

### Tentative Course Offering State (Fall 2024) - SINES

Sr No	Program	Course Code	Course Title	Course CHs	Course Type
1	BS BI	CH-104	Chemistry	2+1	Core
2	BS BI	HU-114	Functional English	3+0	Core
3	BS BI	CS-108	Application of Information & Communication Technologies	2+1	Core
4	BS BI	HU-107	Pakistan Studies	2+0	Core
5	BS BI	BIT-115	Cell Biology	2+1	Core
6	BS BI	MATH-162	Pre-Maths-I	3+0	Additional
7	BS BI	MATH-163	Pre-Maths-II	3+0	Additional
8	BS BI	HU-222	Professional Ethics	2+0	Core
9	BS BI	MATH-222	Linear Algebra	3+0	Core
10	BS BI	MATH-234	Multivariable Calculus	3+0	Core
11	BS BI	CS-212	Object Oriented Programming (OOP)	3+1	Core
12	BS BI	CS-116	Digital Logic Design	2+1	Core
13	BS BI	BI-301	Evolutionary Biology	2+1	Core
14	MS CS&E	CSE-880	Computational Linear Algebra & Optimization	3+0	Core
15	MS CS&E	CSE-887	Computing for CS&E	3+0	Core
16	MS CS&E	CSE-883	Data Analysis & Statistics (CS&E)	3+0	Core
17	MS CS&E	CSE-801	Computational Fluid Dynamics	3+0	Elective
18	MS CS&E	CSE-906	Boundry Layer Theory	3+0	Elective
19	MS CS&E	CSE-878	Computational Chemistry	3+0	Elective
20	MS CS&E	CSE-884	Quantum Chemistry	3+0	Elective
21	MS CS&E	CSE-917	Supramolecular chemistry	3+0	Elective
22	MS CS&E	CSE-847	Biomedical Engineering	3+0	Elective
23	MS CS&E	CSE-881	Applied Maths for CS&E	3+0	Core
24	MS CS&E	CSE-800	Fundamentals of CS&E	3+1	Elective
25	MS CS&E	RM-898	Research Methodology	2+0	Additional
26	MS SYSE	SYSE-818	Product Development & Systems Engineering	3+0	Core
27	MS SYSE	SYSE-805	Systems Engineering Project Management	3+0	Core
28	MS CS&E/ SYSE/CCSD	CSE-845	Applied Machine Learning (CSE, SYSE, BI, CCSD)	3+0	Elective
29	MS CS&E/ SYSE	CSE-867	Virtual Reality (CSE . SYSE)	3+0	Elective
30	MS CS&E/ SYSE	CS-875	Natural Language Processing (CSE, SYSE)	3+0	Elective
31	MS CS&E/ SYSE	EE-829	System Identification	3+0	Elective
32	MS CS&E/ MS BI	CSE-914	Computational Enzymology	3+0	Elective
33	MS BI	CSE-876	Biochemistry	3+0	Elective
34	MS BI	BI-801	Computing for BI	3+0	Core
35	MS BI	CSE-883	Data Analysis & Statistics (BI)	3+0	Elective
36	MS BI	CSE-896	Translational Bioinformatics Applications	3+0	Elective
37	MS BI	CSE-953	Advanced Computational Biology	3+0	Elective
38	MS BI	CSE-873	Computational Drug Design	3+0	Elective
39	MS BI	BI-831	Microarray Analysis	3+0	Elective

40	MS BI	BI-832	Next Generation Sequencing	3+0	Elective
41	MS CCSD	ENS-807	Climate Change Science	3+0	Core
42	MS CCSD	ECO-682	Economics of Environment and Natural Resources	3+0	Elective
43	MS CCSD	AGB-845	Sustainable Agriculture: Practices & Perspectives	3+0	Elective
44	MS CCSD	ECO-775	Topic in sustainable development	3+0	Core
45	MS CCSD	ENS-827	Climate Change Adaptation and Mitigation" (ENS-827)	3+0	Elective