

Branch Name:	Information and Communication Technology
Program Code:	ET208
Course Name:	High Performance Computing Practical (Elective-IV)
Course Code:	2ET2080304P
Pre-requisite Course:	Should have knowledge of Operating System, Computer Organization and Architecture

Course Objective:

1. Understand High Performance Computing (HPC) system architectures and various computational models.
2. Learn basics of CUDA programming.
3. Apply parallel execution models and methodologies for parallel programming and parallel applications development.
4. Design and implement compute intensive applications on HPC platform.

Teaching and Examination Scheme:

Credit	Teaching Scheme Hours per week				Evaluation Scheme(Marks)								
					Theory(Marks)				Practical(Marks)				Total(Marks)
	L	T	P	Total	SEE		CCA		SEE		CCA		
					Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1	-	-	2	2	-	-	-	-	10	25	10	25	50

LAB/Practical

1. To study about High Performance Computing system architectures and various computational models.
2. To study about the Parallel Programming & Computing.
3. To study the Cloud Computing.
4. To study and implement Clustering Models and Clustering Architectures.
5. To study and perform Fault Detection and Masking Algorithms.
6. To study the Xpress Transport Protocol.
7. To study about CUDA architecture for parallel processing.
8. To study and perform Parallel programming in CUDA-C.
9. To study CUDA C on multiple GPUs.