

Cumulative minimum credits (Required for the award of Certificates/ Diploma/Degree)	Subject I: STATISTICS		Choose Anyone	Subject II: Mathematics / Computers		Subject III	Vocational	Co-curricular	Audit Course*	Research Project**	Total credit (Year)
	Major 4/5/6 Credits			Major 4/5/6 Credits		Minor Elective 4/5/6 Credits	Minor 3 Credits	Minor 2	Compulsory Non-credits	Major 4 Credits	
	Own Faculty			Own Faculty (Choose Anyone)		Any Faculty	Vocational/ Skill Development Course	Co-curricular (Qualifying)	Audit Course (Qualifying)	Inter/Intra Faculty related to main subject	
Certificate in Science (Statistics & Mathematics OR Statistics & Computer Science) 40	1	I	MATHEMATICS	B030101T/MT136: Differential Calculus & Integral Calculus (T4) B030102P/MT137: Practical using Mathematica /MATLAB (P2)			I030103V/MT143 Introduction to LaTeX (V-3) OR •MOOCs/SWAYAM etc. (T+P=3)	Z010101T/BE105 Food, Nutrition and Hygiene (T-2)	A050101T/HM101 Rashtra Gaurav		
			COMPUTERS	B070101T/CS127 Problem Solving using Computer (T-4) B070102P/CS128 Software Lab using Python (P-2)							
	1	II	MATHEMATICS	B030201T/MT138: Matrices and Differential Equations & Geometry (T6)		•ES115/BM186 Fundamentals of Environmental Science OR •A040209T/LN109 Basics of Communication OR BS (4+2=6)	I030202V/MT144 LaTeX -Scientific Writing (V-3) OR •MOOCs/SWAYAM etc. (T+P=3)	Z020201T/NS110 First Aid and Health (T-2)	B060203T/MT153 Advanced Application of Artificial Intelligence in Mathematical Sciences		
			COMPUTERS	B070201T/CS129 Database Management Systems (T-4) B070202P/CS130 Database Management Systems Lab (P-2)							
Diploma in Science (Statistics & Mathematics OR Statistics & Computer Science) 40+40=80	2	III	MATHEMATICS	B030301T/MT228: Algebra & Mathematical Methods (T6)			I030302V/MT234 Introduction to R (V-3) OR •MOOCs/SWAYAM etc. (T+P=3)	Reginal Languages*** (T2)			
			COMPUTERS	B070301T/CS273 Operating Systems (T-4) & B070302P/CS274							
			Operating Systems Lab (P-2)								

			MATHEMATICS	B030401T/MT229: Differential Equation & Mechanics (T6)						
		B060401T/ MT232 Testing of Hypothesis & Applied Statistics (T-4)								
	IV	B060402P/ MT233 Test of Significance & Applied Statistics Lab (P-2)	COMPUTERS	B070401T/ CS275 Computer System Architecture (T-4) & B070402P/ CS276 Computer System Architecture Lab (P-2)					Z040401T/PH201 Physical Education and Yoga (T-2)	B030505R/MT 333 Mathematics Project-1(R-3)

3-Year, UG Degree in Statistics & Mathematics OR Statistics & Computer Science

3-Year B.Sc. in Statistics & Mathematics OR Statistics & Computer Science 80+40=120	3	V	MATHEMATICS	B060501T/MT327 Multivariate Analysis & Non- Parametric Methods (T-4) B060502T/ MT328 Analysis of Variance & Design of Experiments (T-4)	B030501T/MT320: Group and Ring Theory & Linear Algebra (T5) • B030502T/MT321: Number Theory & Game Theory OR • B030503T/MT322: Graph Theory & Discrete Mathematics OR • B030504T/MT323: Differential Geometry & Tensor Analysis (T5)					
			COMPUTERS	B060503P/ MT329 Non-Parametric Methods & Design of Experiments Lab (P-2)	B070501T/ CS365 Analysis of Algorithms and Data Structures (T-4) B070502T/ CS366 Soft Computing (T-4) B070503P/ CS367 Lab on Algorithms and Data Structures with C++ (P-2)					
		VI	MATHEMATICS	B060601T/ MT330 Statistical Computing & Introduction to Statistical Software (T-4) B060602T/ MT331 Operations Research (T-4) & B060603P/ MT332 Operations Research & Statistical Computing Lab (P- 2)	B030601T/MT324: Metric Space & Complex Analysis (T4) B030602T/MT325: Numerical Analysis & Operations Research (T4) B030603P/MT326: Practical on Numerical Analysis using Mathematica /MATLAB (P2)					

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			COMPUTERS	B070601T/ CS368 Data Communication and Computer Networks (T-4) & B070602T/ CS369 Cyber Security & Cyber Laws (T-4) & B070603P/ CS370 Lab on Computer Networks (P-2)						
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4-Year UG Degree with Honours & Research (≥75% Marks) Choose Anyone Specialization

				STATISTICS						
4-Year B.Sc. Honours in STATISTICS 120+40=160	4	VII	B030701T/ MT434 Real & Complex Analysis (T-4)							
			B060701T/ MT422 Sample Surveys (T-4)							
			B060702T/ MT423 Probability Theory (T-4)							
			B060703T/ MT424 Reliability Theory (T-4)							
					B060704P/ MT425 Sample Surveys and R – programming Lab (P-4)					
		4	VIII	(B030804T/ MT441) Advanced Linear Algebra (T-4)						
	B060801T/ MT427 Linear Models & Regression Analysis (T-4)									
	B060802/ MT428 Design & Analysis of Experiments (T-4)									
B060803T/ MT430 Non-Parametric & Order Statistics (T-4)										
			B060804R/ MT431 Data Analytics with SPSS (P-4)							
									40	

				STATISTICS					
4-Year	4	VII	B060701T/ MT422 Sample Surveys						B060705R/ MT4

B.Sc. Honours with Research in STATISTICS 120+40=160		(T-4)			45 Statistics Research Project- 1 (R-4)	40
		B060702T/MT423 Probability Theory (T-4)				
		B060703T/MT424 Reliability Theory (T-4)				
		B060704P/MT425 Sample Surveys and R – programming Lab (P-4)				
	VIII	B060801T/MT427 Linear Models & Regression Analysis (T-4)			B060805R/MT4 46 Statistics Research Project- 2 (R-4)	
		B060802/MT428 Design & Analysis of Experiments (T-4)				
		B060803T/MT430 Non-Parametric & Order Statistics (T-4)				
B060804R/MT431 Data Analytics with SPSS (P-4)						

M.Sc. in STATISTICS 160+40=200	5	IX	STATISTICS			B060906R/MT5 50 Statistics Research Project- 3(R-4)	40
			B060901T/MT548 Statistical Inference (T-4)				
			B060902T/MT522 Demography (T-4)				
			B060903T/MT523 Statistical Process & Product Control (T-4)				
	B060905R/MT526 Demography and Statistical Process & Product Control lab (P-4)		B061005R/MT5 51 Statistics Research Project 4 (R-4)				
	X	B061001T/MT529 Multivariate Analysis (T-4)					
		B061002T/MT530 Stochastic Processes (T-4)					
B061003T/MT549 Advanced Operations Research (T-4)							

- ✓ T-4 = Theory with 4 credits; P-2 = Practical with 2 credits; R = Research Project with 4 credits; Q: Qualifying; NC = Non-Credit; MOOCs = Massive Online Open Courses
- ✓ Co-curricular courses offered by UP higher education.
- ✓ Vocational courses offered by respective Department/University
- ✓ *Audit Courses: The respective Department/University offers RashtraGaurav and X+AI (Advanced Application of Artificial Intelligence in Chemical Sciences) as compulsory **Non-Credit** courses. All students will have to pass these courses for obtaining a Certificate, Diploma, Undergraduate Degree, or Undergraduate Honors Degree with Research only once.
- ✓ 01, 02, and 03 combinations are elective papers, out of which students must choose any one with a minimum of ten students' strengths.
- ✓ For entry into the 4-Year UG Degree with Honours and Research program, students must secure $\geq 75\%$ marks in the 3-Year UG Degree program.
- ✓ Students with a 3-Year Single Subject with Honours UG Degree below 75% marks in the 3-Year UG Degree program go for a two-year PG program.
- ✓ **Research Project/Dissertation/Internship/Field or Survey Work etc.
- ✓ ***Regional Language is a co-curricular course offered by the respective Department or University in the third semester, such as Hindi, Urdu, Awadhi, Sanskrit, etc.

Program Structure of B.Sc. Honours in Statistics/B.Sc. Honours with Research in Statistics + 1 OR 2 Year PG

(With Effect From: 2024 – 25)

		Subject I	Subject II	Subject III	**Vocational	Co-curricular	Research project	Minimum Credits (Year)	Cumulative minimum credits (Required for the award of certificates/ diploma/degree)	
		Major	Minor	Audit Course	Minor	Minor	Major			
		4/5/6 Credits	4/5/6 Credits	Non - Credit	3 Credits	2 Credits	12			
Y.	Sem.	Own Faculty	Own/ Other Faculty	Audit/ Non-Credit Course	Vocational/ Skill development course	Co-curricular	Inter/Intra Faculty related to main subject			
1	I	Descriptive Statistics (Univariate) & Theory of Probability (T4) (B060101T/MT139)		(A050101T/H M101) Rashtra Gaurav (T-0)	I030103V/MT143 Introduction to LaTeX (V-3)	(Z010101T/ BE105) Food, Nutrition and Hygiene (T-2)	-----	40 (30 + 6 + 4) (First Year)	40 (Certificate in Statistics)	
		Indian Official Statistics (T4) (B060103T)/MT154								
		Descriptive Statistics Lab (Univariate) (P4) (B060104P)/MT155								
	II	Descriptive Statistics (Bivariate) & Probability Distributions (T4) (B060201T/MT141)		Choose any ONE from the followings. 1) B030201T/MT138 (a) Matrices and Differential Equations & Geometry (T6) (b) (B070201T/CS129) Database Management Systems (T-4) + (B070202P/CS130) Database Management Systems Lab (P-2)	(B030201T/M T153) Applications of Artificial Intelligence in Mathematical Sciences (T-0)	I030202V/MT144 LaTeX - Scientific Writing (V-3)				Z020201T/NS110) First Aid and Health (T-2)
		Actuarial Statistics (T4) (B060203T)/MT156								
		Descriptive Statistics Lab (Bivariate)(P4) (B060204P)/MT157								
		Subject I	Subject II	Subject III	**Vocational	Co-curricular	Research project	Minimum Credits (Year)	Cumulative minimum credits	
		Major	Minor	Audit Course	Minor	Minor	Major			

Program Structure of B.Sc. Honours in Statistics/B.Sc. Honours with Research in Statistics + 1 OR 2 Year PG

(With Effect From: 2024 – 25)

		Subject I	Subject II	Subject III	**Vocational	Co-curricular	Research project	Minimum Credits (Year)	Cumulative minimum credits (Required for the award of certificates/ diploma/degree)
		Major	Minor	Audit Course	Minor	Minor	Major		
		4/5/6 Credits	4/5/6 Credits	Non - Credit	3 Credits	2 Credits	12		
Y.	Sem.	Own Faculty	Own/ Other Faculty	Audit/ Non-Credit Course	Vocational/ Skill development course	Co-curricular	Inter/Intra Faculty related to main subject		
3	V	Graph Theory & Discrete Mathematics(T4) (B030503T/MT322)	----	----	----	----	Statistics Project-1 (B030503R/ MT335) (P5)	(50) (Third Year)	130 (Degree in B.Sc. Honours in Statistics)
		Multivariate Analysis & Non-Parametric Methods(T4) (B060501T/MT327)	----	----	----	----			
		Analysis of Variance & Design of Experiments(T4) (B060502T/MT328)							
		Reliability Theory & Survival Analysis (T4) (B060504T/MT337)	----	----	----	----			
		Non-Parametric Methods & Experimental Design Lab(P4) (B060505P/MT338)	----	----	----	----			
	VI	Operations Research (T4) (B060602T/MT331)	----	----	----	----	Statistics Project-1 (B030608R/ MT336) (P5)		
		Linear Models & Econometrics(T4) (B060604T/MT339)	----	----	----	----			
		Inventory Management & Queuing Theory(T4) (B060605T/MT340)	----	----	----	----			
		Project Management & Network Flow (T4) (B060607T/ MT317)							
		Operations Research Lab(P4) (B060606P/MT341)	----	----	----	----			

Program Structure of B.Sc. Honours in Statistics/B.Sc. Honours with Research in Statistics + 1 OR 2 Year PG

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Award of Degree

After the completion of the 3 year UG degree, one has to pursue 4th/5th year UG/PG programmes in similar manner as double major UG/PG Programme

Case 1: If any candidate having plain B.Sc. Degree takes admission in 4th Year in Integral University in any one of those subjects which they had in their 3rd Year and then make exit after 4th Year, then he/she will be awarded with

- (a) B.Sc. (H) degree in 4th Year (Applicable to all candidates) in that subject
- (b) B.Sc. (H) with Research degree in 4th Year in that subject (Applicable to those whose CGPA of first 3 years i.e. B.Sc. degree is > 7.5)

Case 2: If any candidate having Three Years B.Sc. (H) Degree takes admission in 4th Year in Integral University in that subject and make exit after 4th Year then he/she will be awarded with

- (a) B.Sc. (H) with Research Degree after 4th Year (Applicable to those whose CGPA > 7.5).
- (b) They will not get any degree if they make exit after 4th Year (Applicable to those whose CGPA < 7.5). Rather, they will get Master's Degree if they complete 5th Year.