b>                                       | Database Systems 1                          | 5.0 |
| <b>COMP 4925</b>                                       | Selected Topics in Database Systems         | 5.0 |
| or   |   |     |
| <b>Data Communications and Internetworking Option:</b> |   |     |
| <b>COMP 3717</b>                                       | Mobile Application Development with Android | 4.0 |
| <b>COMP 3980</b>                                       | Data Communications/Internetworking 1       | 5.0 |
| or   |   |     |
| <b>Digital Processing Option:</b>                      |   |     |
| <b>COMP 3770</b>                                       | Programming Windows                         | 4.0 |
| <b>COMP 3931</b>                                       | Digital Image, Video and Audio Fundamentals | 5.0 |
| or   |   |     |
| <b>Information Systems Option:</b>                     |   |     |
| <b>COMP 3717</b>                                       | Mobile Application Development with Android | 4.0 |
| <b>COMP 3910</b>                                       | Information Technology Management           | 5.0 |
| or   |   |     |
| <b>Technical Programming Option:</b>                   |   |     |
| <b>COMP 3717</b>                                       | Mobile Application Development with Android | 4.0 |
| <b>COMP 3951</b>                                       | Technical Programming 1                     | 5.0 |

| <b>Second Year – Level 4</b>  |   |     |
|---|---|-----|
| <b>Common courses:</b>  |   |     |
| <b>BLAW 3600</b>  | Computers and the Law                         | 4.0 |
| <b>COMP 4100</b>  | Career Preparation <sup>3</sup>               | 2.0 |
| <b>COMP 4735</b>  | Operating Systems                             | 5.0 |
| <b>COMP 4900</b>  | Computer Projects Practicum 2 *               | 5.0 |
| <sup>3</sup> Effective September 2018, COMP 4100 will not be offered. |   |     |
| and   |   |     |
| <b>Artificial Intelligence and Machine Learning Option:</b>           |   |     |
| <b>COMP 4560</b>  | Computer Graphics for CST <sup>4</sup>        | 4.0 |
| <b>COMP 4711</b>  | Introduction to Internet Software Development | 3.0 |
| <b>COMP 4983</b>  | Machine Learning                              | 5.0 |
| <b>COMP 4989</b>  | Selected Topics in AI/ML                      | 5.0 |
| <b>MATH 3042</b>  | Applied Probability and Statistics for CST    | 5.0 |
| or  |   |     |
| <b>Client/Server Option:</b>  |   |     |
| <b>COMP 4560</b>  | Computer Graphics for CST <sup>4</sup>        | 4.0 |
| <b>COMP 4711</b>  | Introduction to Internet Software Development | 3.0 |
| <b>COMP 4941</b>  | Client/Server Computing 2                     | 5.0 |
| <b>COMP 4945</b>  | Special Topics in Client/Server               | 5.0 |
| <b>MATH 3042</b>  | Applied Probability and Statistics for CST    | 5.0 |

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| or                                       |   |     |
| <b>Cloud Computing Option:</b>           |   |     |
| <b>COMP 4560</b>                         | Computer Graphics for CST <sup>4</sup>          | 4.0 |
| <b>COMP 4711</b>                         | Introduction to Internet Software Development   | 3.0 |
| <b>COMP 4964</b>                         | DevOps Engineering                              | 5.0 |
| <b>COMP 4968</b>                         | Serverless Computing and Microservices          | 5.0 |
| <b>MATH 3042</b>                         | Applied Probability and Statistics for CST      | 5.0 |
| or                                       |   |     |
| <b>Combined (Web and Mobile) Option:</b> |   |     |
| <b>COMP 4560</b>                         | Computer Graphics for CST <sup>4</sup>          | 4.0 |
| <b>COMP 4711</b>                         | Introduction to Internet Software Development   | 3.0 |
| <b>COMP 4976</b>                         | Web Applications with ASP.NET                   | 5.0 |
| <b>COMP 4977</b>                         | iOS Application Development for iPhone and iPad | 5.0 |
| <b>MATH 3042</b>                         | Applied Probability and Statistics for CST      | 5.0 |
| or                                       |   |     |
| <b>Database Option:</b>                  |   |     |
| <b>COMP 3717</b>                         | Mobile Application Development with Android     | 4.0 |
| <b>COMP 4560</b>                         | Computer Graphics for CST <sup>4</sup>          | 4.0 |
| <b>COMP 4711</b>                         | Introduction to Internet Software Development   | 3.0 |
| <b>COMP 4921</b>                         | Database Systems 2                              | 5.0 |
| <b>MATH 3042</b>                         | Applied Probability and Statistics for CST      | 5.0 |

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|--|---|-----|
| or   |   |     |
| <b>Data Communication and Internetworking Option:</b>                |   |     |
| <b>COMP 4560</b>   | Computer Graphics for CST <sup>4</sup>        | 4.0 |
| <b>COMP 4711</b>   | Introduction to Internet Software Development | 3.0 |
| <b>COMP 4981</b>   | Data Communications/Internetworking 2         | 5.0 |
| <b>COMP 4985</b>   | Selected Topics in DC/I                       | 5.0 |
| <b>MATH 3042</b>   | Applied Probability and Statistics for CST    | 5.0 |
| or   |   |     |
| <b>Digital Processing Option:</b>                                    |   |     |
| <b>COMP 4560</b>   | Computer Graphics for CST <sup>4</sup>        | 4.0 |
| <b>COMP 4711</b>   | Introduction to Internet Software Development | 3.0 |
| <b>COMP 4932</b>   | Advanced Topics in Digital Processing         | 5.0 |
| <b>COMP 4995</b>   | Gaming Systems                                | 5.0 |
| <b>MATH 3042</b>   | Applied Probability and Statistics for CST    | 5.0 |
| or   |   |     |
| <b>Information Systems Option:</b>                                   |   |     |
| <b>COMP 4870</b>   | Intranet Planning and Development             | 7.0 |
| <b>COMP 4911</b>   | Managing IS Development                       | 5.0 |
| <b>COMP 4915</b>   | Special Topics in MIS                         | 5.0 |
| or   |   |     |
| <b>Technical Programming Option:</b>                                 |   |     |
| <b>COMP 4560</b>   | Computer Graphics for CST <sup>4</sup>        | 4.0 |
| <b>COMP 4711</b>   | Introduction to Internet Software Development | 3.0 |
| <b>COMP 4952</b>   | Technical Programming 2                       | 5.0 |
| <b>COMP 4956</b>   | System Programming                            | 5.0 |
| <b>MATH 3042</b>   | Applied Probability and Statistics for CST    | 5.0 |
| <sup>4</sup> Effective September 2018, MATH 3042 replaces COMP 4560. |   |     |

| <b>Co-op Work Term Courses (Optional)</b><br><i>To be completed after Level 2 and prior to Level 4, commencing in January or May.</i>  |   | <b>Credits</b> |
|--|---|----------------|
| <b>COMP 2990</b>   | <b>Co-operative Education Work Term 1</b> | 16.0           |
| <b>COMP 3990</b>   | <b>Co-operative Education Work Term 2</b> | 16.0           |
| <p>All courses are 15 weeks in duration except where otherwise noted.</p> <p>* denotes a five-week course, delivered from late April through to the end of May.</p> <p>** COMP 2910 and COMP 4100 are optional for students who successfully complete one term of co-op education.</p> |   |                |
| <b>Total Credits:</b>  |   | <b>125.0</b>   |