B.Tech MnC 2022/23 Curriculum

Semester 1 (17 credits)			
	Core Courses	***Type of course***	***Credit***
MA1110	Calculus I	Basic Sciences	1
MA1220	Calculus II	Basic Sciences	1
CY1010	Environmental Chemistry	Basic Sciences	2
EP1108	Modern Physics	Basic Sciences	2
MA1130	Vector Calculus	Departmental Core Theory	1
MA1240	Combinatorics	Departmental Core Theory	3
MA1000	Math Foundation	Departmental Core Theory	3
ID1063	Introduction to Programming	Basic Engineering Skills	3
BT1010	Introduction to Life Sciences	Basic Sciences (Soft Skills)	1
			17

Semester 2 (16 credits)			
	Core Courses	***Type of course***	***Credit***
MA1140	Elementary Linear Algebra	Basic Sciences	1
MA1150	Differential Equations	Basic Sciences	1
EP1031	Physics Lab - 1	Basic Sciences	2
MA1230	Series of Functions	Departmental Core Theory	1
MA1250	Introduction to Number Theory	Departmental Core Theory	3
AI1100	Artificial Intelligence	Basic Engineering Skills	1
EM3020	Introduction to Entrepreneurship	Liberal Arts (Soft Skills)	1
	LA/CA Electives	Liberal Arts Elective/Creative Arts	3
	*Departmental Elective**	*Departmental Elective*	*3*
			16

*The elective course may be converted into core or maybe moved to some other semesters.

* Revised curriculum approved in 52nd Senate

Semester 3 (19 credits)			
	Core Courses	***Type of course***	***Credit***
EE1202	Digital Circuits	Basic Engineering Skills	3
ID2230	Data Structures & Applications	Basic Engineering Skills	3
MA2120	Transform Techniques	Departmental Core Theory	1

MA2150	Introduction to Metric Spaces	Departmental Core Theory	1
MA2233	Data Structures & Applications Lab	Departmental Core Laboratory	3
MA2550	Linear Algebra	Departmental Core Theory	3
MA2540	Probability Theory	Departmental Core Theory	3
LA1760	Communication Skills	Liberal Arts (Soft Skills)	2
			19

Semester 4 (18 credits)			
	Core Courses	***Type of course***	***Credit***
MA2101/AI2101	Convex Optimization	Departmental Core Theory	3
MA2130	Complex Variables	Departmental Core Theory	1
CS2030	Theory of Computation	Departmental Core Theory (cross listed course)	3
CS2443	Algorithms	Departmental Core Theory (cross listed course)	3
MA2030	Ordinary Differential Equations	Departmental Core Theory	3
MA2570	Applied Statistics	Departmental Core Theory	3
MA2070	Introduction to Group Theory	Departmental Core Theory	1
CS3320	Compilers-I	Basic Engineering Skills	1
			18

Semester 5 (17 credits)			
	Core Courses	***Type of course***	***Credit***
EE1206	Linear Systems and Signal Processing	Basic Engineering Skills	3
CS3510	Operating Systems I	Basic Engineering Skills	1
CS3550	DBMS 1	Basic Engineering Skills	1
MA3010	Real Analysis	Departmental Core Theory	3
MA3070	Algebra I - Groups and Rings	Departmental Core Theory	3

MA3060	Numerical Analysis	Departmental Core Theory	3
	Free Electives	Free Elective	3
			17

Semester 6 (14 credits)			
	Core Courses	***Type of course***	***Credit***
	MA Electives	Departmental Elective	3
	MA Computational Electives	Departmental Elective	3
	Basic Engineering Skills course	Basic Engineering Skills	3
	Free Electives	Free Elective	3
	LA/CA Electives	Liberal Arts Elective/Creative Arts	2
	Project optional (3 or 6 credits)		***Credit***
MA3615	Credited Research Project - I		3
MA3405	Industry Project		6

Semester 7 (16 credits)			
	Core Courses	***Type of course***	***Credit***
MA4420	Functional Analysis	Departmental Core Theory	3
	MA Electives	Departmental Elective	6
	MA Computational Electives	Departmental Elective	3
	Free Electives	Free Elective	3
LA1770	Personality development	Liberal Arts (Soft Skills)	1
	Project optional (3 credits)		***Credit***
MA4715	Credited Research Project - II		3

Semester 8 (12 credits)			
	Courses	***Type of course***	***Credit***
	MA Electives	Departmental Elective	6
	MA Computational Electives	Departmental Elective	3
	Free Electives	Free Elective	3
	Project optional (3 credits)		***Credit***
MA4715	Credited Research Project - III		3