SAMRAT ASHOK TECHNOLOGICAL INSTITUTE VIDISHA (M.P.) (A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV Bhopal)

Department Of Information Technology Programme AIADS Scheme-2023-24

Structure of U	Indergraduate Engineering Program				
S.No.	Category	Subject Category	Suggested Breakup of Credits (Total 160)	Possible list of subjects	Approx. Credits (Total 160)
1	Humanities and Social Sciences including Management courses	HSMC	12*	English, Environmental Science, Management Concepts and Principles, Organisation behaviors, Project Management, Ethics, Stress Management, Human resource Management, Financial Management, Marketing Management, Project Management, IPR.	10-12
2	Basic Science courses	BSC	25*	Applied Physics, Applied Chemistry, Engineering Mathematics (M-1, M-2, M-3)	20-22
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc.	ESC	24*	Basic Electrical Engineering, Engineering Graphics & Design, Engineering materials, Manufacturing Practices, Strength of Materials / Mechanics of Materials. Introduction to Computer Science, Basic of Information Technology. Engineering Electronics, Digital Design, Programming for Problem Solving,	20-24
4	Professional core courses	PCC	48*	Specific to Departments	48-50
5	Professional Elective courses relevant to chosen specialization/branch	PEC	18*	Specific to Departments	18-20
6	Open subjects – Electives from other technical and /or emerging subjects	OEC	18*	Specific to Departments	18-20
7	Project work, seminar and internship in industry or elsewhere	PROJ	15*	Specific to Departments	15-20
8	Mandatory Courses [Environmental Sciences, Induction training, Indian Constitution, Essence of Indian Traditional Knowledge]	MC	[Non-Credit]		
Total Credits			160*		
NPTEL/SWAY	YAM Courses Certification		20* (Max.)		

	Physical activity
	Creative Arts
	Universal Human Values
Mandatory Induction Program for first year students (Three Weeks duration)	Literary
	Proficiency Modules
	Lectures by Eminent People
	Visits to local Areas
	Familiarization to Dept./Branch & Innovations

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Date	The state of the s			Sc	heme of E	xaminat	ion (Sei	mester-	I)					
City in	No. of Concession, Name of Street, or other Persons, Name of Street, or ot			for B	atch Adm	nitted in	sessio	n - 202	2-23					
		Bachelor	of Tec	hnolog	y (B. Tec	h.) — Arti	ificial lı	ntellige	ence an	d Data	Scie	nce		
			Maximum Marks Allotted Contact Hrs.											
Subject	Subject	Subject Name	Theory Practical Table				Total	6	mact r	15.	Total			
Code	Category		ES	MS	Assign ment	Quiz	ES	LW	Quiz	Marks	L	т	P	Credits
CHB101	BSC	Applied Chemistry	60	20	10	10	30	10	10	150	3	0	2	4
CSA101	ESC	Introduction to Computer Science Engineering	60	20	10	10	30	10	10	150	3	0	2	4
HUB102	HSMC	Communication and Report Writing	60	20	10	10	30	10	10	150	3	0	2	4
CSA102	ESC	Digital Electronics	60	20	10	10	_	_	_	100	3	0	0	3
MAB101	BSC	Linear Algebra and Calculus	60	20	10	10	_	_	_	100	3	1	0	4
MAC101	MAC*	Universal Human Values and Professional Ethics	_	_		-	60	20	20	100	0	0	2	Grade
ILC100	ILC	Extracumoular Activities			It is a	one credit pe	r year activ	ity endors	e in eight s	emester m	arksheet			
Total			300	100	50	50	150	50	50	750	15	1	6	19
MST: Minimum two mid semester tests to be conducted during Semester, MAC: Mandatory courses classes will be conducted in off hours (Weekends)														

MAC	Induction Program	Non-Credit
HEC	NSS/NCC/NSO	Non-Credit
		Name of the Control o

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Abbreviations: ES -End Semester, MS- Mid Semester, LW- Laboratory Work/Assignment. (L: Lecture, T: Tutorial, P: Practical) BSC- Basic Science Course, ESC- Engineering Science Course, HSMC- Humanities Science and Management Course, MAC- Mandatory, Audit Course, AC- Audit Course, HEC- Holistic Education Course, ITC- Information Technology Course, ILC-Institute Level Course, DC- Department Course, DE-Department Elective, OC- Open Course, DLC-Department Laboratory, PROJ- Project Work

BSC- Basic Science Course, ESC- Engineering Science Course, HSMC- Humanities Science and Management Course, MAC- Mandatory, Audit Course, AC- Audit Course, HEC- Holistic Education Courses: NSS/NCC/NSO, ITC- Information Technology Course, ILC-Institute Level Course, DC- Department Course, DE-Department Elective, OC-Open Course, DLC- Department Laboratory, PROJ- Project Work, VA-Value Added Course

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-	The state of the s		Scheme of Examination (Semester-II)											
100	and the same of			for B	atch Adm	itted in	sessio	n - 202	2-23					
		Bachelor	of Tec	hnolog	y (B. Tecl	h.) — Ar	tificial li	ntellige	ence ar	id Data	Scie	nce		
					Max	imum Mar	ks Allotte	d			_			
Subject	Subject	Subject Name		TI	heory			Practical		Total	Contact Hrs.			Total
Code	Category	Susjeu Parie	ES	MS	Assignm ent	Quiz	ES	LW	Quiz	Marks	L	т	Р	Credits
PYB101	BSC	Applied Physics	60	20	10	10	30	10	10	150	3	0	2	4
CSA103	ESC	Problem Solving and Data Structure	60	20	10	10	30	10	10	150	3	0	2	4
ITC101	пс	Python Programming	60	20	10	10	30	10	10	150	3	0	2	4
CSA104	ESC	Principles of Software System	60	20	10	10				100	3	0	0	3
MAB102	BSC	Statistics: Probability Distribution and Differential Equations	60	20	10	10	-		_	100	3	1	0	4
CSL110	ESC	Computer Workshop (Linux Lab)					30	10	10	50	1	0	2	2
MAC102	MAC*	Disaster Management	1	-		_	30	10	10	50	0	0	2	Grade
ILC100	ILC	Extracurricular Activities			It is a	one credit p	er year activ	ity endors	e in eight s	emester m	arksheet			
Total			300	100	50	50	150	50	50	750	16	1	8	21
MST: Mini	mum two mid	d semester tests to be conducted du	uring Sem	ester, MAC	: Mandatory	courses o	lasses will	be condu	cted in of	f hours (V	/eekend	is)		

ILC	Internship-I (60 Hrs) Institute Level	Non-Credit
HEC	NSS/NCC/NSO	Non-Credit
		Same -



Abbreviations: ES -End Semester, MS- Mid Semester, LW- Laboratory Work/Assignment. (L: Lecture, T: Tutorial, P: Practical) BSC- Basic Science Course, ESC- Engineering Science Course, HSMC- Humanities Science and Management Course, MAC- Mandatory, Audit Course, AC- Audit Course, HEC- Holistic Education Course, ITC- Information Technology Course, ILC-Institute Level Course, DC- Department Course, DE-Department Elective, OC- Open Course, DLC-Department Laboratory, PROJ- Project Work

HEC- Holistic Education Courses: NSS/NCC/NSO, ITC- Information Technology Course, ILC-Institute Level Course, DC- Department Course, DE-Department Elective, OC-Open Course, DLC- Department Laboratory, PROJ- Project Work, VA-Value Added Course



SAMRAT ASHOK TECHNOLOGICAL INSTITUTE VIDISHA (M.P.)

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Scheme of Examination (Semester-III) Bachelor of Technology (B. Tech. –AIADS) for Batch Admitted in session - 2023-24

			Maximum Marks Allotted								Co	ntact H	***	
Subject	Subject	Subject Name		7	Theory			Practica	1	Total		mact n	15.	Total
Code	Category	Subject I value	ES	MS	Assignm ent	Quiz	ES	LW	Quiz	Marks	L	Т	P	Credits
MAB-301	BSC	Discrete Mathematics	60	20	10	10				100	3	1	0	4
AI-302	DC	Artificial Intelligence	60	20	10	10	30	10	10	150	3	0	2	4
AI-303	DC	OOPs with JAVA	60	20	10	10	30	10	10	150	3	0	2	4
AI-304	DC	Operating System	60	20	10	10	30	10	10	150	3	0	2	4
AI-305	DC	Computer System Organization	60	20	10	10				100	3	0	0	3
AI-306	DL	Web Application Development					30	10	10	50	0	0	4	2
AI-307	ILC	Internship-I (60 Hrs) Institute Level (Evaluation)					-	50		50	-	-	4	2
	ILC	Extracurricular Activities	It is a	one credit	per year activ	vity to be e	ndorsed in	n eight se	mester ma	ark sheet.				
		Total	300	100	50	50	120	90	40	750	15	1	14	23
MAC-308	MAC	Energy, Ecology, Environment & Society		20	20	10								Grade

HUM-309	HEC* optional	Holistic Education Course		20	20	10								Grade
MS	T: Minimum	two mid semester tests to be con	ducted o	during Sem	ester, MAC	Mandatory	y courses	classes w	ill be con	ducted in o	off hou	s (Wee	kends)	

HEC* classes to be conducted in online mode.



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Scheme of Examination (Semester-IV) Bachelor of Technology (B. Tech. -AIADS)

for Batch Admitted in session - 2023-24

			Maximum Marks Allotted								Co	ntact F	Irc	
Subject	Subject	Subject Name			Theory			Practica	1	Total	Co	maci 1		Total
Code	Category	J	ES	MS	Assignment	Quiz	ES	LW	Quiz	Marks	L	Т	P	Credits
AI-401	DC	Computer Networks	60	20	10	10	30	10	10	150	3	0	2	4
AI-402	DC	Data Base Management System	60	20	10	10	30	10	10	150	3	0	2	4
AI-403	DC	Foundation of Data Science	60	20	10	10	30	10	10	150	3	0	2	4
AI-404	DC	Software Engineering	60	20	10	10				100	3	0	0	3
AI-405	DC	Analysis and Design of Algorithms	60	20	10	10				100	3	1	0	4
AI-406	DL	Advance Java Programming					60	20	20	100	0	0	4	2
	ILC	Extracurricular Activities	It is a or	ne credit p	er year activity t	o be endor	sed in eig	ght semes	ter mark	sheet.				
	To	tal	300	100	50	50	150	50	50	750	15	1	10	21

Internship-II (90 Hrs) External /Institute Level:- To be evaluated in V semester.



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Scheme of Examination (Semester-V) Bachelor of Technology (B. Tech. –AIADS)

for Batch Admitted in session - 2023-24

			Maximum Marks Allotted								Co	ntact F		
Subject	Subject	Subject Name		T	heory			Practica	1	Total	Co	mact f	118.	Total
Code	Category		ES	MS	Assign ment	Quiz	ES	LW	Quiz	Marks	L	Т	P	Credits
AI-501	DC	Fuzzy logic	60	20	10	10	30	10	10	150	3	0	2	4
AI-502	DC	Data Science Analytics	60	20	10	10	30	10	10	150	3	0	2	4
AI-503	DC	Cloud Computing	60	20	10	10	30	10	10	150	3	0	2	4
AI-504	DE	DE-I	60	20	10	10				100	3	0	0	3
OE-505	OE	OE-I	60	20	10	10				100	3	0	0	3
AI-506	DLC	Advanced Data Science Lab-I					30	10	10	50	0	0	4	2
AI-507	ILC	Internship-II (60 Hrs) Institute Level (Evaluation)						50		50	-	-	4	2
	ILC	Extracurricular Activities	It is a or	It is a one credit per year activity to be endorsed in eight semester mark sheet										
	T	otal	300	100	50	50	120	90	40	750	15	0	14	22
	List of Cours	es for Honours Degree (MO	OCs)											Credits

List of Courses for Minor Degree (MOO					Credits	

	DE -I	OE-I
A	Human Computer Interaction	Fuzzy logic
В	Image processing	Computer Graphics & multimedia
С	Information retrieval	Software Engineering

Total 20 credits required for Honours / Minor degree

Note: 1.Open Courses launched by respective Programmes are not applicable for students of parental programmes.

2. Subject which is being opted by IT/IOT/Others in OC-3 should not be opted as DE/DC in parent department.



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Scheme of Examination (Semester-VI)

for Batch Admitted in session - 2023-24

Bachelor of Technology (B. Tech.) - Artificial Intelligence and Data Science

			Maximum Marks Allotted								Contact			Total
Subject Code	Subject Category	Subject Name	Theory			Practical			Total	Hrs. per week			Credits	
			ES	MS	Assignment	Quiz	ES	LW	Quiz	Marks	L	Т	P	i
AI-601	DC	Machine Learning	60	20	10	10	30	10	10	150	3	0	2	4
AI-602	DC	Data Mining & Data Warehousing	60	20	10	10	30	10	10	150	3	0	2	4
AI-603	DE	DE-II	60	20	10	10				100	3	0	0	3
AI-604	DE	DE-III	60	20	10	10				100	3	1	0	4
AI-605	OE	OE-II	60	20	10	10				100	3	0	0	3
AI-606	DLC	Advanced Data Science Lab-II					30	10	10	50	0	0	2	1
AI-607		Minor Project					50	50		100			4	2
			300	100	50	50	140	80	30	750	15	`1	10	21
	ILC	Extracurricular Activities It is a one credit per year activity endorse in eight semester mark sheet												
MST: Minimum two mid semester tests to be conducted during Semester														

Note: 1.Open Courses launched by respective Programmes are not applicable for students of parental programmes.

2. Subject which is being opted by IT/IOT/Others in OC-4 should not be opted as DE/DC in parent department.

Internship-III (120 Hrs) External /Institute Level

	DE -II	DE -III	OE – II
A	Optimization Techniques	Cryptography & Network Security	Cloud Computing
В	Knowledge Representation	Introduction to IOT	Data Science Analytics
С	Computer Vision	Robotics and process automation	Artificial Intelligence

Total 20 credits required for Honours / Minor degree



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Scheme of Examination (Semester-VII) Bachelor of Technology (B. Tech.) for Batch Admitted in session - 2023-24 **Maximum Marks Allotted** Contact Hrs. Subject Subject Total **Theory Practical** Subject Name Total Code Category Credits Assign ES MS ES LWMarks L T P Ouiz Ouiz ment 04 AI-701 DC 60 20 10 10 30 10 10 3 Deep Learning 150 0 20 04 AI-702 DE DE-IV 60 10 10 100 AI-703 DE DE-V 60 20 10 10 100 3 1 0 04 AI-704 **PROJ** 20 0 04 Major Project (Phase-I) --60 20 100 0 8 Internship-III (Completed AI-705 ILC 30 10 10 50 0 0 02 4 in Third Year) It is a one credit per year activity to be endorsed in eight semester marksheet. ILC Extracurricular Activities **Total** 180 60 30 30 120 40 40 2 14 18 500 **List of Courses for Honours Degree (MOOCs)** Credits List of Courses to be floated from NPTEL/SWAYAM During Academic Years 2025-to-2027. **List of Courses for Minor Degree (MOOCs)** Credits

List of Courses to be floated from NPTEL/SWAYAM						
During Academic Years 2025-to-2027.						

Total 20 credits required for Honours / Minor degree

	DE -IV	DE-V
A	Introduction to Logics	Big Data Analytics
В	Natural Language Processing	Data Handling & Visualization
С	Business Intelligence	Software Testing & Quality Assurance



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Scheme of Examination (Semester-VIII) Bachelor of Technology (B. Tech.) for Batch Admitted in session - 2023-24 **Maximum Marks Allotted** Contact Hrs. Subject Total Subject **Theory Practical** Subject Name Total Code Category Credits Assign ES MS ES LWMarks T Ouiz Ouiz ment Major Project (Phase-II) AI 801 Major Project / 300 200 500 0 0 20 10 **MOOCS** ILC Extracurricular Activities 4 **Total** 300 200 500 14 **List of Courses for Honors Degree (MOOCs)** Credits List of Courses to be floated from NPTEL/SWAYAM During Academic Years 2025-to-2027. **List of Courses for Minor Degree (MOOCs)** Credits List of Courses to be floated from NPTEL/SWAYAM During Academic Years 2025-to-2027.

