



National Institute of Technology Meghalaya

An Institute of National Importance

CURRICULUM

	National Institute of Technology Meghalaya An Institute of National Importance	CURRICULUM														
Programme	Bachelor of Technology in Computer Science and Engineering	Academic Year of Regulation 2018-19														
Department	Computer Science and Engineering	Semester VIII														
Course Code	Course Name	Credit Structure				Marks Distribution										
		L	T	P	C	INT	MID	END	Total							
CS414	Cloud Computing	3	0	0	3	50	50	100	200							
Course Objectives	This course introduces the concept of cloud computing and background technologies.	Course Outcomes	CO1	Able to acquire knowledge about cloud computing, its vision, and history, characteristics.												
	This course summarizes the background cryptographic mathematics which will be applied in Cloud computing		CO2	Able to acquire knowledge about the background technologies and cryptographic mathematics of Cloud Computing.												
	This course explain about architecture, types and the security flaws in Cloud computing.		CO3	Able to acquire knowledge about the Cloud architecture, Cloud types and its various services.												
	This course describes the concept of various cloud computing platform available.		CO4	Able to analyse the security of cloud computing.												
			CO5	Able to analyse the various cloud platform available.												
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	3	2	-	-	-	-	-	-	-	-	-	-	2	-	3
2	CO2	3	2	-	-	-	1	-	-	2	-	-	-	2	3	2
3	CO3	3	3	3	1	-	1	2	-	2	-	-	-	3	3	2
4	CO4	2	3	3	1	2	2	3	-	2	-	-	1	3	2	2
5	CO5	2	3	3	-	2	2	3	-	2	-	-	1	3	3	3
SYLLABUS																
No.	Content													Hours	COs	
I	Introduction Definition, vision, characteristics, historical development, building cloud computing environment.													07	CO1	
II	Technology of Cloud Computing Elements of parallel and distributed computing, Virtualization-characteristics, taxonomy, pros and cons, case study of some types of virtualization.													07	CO2	
III	Cloud Computing architecture Cloud Computing reference model, services- IaaS, PaaS, SaaS, Types of Cloud-Public, Private, Hybrid, Community													08	CO3	
IV	Cloud Security Security challenges in Cloud Computing such as integrity and privacy of data stored at cloud servers, authentication etc. Various attacks and their prevention.													07	CO4	
V	Cloud Platforms in Industry Case study of some of the cloud platform available such as Amazon web services, Google AppEngine, Microsoft Azure.													07	CO5	
Total Hours													36			
Essential Readings																
1. Rajkumar Buyya, Christian Vecchiola , S.Thamarai Selvi, “Mastering Cloud Computing Foundations and Applications Programming”, Morgan Kaufmann, 1 st Edition, 2013																
2. Barrie Sosinsky, “Cloud Computing Bible”, Wiley Publishing, 1 st Edition, 2011																
3. Kai Hwang, Geoffrey C. Fox, Jack J. Dongarra, “Distributed and Cloud Computing”, Morgan Kaufmann Publishers, 1 st Edition, 2012																
Supplementary Readings																
1. Ricardo Puttini, Thomas Erl, Zaigham Mahmood, “Cloud Computing: Concepts, Technology & Architecture”, , Prentice Hall International 1 st Edition, 2013																
2. Borko Furht, Armando Escalante, “Handbook of Cloud Computing”, Springer US, 1 st Edition, 2010.																
3. K. Chandrasekaran,“Essentials of Cloud Computing”,CRC Press Talyor & Francis, 1 st Edition, 2015																