

## CSCI1122 - Computer Science II

Credits:	4 (4/0/0)
Description:	This course focuses on advanced programming concepts including an introduction to data structures, analysis of algorithms, recursion, searching, sorting and memory management.
Prerequisites:	• CSCI1121
Corequisites:	
Pre/Corequisites*:	
Competencies:	<ol style="list-style-type: none"> <li>1. Differentiate between recursive and non-recursive programs.</li> <li>2. Construct programs using recursion.</li> <li>3. Write programs using objects.</li> <li>4. Differentiate between dynamic and static storage allocation.</li> <li>5. Utilize indirect addressing techniques.</li> <li>6. Measure the efficiency of algorithms.</li> <li>7. Implement data structures including arrays, linked lists, stacks, queues, pointers, and binary search trees.</li> <li>8. Employ sorting algorithms including Selection Sort, Bubble Sort, and Merge Sort.</li> <li>9. Utilize searching algorithms including Linear Search and Binary Search.</li> <li>10. Analyze memory management issues related to searching and sorting algorithms.</li> <li>11. Create simple classes.</li> <li>12. Build complex classes using inheritance.</li> </ol>
MnTC goal areas:	None

\*Can be taking as a Prerequisite or Corequisite.