## Department of Computer Science University of Delhi

## Model Curricula under UGCF June 2022

				TABLE				
		D:	achalor of (E	TABLE-3 ield of Study/ Dis	scipline) (Hons )			
Semester	Core (DSC) File 1.	Elective (DSE) File 3	Generi c Electiv e (GE)	Ability Enhanceme nt Course (AEC)	Skill Enhanceme nt Course (SEC)	Internship/ Apprentice- ship/Project / Community outreach (2)	Value addition course (VAC)	Tot al Credi ts
	DSC - 1(4) Programming using Python  DSC - 2(4) Computer System Architecture  DSC - 3(4) Mathematics for Computing	त्रका स्थान	Choose one from a pool of courses GE-1 (4)	Choose one from a pool of AEC courses (2)	Choose one from a pool of courses (2)		Choose one from a pool of courses (2)	22 credits
I I	DSC- 4(4) Object Oriented Programming with C++  DSC- 5(4) Discrete Mathematical Structures  DSC- 6(4) Probability for Computing		Choose one from a pool of courses GE-2 (4)	Choose one from a pool of AEC courses (2)	Choose one from a pool of courses (2)		Choose one from a pool of courses (2)	22 credits
	Students on o	exit shall be awarde	d Undergradua requisite	ate Certificate (in the At credits in Semes	e field of Study/ Disc eters I and II	cipline) after secu	ring the	Total= 44

I l l	DSC - 7(4) Data Structures  DSC- 8(4) Operating Systems  DSC-9 (4) Numerical Optimization	Choose one courses, E Of Choose one courses, G  Data Ana Visualizati Of Cryptog  Micropro	OSE-1 (4) R from pool of GE-3 (4)**  lysis and on (DAV) R graphy	Choose one from a pool of AEC courses (2)	Choose one SEC OR Internship / Apprenticeship/ Project/ Com m unity Outreach (IAPC) (2) *	Choose one from a pool of courses (2)	22 credits
I V	DSC - 10(4) Design and Analysis of Algorithms	Choose one courses, Doin the alternatione from poo	from pool of PSE- 2 (4) R ative choose ol of courses	Choose one from a pool of AEC courses (2)	Choose one SEC OR ' Intern ship / Apprenticeship/ Project/ com m unity outreach (IAPC) (2) *	Choose one from a pool of courses (2)	22 Credits
	DSC - 11(4) Database Management System	Data M Ol Combinatorial	R				
	DSC - 12(4) Computer Networks	Ol Data P Ol Introductio Prograi	rivacy R on to Web				
	Students on exit		Undergraduate Di	iploma (in the Field o n completion of Sem	f Study/ Discipline) after securing the renester IV	quisite 88 credits	Total= 88
V	DSC - 13(4) Algorithms and Advanced Data Structures	Data Mining- II OR	Choose one from a pool of courses GE-5 (4)		Choose one SEC OR Intern ship / Apprenticeship / Project/ Com m unity Outreach (IAPC) (2) * * *		22 credits

DSC - 14(4) Theory of Computation	Network Security		
	OR		
DSC- 15(4) Software Engineering	Unix Network Programmi ng		

V	DSC- 16(4)	Choose	Choose		Choose one	22 credits
<b>'</b>	Artificial Intelligence	one from a	one from a		SEC <b>OR</b>	
	intelligence	pool of	pool of			
		courses	courses		'Int ern ship / Apprenticeship /	
	DSC-17 (4)	DSE-4 (4)	GE-6 (4) "		Project / Research / Comm	
	DSC-17 (4) Machine Learning	Social		17.7.11 1 C	unity Outreach (2) * * *	
	Learning	Network			Outreach (2) * * *	
		Analytics				
	DSC-18 (4)		. /			
	Introduction to Parallel	OR				
	Programming					
	Trogramming	Computer				
		Graphics				
		0				
		OR				
		24/1				
		Deep	\			
		Learning				
		Learning				
				(/ 9		
		OR				
		Ethical	00			
		Hacking				
				7 10		
		OR	117			
		Wireless				
		Technolog				
		y and				
		Standards				
		Staridardo				
		OR				
		OK .				
		Research				
		Methodolo				
		METHOROTO				

		gy(RM)				
	Students on 6	exit shall be awarded		Field of Study/Disciplir site 132 credits on com		Total= 132
VII	DSC-19 (4) Compiler Design	Choose three DS courses Ol Choose two DSE-( one GE (4) " cou Choose one DSE two GE (2x4) co (total = 12)  Digital Imag Processing Advanced Algorithms Reinforcem Learning Cyber Forel Advanced T Mobile and Communica Research Methodolog	R (2x4) and rse OR (4) and ourses # ge ent  CCP/IP Satellite ation		Dissertation on Major (6) OR Dissertation on Minor (6) OR Academ ic project/ Entrepreneurship (6)	22 credits
VIII	DSC -20 (4) Information Security	Choose three DS courses Ol Choose two DSE- ( one GE (4) cour Choose one DSE two GE (2x4) co (total = 12) Information Image Retri Natural Lan	R (2x4) and se OR (4) and burses # and eval		Dissertation on Major (6) OR Dissertation on Minor (6) OR Academ ic project/ Entrepreneurship (6)	22 credits

	Processing				
	IT Infrastructure				
	Management				
	Critical Infrastructure				
	Management				
	Blockchain and its				
	applications				
	Cloud Computing				
	• IOT				
	<ul> <li>Distributed</li> </ul>				
	Algorithms				
Studente en evit ek	all be awarded Backelor of Gratha I	Field of Study/Dissipling) (Hon	ouro with Dogoroh/	A andomia	Total = 1.76
	all be awarded Bachelor of (in the I or (Honours with Research in Disc				Total = I 76
		npletion of Semester VIII	= (		

TABLE-6
Illustration - 1: Sample UGCF for Multidisciplinary Courses of Study @#

Semester	Core (DSC)	Elective	Generic	Ability	Skill	Internship/	Value addition	Tota
		(DSE)	Elective (GE)	Enhancem ent Course	Enhancemen t Course	Apprentice ship/Projec	course (VAC)	l Credi
			(OL)	(AEC)	(SEC)	t (2)		ts
I	Discipline Al- (4)		Choose	Choose	Choose one		Choose one from a	22 credits
	Programming fundamentals		one from a	one from a	from a pool of		pool of courses (2)	
	using C++		pool of courses	pool of AEC	courses (2)			
	Discipline BI- (4)		GE-1 (4)	courses (2)		1,571		
	Discipline CI- (4)	0.0			No.			
I	Discipline A2 (4)		Choose	Choose	Choose one	000	Choose one from a	22 credits
I	Data Structures	7	one from a	one from a	from a pool of	190	pool of courses (2)	
	Discipline B2 (4)		pool of courses	pool of AEC	courses (2)			
	Discipline C 2 (4)		GE-2 (4)	courses (2)				
	Students on exit	shall be aw <mark>a</mark> r	ded Und <mark>erg</mark> radu			-	dy) after securing the	Total= 44
				requ	uisite 44 credits in	Semesters 1 and	11	
I	Discipline A3 (4)		rom pool of	Choose	Choose on		Choose one from a	
1	Computer System Architecture		SE A/B/C (4)	one from a	Internship/ Ap Project/commu		pool of courses (2)	22 credits
	Discipline B 3 (4)		OR rom pool of	pool of AEC	Project/commu	•		ZZ orcans
	Discipline C 3 (4)		, GE -3 (4)	courses (2)		,		
	Discipline A4 (4)	Choose f	rom pool of	Choose	Choos	se one SEC OR	Choose one from a	22 Credits
V	Operating Systems	courses, DSE	E A/ B/C (4) OR	one from a	'Internship/	Appr enticeship /	pool of courses (2)	ZZ Greatis
	Discipline B 4 (4)		lternative -4 (4)	pool of AEC	Project/commu	unity outreach (2)		
	Discipline C 4 (4)			courses (2)				
	Students on ex	it shall be awa	rded Undergradı	uate Diploma (ir	the Field of Multi	idisciplinary Stud	y) after securing the	Total= 88
				requisite BB	credits on comple	etion of Semester	N	

V	Discipline A5 (4)  Database  Management  Systems  Discipline B 5 (4)  Discipline C 5 (4)	Choose one from a pool of courses DSE A/ B/ C - C - ( 4)	Choose one from a pool of courses GE-5 (4)		Choose one SEC OR Internship/ Appren tic eship / Project / Com m unity outreach (2)		22 credits
V I	Discipline A6 (4) Computer Networks	Choose one from a pool of	Choose one from a pool of	दिल्ल	Choose one SEC OR ' In tern - ship/ App ren ticeship / Project / Research / Com m		22 credits
	Discipline B 6 (4)	courses DSE A/ B/	courses GE-6 (4)		unity Outreach (2)		
	Discipline C 6 (4)	C (4)	by /	V (	3		
	Students on ex	it shall be <mark>awar</mark> d	ded Bachelor of		Multidisciplinary Study) after securi redits on completion of Semester \	-	Total= 132
V I I	DSC-(4)  Design and Analysis of Algorithms	Choose two and one GE Choose one two GE (2)	ee DSE (3x4) es OR DSE- (2x4) (4) course OR DSE (4) and (4) courses			Dissertation on Major (4+2) OR Dissertation on Minor (4+2) OR Academic project/ Entrepreneurship (4+2)	22 credits

VIII	DSC- (4) Information security	Choose three DSE(3x4) courses OR Choose two D SE-(2x4) one GE (4) course OR Choose one DSE (4) and two GE (2x4) courses (total= 12)	Course (AEC)	Course (SEC)	ship / Project (2)	Dissertation on Major (4+2)  OR Dissertation on Minor (4+2)  OR Academic project/ Entrepreneurship (4+2)	22 credits
Stu	_	awarded Bachelor of (in the Fid repreneurship) after securing th					Total = 176

TABLE-7
Illustration - 2: Sample UGCF for Courses of Study with more than Core Discipline

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Semester	Core (DSC)	Elective (DSE)	Generic Elective (GE)	Ability Enhancement	Still Enhancement	Internship Appendix	Value Addition course (VAC)	Total Credits
I	DSC-1 (A/B) Introduction to Programming using C++ Discipline A1 Programmi ng Fundament als using Python  Discipline- B1						from a pool of courses (2)	
П	(4) DSC-2 (A/B) Data Structures Discipline -A2 Data Visualization Using Python Discipline- B2 (4)		Choose one from a				Choose one from a pool of courses (2)	22 credits
Students	s on exit shall be awa	rded Under	Semesters	s 1 and II		g the requisit	e 44 credits in	Total= 44
III	DSC-3 (A/B) Computer System Architecture Discipline - A3 Database Management System I Discipline - B3 (4)		Choose one from		Intern ship/ Apprer Project / Comn Outreach	nunity	Choose one from a pool of courses (2)	22 credits
IV	DSC-4 (A/B) Operating Systems Discipline - A4 Introduction to Web Programming		Choose one from		Intern ship/ Appren Project / comm outreach		Choose one from a pool of courses (2)	22 Credits

	Discipline - B4 (4)						
Students or	n exit shall be award	ed Under	completion o	f Semester IV	the requ	isite 88 credits on	Total= 88
V	DSC - 5 (A/B) Database Management System II Discipline - A5 Multimedia and Its Applications Discipline - B5 (4)	Choose one from a pool of courses DSE-1 (A/B) (4)			Intern ship/ Apprenticeship/ Project / Research / Community		22 credits
VI	DSC- 6 (A/B) Computer Networks Discipline - A6 Introduction to Cyber Security Discipline - B6 (4)	Choose one from a pool of courses DSE-2 (A/B) (4)	Pool of courses G ( 4 )		Intern ship/ Apprenticeship / Project / Research /Community Outreach (2)		22 credits
Students on	exit shall be awarded	d Bachelor of (in the	□ e Field of Multidisciplinary	⊥ / Study) after securii	ng the requisite 132 credits on comple	tion of Semester VI	Total= 132

VII	DSC-13	Choose three DSE (3x4) courses  OR			Dissertation on Major	
VII	(4)	Choose two DSE- (2x4) and one GE			0R	22 credits
	Design and Analysis of	course			Dissertation on	
	Algorithms	OR			Minor	
		Choose one DSE (4) and two GE			0R	
		(2x4) courses			Acade	
					mic	
		(total= 12)			project/	
					Entrepreneurship	
					(6)	
		Choose three DSE (3x4) courses			Dissertation on	
VIII	DSC-14 (4)	OR			Major	22 credits
	Information	Choose two DSE- (2x4) and one GE			OR	
	Security	course			Dissertation on	
		OR			Minor	
		Choose one DSE (4) and two GE			0R	
		(2x4) courses			Acade	
					mic	
		(total= 12)			project/	
					Entrepreneurship	
					(6)	
	Students on exit sh	all be awarded Bachelor of (in the field of	Multidisciplinary S	tudy) (Honours or Honours with	Academic	
	Projec	t/Entrepreneurship)alter securing the requ	isite 176 credits or	n completion of Semester VIII		Total= 176

