Grambling State University

Cloud Computing Curriculum Plan

	Course Number	Course Name	Hours
Year 1 (Freshman)			
	CC 116	Foundations of Cloud Computing	3
	FYE 101	First Year Experience I	1
	FYE102	First Year Experience II	1
	ENG 101	Freshman Composition	3
	ENG 102	Freshman Composition	3
	HIST 103	World History I	3
	CBS 115	Foundations of Cybersecurity	3
	MATH 147	Pre-Calculus I	3
	MATH 148	Pre-Calculus II	3
	CS 110	Computer Science I	3
	CS 120	Computer Science II	3
	SOC 101	Introduction to Social Science	3
		TOTAL	32 Hours
Year 2 (Sophomore)			
	GET 300	Rising Junior Exam	0
	BIOL 113	Principals of Biology **or CHEM 111**	3
	BIOL 115	Biol Lab **or CHEM 113**	1
	ENG 200	World Literature I	3
	ENG 207	Introduction to Technical Writing	3
	PHYS 153	General Physics I	3
	PHYS 153L	General Physics Laboratory	1
	CC 256	Migrating Data and Application to the Cloud	3
	CC 260	Web Programming and Cloud Architecture	3
	CS 201	Social, Legal, and Ethical Issues in Information Age	3
	CS 210	Discrete Structures	3
	CS 236	Data Structures and Algorithm Analysis	3
		TOTAL	29 Hours
Year 3 (Junior)			
	THEAT 212	Fundamentals of Public Speaking	3
	ART 105	Introduction to Fine & Performing Arts	3
	MATH 153	Calculus I	3
	ECON 201	Principles of Economics	3
	CC 300	Cloud Networking	3
	CBS 326	Introduction to Databases and Security	3
	CC 326	Secure Cloud Architecture	3
	CBS 346	Operating Systems and Security	3
	MATH 154	Calculus II	3
	CC 350	Cloud Database	3
		TOTAL	30 Hours
Year 4 (Senior)			
	PHYS 154	General Physics II	3
	PHYS 154L	General Physics Laboratory	1
	CC 402	Cloud Computing Seminar	1
	CC 408	Capstone Course (Cloud Computing)	3
	MATH 273	Probability and Statistics I	3
	CC 415	Network Virtualization and Cloud Storage Organization	3

	CC 4XX	Major Elective	3
	CC 4XX	Major Elective	3
	CC 4XX	Major Elective	3
	Gen-Edu - Elective I	Foreign Language or selective course I	3
	Gen-Edu - Elective II	Foreign Language or selective course II	3
		TOTAL	29 Hours
		TOTAL Hours for Graduation	**120 Hours**
Cloud Computing Electives			
	CBS 434	Big Data and Cloud Security	3
	CC 432	Green Computing	3
	CC433	Mobile Cloud Computing	3
	CC 412	Cloud Cryptography and Application	3
	CC 415	Distributed Data Bases	3
	CC 434	Android Offloading Computation Over Cloud	3
	CC 455	Research in Cloud Deployment and Security	3
	CC XXX	Internship or Co-OP or certification **Electives to substitute (3 credits each):** **Maximum of 3 courses** 1. Amazon Cloud Architect (AWS & AZURE) 2. AWS Certified Solutions Architect 3. Docker Technologies 4. Serverless Concepts 5. Azure Data Management Solutions 6. Architecting Microsoft Azure Solutions Certification 7. Azure Security and Governance 8. Google Cloud Architecture 9. Google Data Engineer and Cloud Architect 10. Advanced Machine Learning with TensorFlow on Google Cloud Platform 11. IBM Cloud Infrastructure Solutions Design 12. IBM Cloud Enterprise Developer 13. IBM Watson Application Development Certification	

Foreign Languages: Spanish 101 and Spanish 102 or French 101 or French 102

Selective General Education electives:

  (ACCT 201 and ACCT 202) or (GB 150 and GB202) or (MC 303 and MC 304) or (GB 150 and MAN 301)

Transfer Students
Student must have 30 transfer credit hours to be exempt from FYE 101 and FYE 102
(CHEM 111 and CHEM 113L) can be substituted for (BIOL 113 and BIOL 115L)