**Lecture Plan**

**Unit 1**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Week | Topics | Videos | Slides | Resources | Evaluation |
| 0 | Welcome | [Lecture 0](https://web.microsoftstream.com/video/17a3f222-5395-4054-a623-71d71477722a) | [Course outline, installation](https://amritauniv-my.sharepoint.com/:p:/r/personal/jayasreen_am_amrita_edu/Documents/19CSE201Advanced%20Programming/Unit1/ppt/Slide-0.pptx?d=wbb46fe38925642ec837f5665f0ebc482&csf=1&web=1&e=t8F7wS) | Window platform  [gcc compiler](http://www.mingw.org)  [visualstudio](https://code.visualstudio.com/docs/cpp/config-mingw)  Linux   Platform (works on windows also)  [gcc compiler](https://www3.ntu.edu.sg/home/ehchua/programming/howto/Cygwin_HowTo.html)  [geany IDE](https://wiki.geany.org/howtos/win32/getting-started) |  |
| 1 | Introduction and software setup, first program | [First C++ program](https://web.microsoftstream.com/video/1cd9b23f-9e21-4eeb-a3ad-968c9c69b7ed)  [class](https://web.microsoftstream.com/video/9f6c81f6-35b2-4157-a91b-100f5e8ad831) | [Slide1](https://amritauniv-my.sharepoint.com/:p:/r/personal/jayasreen_am_amrita_edu/Documents/19CSE201Advanced%20Programming/Unit1/ppt/Slide-1.pptx?d=w960b709a369a408db2c80afe824f8ee6&csf=1&web=1&e=AB2hcL) |  | [Installation survey](https://forms.office.com/Pages/DesignPage.aspx#FormId=D4lULeMYcEyXzbweXyH5y7WLgRu6HwlHjlCBTnqJ9S9UQkdJTDI2QUhNM05ZUjlKRTMwU0FPQVdDSi4u) |
| 1 | how to write basic C++ programs, Classes and objects, attributes, methods, access specifiers , constructors | [private](https://web.microsoftstream.com/video/002bc2eb-8adf-4b82-9bbd-0bce04c2f930)  [constructor, destructor](https://web.microsoftstream.com/video/79b26088-0566-4ff7-8382-3312483dcd37) | [Slide1](https://amritauniv-my.sharepoint.com/:p:/r/personal/jayasreen_am_amrita_edu/Documents/19CSE201Advanced%20Programming/Unit1/ppt/Slide-1.pptx?d=w960b709a369a408db2c80afe824f8ee6&csf=1&web=1&e=AB2hcL) |  | [Lab Assignment 1](https://amritauniv-my.sharepoint.com/:f:/r/personal/jayasreen_am_amrita_edu/Documents/19CSE201Advanced%20Programming/Unit1/Lab%20Assignments/Lab1-classes%20and%20objects?csf=1&web=1&e=5G2le9)  [Quiz-1 Class and Object](https://forms.office.com/Pages/DesignPage.aspx#FormId=D4lULeMYcEyXzbweXyH5y7WLgRu6HwlHjlCBTnqJ9S9UNlFXSUZHWEVRRVpWNVRFNFdTWEgwODNRMC4u) |
| 2 | String in C++. | [String class](https://web.microsoftstream.com/video/002bc2eb-8adf-4b82-9bbd-0bce04c2f930?showScreenRecorder=true) | [Slide 2](https://amritauniv-my.sharepoint.com/:p:/r/personal/jayasreen_am_amrita_edu/Documents/19CSE201Advanced%20Programming/Unit1/ppt/Slide-2-String.pptx?d=w1a9fe779902f48449422eb8e86f4e0da&csf=1&web=1&e=2jF1aU) |  | [Quiz 2-Access Specifiers](https://forms.office.com/Pages/DesignPage.aspx#FormId=D4lULeMYcEyXzbweXyH5y7WLgRu6HwlHjlCBTnqJ9S9UQUZPN043RjhRRkFISjJBWUpUTko5UDdNNS4u)  [Quiz 3-Constructors](https://forms.office.com/Pages/DesignPage.aspx#FormId=D4lULeMYcEyXzbweXyH5y7WLgRu6HwlHjlCBTnqJ9S9UQjZEUDdMVzJLS0szOThKT0NTWUczVTZJRi4u)  [Lab Assignment 2](https://amritauniv-my.sharepoint.com/:f:/r/personal/jayasreen_am_amrita_edu/Documents/19CSE201Advanced%20Programming/Unit1/Lab%20Assignments/Lab2-strings?csf=1&web=1&e=GryvL8) |
| 2 | Generic classes and generic functions overview, programs using array templates. | [function Template](https://web.microsoftstream.com/video/7378c7f1-2a92-4173-8012-095c857838ff)  [class template](https://web.microsoftstream.com/video/7b61b701-ce0f-4f62-a372-3d5f65502735)  [Array Template](https://web.microsoftstream.com/video/93123963-620d-4208-bc1f-35a46a4e24b6) | [Slide 3](https://amritauniv-my.sharepoint.com/:p:/r/personal/jayasreen_am_amrita_edu/Documents/19CSE201Advanced%20Programming/Unit1/ppt/Slide-2-String.pptx?d=w1a9fe779902f48449422eb8e86f4e0da&csf=1&web=1&e=2jF1aU) |  | [Quiz3 - Strings](https://forms.office.com/Pages/DesignPage.aspx#FormId=D4lULeMYcEyXzbweXyH5y7WLgRu6HwlHjlCBTnqJ9S9UMDVGMU0xV1RDQVVSSlZHTEszVUpVM0JVSy4u)  [Lab Assignment 3](https://amritauniv-my.sharepoint.com/:f:/r/personal/jayasreen_am_amrita_edu/Documents/19CSE201Advanced%20Programming/Unit1/Lab%20Assignments/Lab3-Template%2cArray?csf=1&web=1&e=geIfBu) |
| 3 | C++ STL overview -  Sequence containers (vector, deque), container adapters(stack, queue, priority queue ) | [vector](https://web.microsoftstream.com/video/49088723-9673-4f02-8883-131800a0b7b0)  [deque](https://web.microsoftstream.com/video/9f7ef5b4-c5bc-42bb-9d29-a006b0e1aef3)  [stack, queue, priority queue](https://web.microsoftstream.com/video/7c68809d-2af3-4dca-ae63-765b0c36ce7c) | [Slide 4](https://amritauniv-my.sharepoint.com/:p:/r/personal/jayasreen_am_amrita_edu/Documents/19CSE201Advanced%20Programming/Unit1/ppt/Slide-4.pptx?d=w21cf240ab1ce44859077c61e6dd5a9e2&csf=1&web=1&e=qpipD8) |  | [Lab Assignment 4](https://amritauniv-my.sharepoint.com/:f:/r/personal/jayasreen_am_amrita_edu/Documents/19CSE201Advanced%20Programming/Unit1/Lab%20Assignments/Lab4-containers?csf=1&web=1&e=yWYSO9)  [Quiz 4 - Templates, Arrays](https://forms.office.com/Pages/DesignPage.aspx?auth_pvr=OrgId&auth_upn=jayasreen%40am.amrita.edu&origin=shell#FormId=D4lULeMYcEyXzbweXyH5y7WLgRu6HwlHjlCBTnqJ9S9UMVo3QjFNNE0zM1NCMkc0MDFaNFA3RjhMWi4u) |
| 4 | C++ STL - set,map | [Associative containers - Set,Map](https://web.microsoftstream.com/video/7a7cb857-d40b-400d-8c21-a890398eda1b) | [slide 4](https://amritauniv-my.sharepoint.com/:p:/r/personal/jayasreen_am_amrita_edu/Documents/19CSE201Advanced%20Programming/Unit1/ppt/Slide-4.pptx?d=w21cf240ab1ce44859077c61e6dd5a9e2&csf=1&web=1&e=qpipD8) |  | [Lab Assignment 5](https://amritauniv-my.sharepoint.com/:f:/r/personal/jayasreen_am_amrita_edu/Documents/19CSE201Advanced%20Programming/Unit1/Lab%20Assignments/Lab4-containers?csf=1&web=1&e=yWYSO9)  Quiz 5-Sequence containers-adapters |
| 5 | Evaluation |  |  |  | Quiz 6 - Associative Containers  Problem solving using STL C++ Library |