Course Code	Subject	Credit	hours	Required/ Selected	Full year/ semester	Grade	prerequisites
AMU1101 AMU1201	Calculus	8	10	Required	Full year	1	
AMU1102 AMU1202	Advanced Calculus	8	8	Required	Full year	2	Calculus
AMU1003	Differential Equations I	3	3	Required	Semester	2	
AMU1104 AMU1204	Linear Algebra	6	6	Required	Full year	1	
AMU1005	Abstract Algebra I	3	3	Required	Semester	3	
AMU1008	Computer Language and Programming I	3	3	Required	Semester	1	
AMU1111 AMU1211	Probability Theory	6	6	Required	Full year	2	
AMU1112 AMU1212	Statistics	6	6	Required	Full year	2	
AMU2106	Numerical analysis I	3	3	Required	Semester	3	
AMU2115	Numerical Linear Algebra	3	3	Required	Semester	3	
AMU1006	Number Theory	3	3	Selected	Semester	1	
AMU2101	Differential Equations II	3	3	Selected	Semester	3	Differential Equations I
AMU2102	Complex Analysis	3	3	Selected	Semester	4	
AMU2103	Real Analysis	3	3	Selected	Semester	4	
AMU2105	Geometry	3	3	Selected	Semester	4	
AMU2104	Partial Differential Equations	3	3	Selected	Semester	4	Differential Equations I
AMU2107	Numerical Analysis II	3	3	Selected	Semester	3	Numerical analysis I
AMU2108	Operating Research I	3	3	Selected	Semester	2	
AMU2109	Operating Research II	3	3	Selected	Semester	4	Operating Research I
AMU2111	Methods of Applied Mathematics	3	3	Selected	Semester	3	
AMU2112	Numerical Differential Equations	3	3	Selected	Semester	3	
AMU2113	Numerical Partial Differential Equations	3	3	Selected	Semester	4	

Course Code	Subject	Credit	hours	Required/ Selected	Full year/ semester	Grade	prerequisites
AMU2114	Discrete Mathematics	3	3	Selected	Semester	2	
AMU2311	Dynamic System	3	3	Selected	Semester	3	
AMU2314	Scientific Computing	3	3	Selected	Semester	4	
AMU2315	Abstract Algebra II	3	3	Selected	Semester	3	Abstract Algebra I
AMU2316	Combinatorial Mathematics I	3	3	Selected	Semester	2	
AMU2317	Combinatorial Mathematics II	3	3	Selected	Semester	3	Combinatorial Mathematics I
AMU2318	Graph Theory	3	3	Selected	Semester	2	
AMU2312	Difference Equation	3	3	Selected	Semester	3	Differential Equations I
AMU2313	Introduction and Practice of Mathematics Software	3	3	Selected	Semester	3	
AMU2116	Foundations of Mathematics	3	3	Selected	Semester	1	
AMU2207	Mathematical Statistics I	3	3	Selected	Semester	3	
AMU2208	Mathematical Statistics II	3	3	Selected	Semester	3	Mathematical Statistics I
AMU2214	Statistical Methods	3	3	Selected	Semester	3	
AMU2215	Stochastic Processes	3	3	Selected	Semester	4	
AMU2216	Regression Analysis	3	3	Selected	Semester	3	
AMU2217	Time Series	3	3	Selected	Semester	4	
AMU2218	Analysis of Variance and Experimental Design	3	3	Selected	Semester	4	
AMU2326	Dynamical economics	3	3	Selected	Semester	3	Calculus
AMU2227	Biostatistics	3	3	Selected	Semester	4	
AMU2228	Applications of Statistical Software	3	3	Selected	Semester	3	Statistics
AMU1007	Introduction of Computer Science	3	3	Selected	Semester	1	
AMU2303	Data Structures	3	3	Selected	Semester	2	
AMU2304	Computer Language and Programming II	3	3	Selected	Semester	2	Computer Language and

Course Code	Subject	Credit	hours	Required/ Selected	Full year/ semester	Grade	prerequisites
							Programming I
AMU2310	Algorithm	3	3	Selected	Semester	3	
AMU2321	Multimedia Designs and Applications	3	3	Selected	Semester	2	
AMU2302	Java Program Design	3	3	Selected	Semester	3	Computer Language and Programming I
AMU2309	Computer-Aided Geometric Design	3	3	Selected	Semester	3	
AMU2203	Actuarial Mathematics I	3	3	Selected	Semester	4	
AMU2204	Actuarial Mathematics II	3	3	Selected	Semester	4	Actuarial Mathematics I
AMU2206	Risk Theory	3	3	Selected	Semester	4	
AMU2209	Economics	3	3	Selected	Semester	2	
AMU2210	Fundamentals of Insurance Science	3	3	Selected	Semester	4	
AMU2219	Accounting	3	3	Selected	Semester	3	
AMU2220	Financial Management	3	3	Selected	Semester	2	
AMU2221	Financial Reporting and Statement Analysis	3	3	Selected	Semester	3	
AMU2223	Financial Mathematics I	3	3	Selected	Semester	3	
AMU2224	Financial Mathematics II	3	3	Selected	Semester	3	Financial Mathematics I
AMU2225	Investing Mathematics	3	3	Selected	Semester	3	
AMU2226	Mathematics of Derivatives	3	3	Selected	Semester	3	1
AMU2229	The Use of Mathematical Models in Financial Planning	3	3	Selected	Semester	3	
AMU2323	Mathematical Economics	3	3	Selected	Semester	2	
AMU2324	Applications of Game Theory	3	3	Reselected	Semester	3	
AMU2001	Mathematics Appreciation	3	3	Selected	Semester	1	

Course Code	Subject	Credit	hours	Required/ Selected	Full year/ semester	Grade	prerequisites
AMU2002	Problem Solving and Creativity	3	3	Selected	Semester	3	
AMU2003	Thinking and Practice of Creativity	3	3	Selected	Semester	2	
AMU2007	The History of Mathematics	3	3	Selected	Semester	4	
AMU2008	Problem Solving I	3	3	Selected	Semester	3	
AMU2009	Problem Solving II	3	3	Selected	Semester	4	
AMU2004	Independent Study	2	2	Selected	Full year	4	