**INFO1156- Syllabus: F2020,   
With your host: Michael Feeney**

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| **Required Learning Resources:** |
| * **Software:** I’ll be using Visual Studio 2019 Community (but have other versions installed) |

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|  | **Syllabus / Tentative Schedule** | |
| **Week of: date** | **Lecture topics** | **Evaluation** |
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| 1: January 12th | * Course into * Visual Studio * Why C/C++ * Building “Hello world” (“build” process: compile and link) |  |
| 2: January 19th | * Data types and built in structure  (brief intro: arrays, structs, classes – more later) |  |
| 3: January 26th | * I/O (input/output), console and files * Functions * Command line arguments (“C style”/stack arrays) | Assignment/Quiz #1 (2.5%) Quiz (think: short, in class) |
| 4: February 2nd | * Pointers and references * Arrays * “C strings” * C and C++ memory management | Project #1 due |
| 5: February 9th | * Header files * User defined types: Structures (and briefly: classes and unions) * More C++ file I/O (STL) | **Project #1 due** (updated) |
| 6: February 16th | * IO manipulation (C++) (STL) * More data type stuff: variables, const, typedef, enum, auto, etc. * Functions and “passing and returning” * Strings (C and C++ STL) |  |
| 7: February 23rd | * (Buffer class: more in details on pointers, iterators, file I/O) | Assignment/Quiz #2 (2.5%) Quiz (think: short, in class) |
| March 1st to 5th : Break week (there will still be zoom sessions, though) | | |
| 8: March 9th | * **Midterm:**    + (Tuesday, March 9th is review)   + **\*\*Thursday, March 11th \*\*** | Project #2 due (10%)  Midterm (25%) |
| 9: March 16th | * More C++ I/O: iostream/fstream/sstream * stream hierarchies * STL containers: vectors | Assignment/Quiz #3 (2.5%) Quiz(think: short, in class) |
| 10: March 23rd | * File systems * Other STL containers: vector, array, list, deques * STL iterators (and algorithm library integration) |  |
| 11: March 30th | * Recursion * Predicate functions * Some performance stuff: memory vs processing speed and how that’s fundamentally changed over time | Project #3 due (10%) |
| 12: April 6th | * Classes and Structs: methods, constructors, etc. * Operator overloading | Assignment/Quiz #4 (2.5%) Quiz(think: short, in class) |
| 13: April 13th | * Assert, exceptions, etc. * What they are, when to use, and *not* use them? |  |
| 14: April 20th | * Final Exam | Project #4 due (10%)  Final (35%) |