

## 605.604 Summer 2021 Course Outline

This outline provides an overview of the course topics, assignments, assignments, and project deliverables by week. Please remember to check the course website for each week's reading assignments.

Each course week runs for a period of seven (7) days, beginning on a Tuesday and ending on a Monday, with the exception of the final week which ends on a Tuesday. Unless otherwise specified, all assignments, discussion postings, project deliverables, and exams are due by 11:59pm Eastern time on the last day for that module.

Week	Dates	Topics	Assignments
Week 1	Tue 06/01/21– Mon 06/07/21	<ul style="list-style-type: none"> <li>• Introduction to C++</li> <li>• Pointers &amp; References</li> </ul>	<ul style="list-style-type: none"> <li>• Week 1 Assignment (Due 06/07)</li> </ul>
Week 2	Tue 06/08/21– Mon 06/14/21	<ul style="list-style-type: none"> <li>• Scope, Lifetime, Namespaces</li> <li>• Introduction to Classes</li> </ul>	<ul style="list-style-type: none"> <li>• Week 2 Assignment (Due 06/14)</li> <li>• Project #1 Available (Due 07/05)</li> </ul>
Module 3	Tue 06/15/21– Mon 06/21/21	<ul style="list-style-type: none"> <li>• Working with Classes – 2</li> <li>• Basic Object-Oriented Design</li> <li>• Smart Pointers</li> </ul>	<ul style="list-style-type: none"> <li>• Advance Prep Assignment (Due 06/21)</li> </ul>
Week 4	Tue 06/22/21– Mon 06/28/21	<ul style="list-style-type: none"> <li>• Working with Classes – 3</li> <li>• Object-Oriented Design Principles – 2</li> <li>• Guidelines for Testing &amp; Containment</li> </ul>	<ul style="list-style-type: none"> <li>• Week 4 Assignment (Due 06/28)</li> </ul>
Week 5	Tue 06/29/21– Mon 07/05/21	<ul style="list-style-type: none"> <li>• Function Overloading</li> <li>• Operator Overloading</li> <li>• Introduction to Inheritance</li> </ul>	<ul style="list-style-type: none"> <li>• Project #1 Due</li> <li>• Project #2 Available (Due 08/09)</li> </ul>
Week 6	Tue 07/06/21– Mon 07/12/21	Midterm Exam	<ul style="list-style-type: none"> <li>• Midterm Exam (Due 07/06)</li> </ul>
Week 7	Tue 07/13/21– Mon 07/19/21	<ul style="list-style-type: none"> <li>• Base Class Pointers</li> <li>• Virtual Functions</li> <li>• Abstract Classes</li> <li>• Interfaces</li> </ul>	
Week 8	Tue 07/20/21– Mon 07/26/21	<ul style="list-style-type: none"> <li>• Function &amp; Class Templates</li> <li>• Random Numbers &amp; Simulation</li> <li>• State Models &amp; Activity Diagrams</li> </ul>	<ul style="list-style-type: none"> <li>• Week 8 Assignment (Due 07/26)</li> </ul>

Week	Dates	Topics	Assignments
Week 9	Tue 07/27/21– Mon 08/02/21	<ul style="list-style-type: none"> <li>STL Sequential Containers</li> <li>STL Associative Containers</li> </ul>	<ul style="list-style-type: none"> <li>Week 9 Assignment (Due 08/02)</li> </ul>
Week 10	Tue 08/03/21– Mon 08/09/21	<ul style="list-style-type: none"> <li>STL Algorithms</li> <li>Exception Handling</li> <li>File I/O</li> </ul>	Project #2 Due
Week 11	Tue 08/10/21– Mon 08/16/21	<ul style="list-style-type: none"> <li>Lambdas</li> <li>Design Problems &amp; Solutions</li> </ul>	
Week 12	Tue 08/17/21	Final Exam	<ul style="list-style-type: none"> <li>Final Exam (Due 08/17)</li> </ul>

Please note that your instructor may make changes to the above information over the course of the semester.