



National Institute of Technology Meghalaya

An Institute of National Importance

CURRICULUM

Programme	Bachelor of Technology in Computer Science and Engineering	Year of Regulation	2018-19
Department	Computer Science and Engineering	Semester	IV

Course Code	Course Name	Credit Structure				Marks Distribution		
		L	T	P	C	Continuous Evaluation	Quiz / Viva	Total

CS 254	Object Oriented Programming and Design Lab	0	1	2	2	70	30	100
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Course Objectives	Course Outcomes	CO1		CO2		CO3		CO4	
		Description	Assessment	Description	Assessment	Description	Assessment	Description	Assessment
To provide students in-depth theoretical base and fundamentals of Object Oriented Programming paradigm	Course Outcomes	CO1	Able to illustrate dynamic memory management techniques using pointers, constructors, destructors etc.	CO2	Able to make use of the concept of function overloading, operator overloading, type conversion and polymorphism	CO3	Able to interpret the concept of Inheritance and its various types along with the understanding of late binding	CO4	Able to compare the procedures of file handling and exception handling in C++ and test the concept of templates
To prepare students to design and code various projects using Object Oriented Programming paradigm									

No.	COs	Mapping with Program Outcomes (POs)												Mapping with PSOs		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	CO1	2	0	0	0	0	1	0	2	0	0	0	2	1	1	1
2	CO2	2	2	2	1	2	0	0	2	0	2	0	1	2	2	1
3	CO3	3	2	2	3	0	0	2	1	0	1	1	1	2	1	1
4	CO4	1	1	0	1	0	0	0	2	1	1	0	2	3	1	3

Suggested List of Experiments

No.	Content	Hours	COs
I	Assignments and Tutorials on basic classes and objects	02	CO1
II	Assignments and Tutorials on friend function	02	
III	Assignments and Tutorials on different call-by techniques	02	
IV	Assignments and Tutorials on constructors and destructors	04	
V	Assignments and Tutorials on function and operator overloading	02	CO2
VI	Assignments and Tutorials on compile time polymorphism	01	
VII	Assignments and Tutorials on inheritance	06	CO3
VIII	Assignments and Tutorials on run-time polymorphism	01	
IX	Assignments and Tutorials on file handling	02	CO4
X	Assignments and Tutorials on templates	02	
Total Hours		24	

Essential Readings

- Robert Lafore, "Object-Oriented Programming in C++", 4th Edition, Sams Publishing, 2001.
- E Balagurusamy, "Object-Oriented Programming in C++", 8th Edition, McGraw-Hill Education India, 2020.
- Yashvant Kanetkar, "Let Us C++", BPB Publication, 2020.

Supplementary Readings

- P.J. Deitel and H.M Deitel, "C++ How to Program", 10th Edition, Pearson Publication, 2016.
- Herbert Schildt, "C++: The Complete Reference", 4th Edition, McGraw-Hill Education India, 2017.
- Bjarne Stroustrup, "The C++ Programming Language", 3rd Edition, Pearson Education India, 2002.