

B.Sc. +M.Sc. Integrated (Mathematics) (5 years)

Semester-Wise Programme structure

Sr · No.	Year 1		Year 2		Year 3		Year 4		Year 5	
	Sem 1	Sem 2	Sem 3	Sem 4	Sem 5	Sem 6	Sem 7	Sem 8	Sem 9	Sem 10
1	Calculus (Course Code) [CU:4, L-4_, P-0_] {MCC}	Muti-variable Calculus (Course Code) [CU:4_, L-4_, P-0_] {MCC}	Introduction to Real Analysis (Course Code) [CU:_4, L-4_, P-0_] {MCC}	Introduction to Linear Algebra (Course Code) [CU:4_, L-4_, P-0_] {MCC}	Set Theory and Metric Spaces (Course Code) [CU:_4, L-4_, P-0_] {MCC}	Introduction to Complex Analysis (Course Code) [CU:4_, L-4_, P-0_] {MCC}	Real Analysis [CU:4,L-4] {CC}	Abstract Algebra [CU:4,L-4] {CC}	Functional Analysis [CU:4 ,L-4] {CC}	Non-linear Dynamics [CU:4 ,L-4] {CC}
2	Algebra and Geometry (Course Code) [CU: 4, L-_0, P-_0] {MCC}	Ordinary Differential Equations (Course Code) [CU:_4, L-4_, P-_0] {MCC}	Group Theory (Course Code) [CU:_4, L-4_, P-0_] {MCC}	Introduction to Partial Differential Equations (Course Code) [CU:4_, L-4_, P-0_] {MCC}	Advanced Algebra (Course Code) [CU:4_, L-_4, P-0_] {MCC}	Discrete Mathematics (Course Code) [CU:_4, L-4_, P-0_] {MCC}	Linear Algebra [CU:4,L-4] {CC}	Probability and Statistics [CU:4,L-4] {CC}	Complex Analysis [CU:4 ,L-4] {CC}	Measure Theory [CU:4 ,L-4] {AC}
3	Introduction to Probability Theory (Course Code) [CU:4_, L-4_, P-_0] {MC}	Statistical Methods (Course Code) [CU:_4, L-4_, P-0_] {MC}	Statistical Inference (Course Code) [CU:4_, L-_4, P-_0] {MC}	Linear Programming (Course Code) [CU:_4 ,L-4_, P-0_] {MCC}	Mathematical Logic (Course Code) [CU:_4, L-4_, P-0_] {MCC}	Tensors and Differential Geometry (Course Code) [CU:_4, L-4_, P-_0] {MCC}	Ordinary Differential Equations [CU:4,L-4] {CC}	Numerical Methods [CU:4,L-3,P-2] {CC}	Field Theory [CU:4 ,L-4] {CC}	AC [CU:4 , L-4] {AC}
4	Fundamentals Of Physics (Course Code) [CU:_3, L-3_, P-0_] {MDC}	Object Oriented Programming Software (Course Code) [CU:_4, L-2_, P-2_] {MDC}	Java Programming (Course Code) [CU:4_, L-2_, P-_2] {MDC}	Mechanics (Course Code) [CU:_4 ,L-4_, P-0_] {MC}	Laplace and Fourier Transform (Course Code) [CU:4_, L-_4, P-0_] {MCC}	Evolutionary Algorithms for Optimization Problems (Course Code) [CU:_4, L-4_, P-0_] {MCC}	Topology [CU:4,L-4] {CC}	*SE3- [CU:4 ,L-4] {SE}	Calculus of Variations and Integral Equations [CU:4 ,L-4] {CC}	*SE5- [CU:4 ,L-4] {SE}

5	Punjabi Language and Literature -I/ History & Culture of Punjab-I (Course Code) [CU: 1, L-1, P-0] {AEC}	Punjabi Language and Literature -I/ History & Culture of Punjab-II (Course Code) [CU:1, L-1, P-0] {AEC}	Fundamental of Communication(Course Code) [CU:_2, L-_2, P-0] {AEC}	Professional Etiquette and Workplace Communication (Course Code) [CU:_2, L-_2, P-0] {AEC}	Graph Theory (Course Code) [CU:4, L-4, P-0] {MC}	Introduction to Numerical analysis (Course Code) [CU:_6, L-4, P-_2] {MC}	*SE1-[CU:4, L-4] {SE}	*SE4- [CU:4, L-4] {SE}	Seminar [CU:2, P-4] {NTC}	Seminar [CU:2, P-4] {NTC}
6	Introduction to French Culture and Language/German Culture and Language (Course Code) [CU: 1, L-1, P-0] {AEC}	French Grammar/German Grammar (Course Code) [CU: 1, L-1, P-0] {AEC}	Mathematical Statistics with R (Course Code) [CU:_4, L-_1, P-3] {SEC}	C++ Programming for Mathematics (Course Code) [CU:_4, L-4, P-0] {SEC}	Logic and Sets (Course Code) [CU:2, L-2, P-0] {MC}		*SE2-[CU:4, L-4] {SE}	*SE5- [CU:4, L-4] {SE}	Dissemination Work [CU:6, P-12] {NTC}	Dissemination Work [CU:6, P-12] {NTC}
7	Programming based on Mathematical Softwares (Course Code) [CU: 3, L-1, P-2] {SEC}	Introduction to LaTeX(Course Code) [CU: 3, L-1, P-2] {SEC}					Self-Development and Interpersonal Skills(Behavioral Sciences) [CU:1,L-1] {VAC}	CONFLICT RESOLUTION & MANAGEMENT(Behavioral Sciences)[CU:1,L-1] {VAC}	Professional Ethics -I [CU:1, L-1] {VAC}	Professional Ethics -II [CU:1, L-1] {VAC}
8	Environmental Studies 1 (Course Code) [CU:2, L-2, P-0] {VAC}	Environmental Studies 2 (Course Code) [CU:2, L-2, P-0] {VAC}					Foreign Business Language (French/German) [CU:1,L-1] {VAC}	Foreign Business Language (French/German) [CU:1,L-1] {VAC}		
9	Understanding Self for Effectiveness(Behavioural Science) (Course Code) [CU:_1, L-1, P-0] {VAC}	Individual, Society and Nation(Behavioural Science) (Course Code) [CU:_1, L-1, P-0] {VAC}	-	-	*Summer Internship (4 Cr)	-				
Cr.	23	24	22	22	22+4	22	26	26	25	25
Total Credit: 241										

M C C	Major Core Course (Discipline Specific Course)
M C	Minor Course
M D C	Multidisciplinary Course
A E C	Ability Enhancement Course

SEC	Skill Enhancement Course
VAC	Value Added Course
CCH	Core Course - Hons.
DSE	Discipline Specific Elective
MOOC	Massive Open Online Course

*****The Specialization Elective courses can also be taken through MOOC***

AC	Allied Course
AEC	Ability Enhancement Course
CC	Core Course
OE	Open Elective Specialization Elective Course
SE	Specialization Elective Course
SEC	Skill Enhancement Course
MOOC	Massive Open Online Course
NTCC	Non Teaching Credit Course
VAC	Value Added Course