Course: An Introduction To Programming Through C++ - Online

Course Code: noc19-cs39

Session: 2019-20

Duration: 8 Weeks

Assessment procedures: Weekly Assignment (25%) + proctored certification Exam (75%)

Curriculum of the Course:

Week: Introduction to computers using graphics. Notions of program organization, control flow. Introduction to a repeat macro statement and its use for drawing interesting pictures. Basics of computer hardware and how numbers and other information are represented and processed on computers.

Week: Basic data types. Variables. Assignment statement. Introduction to program design using examples such as summing infinite series. Introduction to coordinate based graphics and elementary animation. The repeat macro is used for looping.

Week: Statements of C++ for conditional execution and looping. Applications such as computing mathematical functions, root finding.

Week: Functions. Parameter passing. Pointers and references. Recursion basics. Recursive algorithms and recursive drawings. Breaking larger programs into functions. Passing functions as arguments to other functions.

Week: Arrays. Basic array processing strategies including passing arrays to functions. Pointers. Applications illustrating use of arrays to store sets and sequences. Iterating over pairs of objects from an array. Selection sort.

Week: Use of arrays to represent textual data. Multidimensional arrays. Command line arguments. Binary search. Mergesort.

Week: Structures. Pointers with structures. Structure examples. Basics of classes: member functions, constructors, operator overloading and access control. Dynamic memory allocation. Basic mechanisms and pitfalls. Design of a "String" class that has automated memory management. Copy constructors and destructors. Introduction to the standard library.

Week: Use of the standard library in designing programs. Design of medium size programs. A miniature program for marks and ranks display. A program for gravitational simulation. A program for designing and solving resistive circuits with a graphical user interface

List of students enrolled

S. No	Name of Student
1	Ritika Agarwal
2	Vishnu Gupta
3	Yameen Khan Pathan
4	Aditya Mishra
5	Akash Yadav
6	Aashna Puri
7	Abhishek Sharma
8	Abhishek Khandelwal
9	Adarsh Pansari
10	Aditya Bhargava
11	Aditi Sharma
12	Aditya Manu Sharma
13	Uma Agarwal
14	Ajay Gupta
15	Akshat Jain
16	Akshat Nama
17	Akshay Jain
18	Aman Chaturvedi
19	Aman Baheti
20	Amit Lawaniya
21	Anand Samantnani

22	Anil		64	Disha Nagori
23	Anjali Hinduja		65	Disha Goyal
24	Anjali Sharma		66	Divyansh Sharma
25	Ankit Kumar		67	Divyansh Shukla
26	Ankit Yadav		68	Drishti Jain
27	Ankit Saini		69	Dusad Dusad
28	Anshita Yadav		70	Divya Sharma
29	Anshita Raghuvanshi		71	Eklavya Joshi
30	Ansh Mehta		72	Rohit Singh Foujdar
31	Shree Ramji		73	Gauransh Sharma
32	Anshul Simlote		74	Gauranshu Mathur
33	Anshuman Yadav		75	Gautam Khatri
34	Anuj Sharma		76	Gaurav Agarwal
35	Kshitiz Anurag		77	Ajay Sharma
36	Arnav Rajoria		78	Gunjan Gupta
37	Arpit Somani		79	Skand Gupta
38	Arpit Gupta		80	Devyanshi Khandelwal
39	Arpit Pachori		81	Gaurav Hada
40	Arya Sharma		82	Hemant Patwari
41	Ashish Maheshwari		83	Harsh Modi
42	Ashish Meena		84	Harshita Dadhich
43	Ashita Gupta		85	Harshit Gautam
44	Ashita Rathi		86	Harshit Gupta
45	Astha Khandelwal		87	Harshit Singh
46	Abhishek Yadav		88	Harsh Khandelwal
47	Ayush Jhanwar		89	Harsh Vardhan Goel
48	Ayush Garg		90	Himanshu Gupta
49	Ayushi Sharma		91	Hitesh Bhojwani
50	Ayush Mishra		92	Ayush Dev
51	Bahadur Choudhary		93	Jahnavi Sachdeva
52	Bharat		94	Virendra Singh Rathore
53	Bhavika Samdani		95	Jaspreet Singh
54	Aditya Kumar Gupta		96	Jayesh Singh Sagar
55	Chetan Sharma		97	Akshay Jindal
56	Chhavi Jangid		98	Pooja Jain
57	Chirag Bhayana		99	Harsh Kanojia
58	Vijay Choudhary		100	Keshav Kumar Sharma
59	Gaurav Malani		101	Kaushal Kumar
60	Daksh Sharma		102	Nitin Khandelwal
61	Deepesh Yadav		103	Harsh Khandelwal
62	Dhruv Mangal		104	Rakshit Khandelwal
63	Dinesh Jajoo		105	Yash Khandelwal

106	Bhavya Khatri		148	Ruchi Jaiswal
107	Khushal Sharma		149	Acchint Kaur
108	Kriti Kothari		150	Sagar Alwani
109	Vishnu Kumar		151	Sajal Birla
110	Lav Kumar Pareva		152	Samarth Saxena
111	Lokendra Singh Tanwar		153	Samridh
112	Lovish Chittora		154	Sanket Sawarn
113	Ashutosh Maheshwari		155	Sanskar Dutt Sharma
114	Mahima Sharma		156	Kaushal Saraswat
115	Manendra Singh Bhati		157	Saumya Gautam
116	Mansi Jain		158	Saurabh Gupta
117	Yashaswi Mathur		159	Yash Saxena
118	Mishal Gupta		160	Seenu Mangal
119	Mudit Maheshwari		161	Pankaj Sharma
120	Muskaan Joshi		162	Sangeeta Sharma
121	Nakshatra Bhardwaj		163	Saurabh Sharma
122	Naman Kumar Jain		164	Shashank Jindal
123	Nikhil Singh Khatuwal		165	Shivangi KOUL NAQIB
124	Nishant Kumar		166	Shivani Jethliya
125	Nitesh Goyal		167	Shiv Kumar Modi
126	Nitin Chittoria		168	Shorya Upadhayay
127	Nisha Jain		169	Shradha Sharma
128	Saumya Pancholi		170	Shreyansh Jain
129	Parth Bhandari		171	Shubham Kumar
130	Piyush Gupta		172	Shyam Varshney
131	Prachi Munot		173	Siddharth Rawat
132	Prateek Goyal		174	Dinesh Soni
133	Priyanshu Tali		175	Sourabh Sharma
134	Rachit Gupta		176	Sparshi Gupta
135	Radhika Choudhary		177	Srishti Gupta
136	Rahul Singh		178	Sunidhi Sharma
137	Rajesh Kumar		179	Suraj Kumar
138	Rajneesh		180	Surbhi Maheshwari
139	Ratan Soni		181	Swapnil Agrawal
140	Parikshit Rathore		182	Sachin Yadav
141	Rishabh Singh Shekhawat		183	Tanisha Dhemla
142	Ritik Agarwal		184	Tanu Mehra
143	Ritvik Babel		185	Tarun Sharma
144	Riya Agarwal		186	Rahul Chandnani
145	Robins Kumar		187	Tushar Saxena
146	Rounak Mathur		188	Ujala Jhanwar
147	Rajeev Sharma		189	Iqjot Valecha

190	Varnit Kashyap		196	Vishesh
191	Ritik Garg		197	Vishnu Sharma
192	Vibhuti Sharma		198	Vishwanath Hosmane
193	Vinay Vyas		199	Priyanka Jain
194	Vishal		200	Vishal Prajapat
195	Vishal Sen		201	Parikshit Sharma