

(A Govt. Aided UGC Autonomous Institute Affiliated to RGPV, Bhopal)

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# **Centre for Artificial Intelligence**

Date: 13.12.2023

#### Minutes of Meeting of Board of Studies (BoS) in Centre for Artificial Intelligence

The meeting of the Board of Studies (BoS) in the Centre for Artificial Intelligence was held on 02 Dec., 2023 at 11:00 AM in offline/online mode (though video conferencing). During the meeting following were present:

1.	Dr. R. R. Singh	Chairman
2.	Dr. Jitendra Agrawal Director and Associate Professor, School of Information Technology, RGPV Bhopal.	External Member (Academics) (Nominee of Hon'ble Vice Chancellor RGPV Bhopal)
3.	Mr. Giridhari Lal Gupta Associate at Goldman Sachs, Gwalior.	External Member (Alumnus)
4.	Mr. Aditya Marathe Founder and CEO, Nugenix Robotics, Ichalkaranji, Maharashtra.	External Member (Corporate Sector)
5.	Dr. Tej Singh	Member
6.	Dr. Pawan Dubey	Member
7.	Dr. Bhagat S. Raghuwanshi	Member
8.	Dr. Kritika Bansal	Member
9.	Ms. Shubha Mishra	Member
10.	Dr. Sunil Kumar Shukla	Member
11.	Dr. Vibha Tiwari	Member
12.	Mr. Mir Shahnawaz Ahmad	Member

The following external members could not attend the meeting:

1.	Dr. Dilip Singh Sisodia Associate Professor and HoD, Department of Computer Science, NIT Raipur	External Member (Academics)
	Dr. R. K. Pateriya  Professor, Department of CSE,  MANIT Bhopal	External Member (Academics)



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The following deliberation took place in the meeting:

1										
	To confirm the minutes of the previous BoS meeting held	in the month of May-June 2023.								
Item 1	The minutes of the previous Doc meeting held on 02 Inno 2022 more presented discussed and									
		The minutes of the previous BoS meeting held on 02-June, 2023 were presented, discussed and confirmed.								
	The examination committees constituted vide Dean Ac	ademics Notice no 1332 dated 20/4/2021 need to be								
	reconstituted this year.	defines notice no 1332 dated 20/4/2021 need to be								
	reconstituted this year.									
	The examination committee has be reconstructed and includes the following members:									
	Dr. R. R. Singh									
Item 2	Dr. Vibha Tiwari									
	Ms. Shubha Mishra									
	Mr. Mir Shahnawaz	Ahmad								
	<b>Director Nominee</b>									
	The same was also confirmed by all the BoS members									
	To propose the scheme structure of VIII Semester with									
	offered in online mode with credit transfer for the batch a									
	from I-VIII semester should not be less than 160 for this	` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `								
Item 3										
Ittili 3	The scheme structure of B. Tech. VIII Semester [In									
	Robotics)], batch admitted in academic session 20									
	discussed and recommended. Also, it was confirmed									
	equal to 160 for this batch. The scheme is annexed as									
	To propose the list of courses which the students can open Institution (MITS) MOOC, to be offered in online model									
	(DE-5) and open category (OC3) for credit transfer in th									
	admitted in academic year 2020-21).	the first semester under the nemotic currentum (Buten								
	The list of Departmental Elective (DE-5									
	SWAYAM/NPTEL/MOOC based learning platform (in online mode) for B. Tech VIII Semester									
Itom A										
Item 4		d Robotics)], batch admitted in academic year								
item 4	2020-21, were discussed and finalized, as per the follo	d Robotics)], batch admitted in academic year wing details:								
item 4	2020-21, were discussed and finalized, as per the follo DE-5	d Robotics)], batch admitted in academic year wing details:  OC-3								
nem 4	2020-21, were discussed and finalized, as per the follo  DE-5  Reinforcement Learning	d Robotics)], batch admitted in academic year wing details:  OC-3  • Data Analytics with Python								
nem 4	2020-21, were discussed and finalized, as per the followard DE-5  Reinforcement Learning Blockchain and its Applications	d Robotics)], batch admitted in academic year wing details:  OC-3  • Data Analytics with Python • Deep Learning - IIT Ropar								
nem 4	2020-21, were discussed and finalized, as per the follo  DE-5  Reinforcement Learning	d Robotics)], batch admitted in academic year wing details:  OC-3  • Data Analytics with Python								
nem 4	2020-21, were discussed and finalized, as per the follo  DE-5  Reinforcement Learning Blockchain and its Applications Natural Language Processing Embedded System Design with ARM	d Robotics)], batch admitted in academic year wing details:  OC-3  • Data Analytics with Python • Deep Learning - IIT Ropar • Natural Language Processing								
nem 4	2020-21, were discussed and finalized, as per the follo  DE-5  Reinforcement Learning Blockchain and its Applications Natural Language Processing Embedded System Design with ARM  To propose the list of "Additional Courses" which can be	d Robotics)], batch admitted in academic year wing details:  OC-3  • Data Analytics with Python • Deep Learning - IIT Ropar • Natural Language Processing  opted for getting an								
nem 4	2020-21, were discussed and finalized, as per the follo  DE-5  Reinforcement Learning Blockchain and its Applications Natural Language Processing Embedded System Design with ARM  To propose the list of "Additional Courses" which can be (i) Honours (for students of the host department)	d Robotics)], batch admitted in academic year wing details:  OC-3  • Data Analytics with Python • Deep Learning - IIT Ropar • Natural Language Processing  opted for getting an								
	2020-21, were discussed and finalized, as per the follo  DE-5  Reinforcement Learning Blockchain and its Applications Natural Language Processing Embedded System Design with ARM  To propose the list of "Additional Courses" which can be (i) Honours (for students of the host department (ii) Minor Specialization (for students of other design with the control of the students of the s	d Robotics)], batch admitted in academic year wing details:  OC-3  • Data Analytics with Python • Deep Learning - IIT Ropar • Natural Language Processing  opted for getting an ) epartments)								
Item 4	2020-21, were discussed and finalized, as per the follo  DE-5  Reinforcement Learning Blockchain and its Applications Natural Language Processing Embedded System Design with ARM  To propose the list of "Additional Courses" which can be (i) Honours (for students of the host department (ii) Minor Specialization (for students of other d [These will be offered through SWAYAM/NPTEL/MC	OC-3  Data Analytics with Python Deep Learning - IIT Ropar Natural Language Processing  opted for getting an pepartments) OC based Platforms for the B.Tech. VIII semester								
	2020-21, were discussed and finalized, as per the follo  DE-5  Reinforcement Learning Blockchain and its Applications Natural Language Processing Embedded System Design with ARM  To propose the list of "Additional Courses" which can be (i) Honours (for students of the host department (ii) Minor Specialization (for students of other definition of the latent admitted in 2020-21)] and for students (for the batch admitted in 2020-21)]	OC-3  Data Analytics with Python Deep Learning - IIT Ropar Natural Language Processing  opted for getting an pepartments) OC based Platforms for the B.Tech. VIII semester								
	2020-21, were discussed and finalized, as per the follo  DE-5  Reinforcement Learning Blockchain and its Applications Natural Language Processing Embedded System Design with ARM  To propose the list of "Additional Courses" which can be (i) Honours (for students of the host department (ii) Minor Specialization (for students of other d [These will be offered through SWAYAM/NPTEL/MC	OC-3  Data Analytics with Python Deep Learning - IIT Ropar Natural Language Processing  opted for getting an pepartments) OC based Platforms for the B.Tech. VIII semester								



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The courses available on SWAYAM/NPTEL/MOOC based learning platforms for Honours Specialization for the B.Tech. VIII semester students [Information Technology (Artificial Intelligence and Robotics) (for the batch admitted in 2020-21)] were discussed and identified. Following track-wise list of honours courses were selected:

Foundations of Cyber Physical Systems
<b>Computer Vision and Image Processing-Fundamentals and Applications</b>
Experimental Robotics
Edge Computing
The Joy of Computing using Python
Artificial Intelligence: Knowledge Representation And Reasoning
GPU Architectures And Programming
Advanced Computer Architecture

Also, the courses available on SWAYAM/NPTEL/MOOC based learning platforms for Honours Specialization for the B.Tech. VI semester students [Information Technology (Artificial Intelligence and Robotics)/ Artificial Intelligence (AI) and Data Science/ Artificial Intelligence (AI) and Machine Learning], for the batch admitted in 2021-22, were discussed and identified. Following track-wise list of honours courses were selected:

Track 1: Information Security	Track 2: IoT				
Secure Computation: Part I	Sensors and actuators				
Information Security- 5 - Secure Systems Engineering	Microprocessors and Microcontrollers				
-	Introduction to Internet of Things				
Track 3: High Perfo	rmance Computing				
Parallel Computer Architecture					
GPU Architectures and Programming					

To review and finalize the scheme structure of B.Tech VI Semester under the flexible curriculum (Batch admitted in 2021-22) The scheme structure of B. Tech. VI Semester [Information Technology (Artificial Intelligence and Item 6 Robotics)/ Artificial Intelligence (AI) and Data Science/ Artificial Intelligence (AI) and Machine Learning, batch admitted in academic session 2021 - 22 (under the flexible curriculum), was discussed and recommended. The scheme is annexed as Annexure-II. To review & finalize the syllabi for all Departmental Core Courses (DC) and Mandatory Course (MC) of B. Tech VI Semester (for batch admitted in 2021-22) under the flexible curriculum along with their COs. The syllabi (along with course outcomes) of B. Tech. VI Semester [Information Technology (Artificial Item 7 Intelligence and Robotics)/ Artificial Intelligence (AI) and Data Science/ Artificial Intelligence (AI) and Machine Learning, batch admitted in academic session 2021 – 22 (under the flexible curriculum), were discussed and recommended. The scheme is annexed as Annexure-III. To propose the list of courses from SWAYAM/NPTEL/MOOC Platforms to be offered (for batches admitted in 2021-22) in online mode under Departmental Elective (DE-1) Course with credit transfer, in the VI Item 8 Semester.



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The list of Departmental Elective (DE-1) courses to be offered from SWAYAM/NPTEL/MOOC based

	DE-1 (Information Technology (Artificial Intelligence and Robotics))	DE-1 (Artificial Intelligence (AI) and Data Science)	DE-1 (Artificial Intelligence (AI) and Machine Learning)
	<ul> <li>Embedded System         Design with ARM</li> <li>Robotics: Basics and         Selected Advanced         Concepts</li> <li>Blockchain and its         Applications</li> <li>Compiler Design</li> </ul>	<ul> <li>Data Science for Engineers</li> <li>Business Intelligence &amp; Analytics</li> <li>Blockchain and its Applications</li> <li>Compiler Design</li> </ul>	<ul> <li>Data Analytics with Python</li> <li>Artificial Intelligence: Knowledge Representation and Reasoning</li> <li>Blockchain and its Applications</li> <li>Compiler Design</li> </ul>
	To review and finalize the courses & sy	`	, , , , , , , , , , , , , , , , , , ,
tem 9	Category (OC) Courses (in traditional mocCOs.  The syllabi (along with course outcomes semester students of other department flexible curriculum), were discussed an	es) of Open Category (OC) Co nts, batch admitted in acaden	ourses (in traditional mode) for inic session 2021 – 22 (under t
Item 9	The syllabi (along with course outcome semester students of other department flexible curriculum), were discussed and To review and finalize the Experiment B.Tech.VI semester (for batch admitted in The Experiment list/ Lab manual for a Technology (Artificial Intelligence and Artificial Intelligence (AI) and Machine	es) of Open Category (OC) Conts, batch admitted in academond finalized. The scheme is annolist/ Lab manual for all the Lan 2021-22).  All the Laboratory Courses of End Robotics)/ Artificial Inteline Learning], batch admitted	ourses (in traditional mode) for onic session 2021 – 22 (under the exed as Annexure-IV.  aboratory Courses to be offered  3. Tech. VI Semester [Information of the exed as Annexure]  d in academic session 2021 – 2021
	The syllabi (along with course outcome semester students of other department flexible curriculum), were discussed and To review and finalize the Experiment B.Tech.VI semester (for batch admitted in The Experiment list/ Lab manual for a Technology (Artificial Intelligence and	es) of Open Category (OC) Conts, batch admitted in academ of finalized. The scheme is annulist/ Lab manual for all the Laboratory Courses of End Robotics)/ Artificial Inteline Learning], batch admitted liscussed and finalized. The scheme is of projects which can be	ourses (in traditional mode) for nic session 2021 – 22 (under texed as Annexure-IV. aboratory Courses to be offered  3. Tech. VI Semester [Information of the session 2021 – 2021 – 2022]  de offered under the 'Skill base
	The syllabi (along with course outcome semester students of other department flexible curriculum), were discussed and To review and finalize the Experiment B.Tech.VI semester (for batch admitted in The Experiment list/ Lab manual for a Technology (Artificial Intelligence and Artificial Intelligence (AI) and Machi (under the flexible curriculum), were defined to review and finalize the suggestive mini-project' category in various laborate	es) of Open Category (OC) Conts, batch admitted in academ of finalized. The scheme is annulist/ Lab manual for all the Lan 2021-22).  All the Laboratory Courses of End Robotics)/ Artificial Interior Learning, batch admitted liscussed and finalized. The scheme is of projects which can be ory components based courses to can be offered under the 'Skill de courses of B. Tech. VI Second ing, batch admitted in academic to the same of the sa	ourses (in traditional mode) for nic session 2021 – 22 (under the exed as Annexure-IV.  aboratory Courses to be offered  3. Tech. VI Semester [Information academic session 2021 – 2021



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	flexible curriculum), were reviewed and finalized. The scheme and syllabi are annexed as Annexure-VI.
	To review and finalize the Experiment list/ Lab manual for all the Laboratory Courses to be offered in Batch IV semester (for batch admitted in 2022-23)
Item 13	The Experiment list/ Lab manual for all the Laboratory Courses of B. Tech. IV Semester [Information Technology (Artificial Intelligence and Robotics)/ Artificial Intelligence (AI) and Data Science/ Artificial Intelligence (AI) and Machine Learning], batch admitted in academic session 2022 – 23 (under the flexible curriculum), were discussed and finalized. The scheme is annexed as Annexure-VII.
	To review and finalize the suggestive list of projects which can be offered under the 'Skill based mini-project' category in various laboratory components based courses to be offered in B. Tech IV Semester (for the batch admitted in 2022-23).
Item 14	The suggestive list of projects which can be offered under the 'Skill based mini-project' category in various laboratory components based courses of B. Tech. IV Semester [Information Technology (Artificial Intelligence and Robotics)/ Artificial Intelligence (AI) and Data Science/ Artificial Intelligence (AI) and Machine Learning], batch admitted in academic session 2022 – 23 (under the flexible curriculum), were discussed and finalized. The scheme is annexed as Annexure-VII.  To review and finalize the scheme and syllabi of B. Tech. II Semester (for batch admitted in 2023-24) under the flexible curriculum along with their COs.
Item 15	The scheme and syllabi (along with course outcomes) of B. Tech. II Semester [Information Technology (Artificial Intelligence and Robotics)/ Artificial Intelligence (AI) and Data Science/ Artificial Intelligence (AI) and Machine Learning], batch admitted in academic session 2023 – 24 (under the flexible curriculum), were reviewed and finalized. The scheme and syllabi are annexed as Annexure-VIII.
	To review and finalize the Experiment list/ Lab manual for all the Laboratory Courses to be offered in Batch II semester (for batch admitted in 2023-24)
Item 16	The Experiment list/ Lab manual for all the Laboratory Courses of B. Tech. II Semester [Information Technology (Artificial Intelligence and Robotics)/ Artificial Intelligence (AI) and Data Science/ Artificial Intelligence (AI) and Machine Learning], batch admitted in academic session 2023 – 24 (under the flexible curriculum), were discussed and finalized. The scheme is annexed as Annexure-IX.
	To review and finalize the suggestive list of projects which can be offered under the 'Skill based mini-project' category in various laboratory components based courses to be offered in B. Tech IV Semester (for the batch admitted in 2023-24).
Item 17	various laboratory components based courses of B. Tech. II Semester [Information Technology
	(Artificial Intelligence and Robotics)/ Artificial Intelligence (AI) and Data Science/ Artificial Intelligence (AI) and Machine Learning], batch admitted in academic session 2023 – 24 (under the flexible curriculum), were discussed and finalized. The scheme is annexed as Annexure-IX.
Item 18	Intelligence (AI) and Machine Learning, batch admitted in academic session 2023 – 24 (under the flexible curriculum), were discussed and finalized. The scheme is annexed as Annexure-IX.  To review the CO attainments, identify gaps and suggest corrective measures for the improvement in the CO attainment levels for the courses taught in Jan-June 2023 Session.
Item 18	Intelligence (AI) and Machine Learning], batch admitted in academic session 2023 – 24 (under the flexible curriculum), were discussed and finalized. The scheme is annexed as Annexure-IX.  To review the CO attainments, identify gaps and suggest corrective measures for the improvement in the CO attainment levels for the courses taught in Jan-June 2023 Session.  The CO attainment levels of various courses were reviewed, along with the Gap identification and necessary action taken for not attained CO levels. The same is annexed as Annexure-X.



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	Note: Currently, the senior batches of Information Technology (Artificial Intelligence and Robotics), Artificial Intelligence (AI) and Data Science and Artificial Intelligence (AI) and Machine Learning are in VII, V and V semesters respectively, and no batch has yet completed the degrees in these programs. So, the PO attainment will not be prepared in this semester.
	To review curricula feedback from various stakeholders, its analysis and impact.
Item 20	The curricula feedback from various stakeholders for B. Tech. II/IV/VI Semesters [Information Technology (Artificial Intelligence and Robotics)/ Artificial Intelligence (AI) and Data Science/Artificial Intelligence (AI) and Machine Learning] during Jan-June2023, were reviewed and discussed. The same is annexed in Annexure-XI
Item 21	To discuss and recommend the scheme structure & syllabi of PG Programme (M.E./M.Tech./MCA/MBA) along with their Course Outcomes (COs)
	Note: Currently, the Centre for Artificial Intelligence is not offering any PG Programme.
Item 22	To recommend the scheme structure and Syllabus of Ph.D. Course Work (specific to Doctoral Research Scholars, if any)
	Note: Currently, the Centre for Artificial Intelligence is not offering any Ph.D. Programme.
Item 23	Any other matter.  The Syllabus, List of Experiments and Skill based mini Projects for Problem Solving and Programming (3240122/ 3270122/ 3280122) as a rectification to Computer Programming in the First Semester (batch admitted in academic session 2023 – 24) was discussed and finalized. The syllabus (along with List of Experiments and skill based mini projects) is annexed as Annexure-XII.

Suggestions by the external experts/members:

The external experts suggested that Robot Economics and Robot Esthetics and Design be included in the curriculum of the Artificial Intelligence and Robotics branch. It was also discussed in the meeting that seminars and skill based mini projects can suffice for this requirement.

The meeting ended with the vote of thanks to all the members.

Dr. Tej Singh Dr. Pawan Dubey Dr. Bhagat S. Raghuwanshi Dr. Vibha Tiwari

Dr. Kritika Bansal Ms. Shubha Mishra Dr. Sunil Kumar Shukla Mr. Mir Shahnawaz Ahmad



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#### Dr. Jitendra Agrawal

Director and Associate Professor, School of Information Technology, RGPV Bhopal.

#### Dr. Dilip Singh Sisodia

Associate Professor and HoD, Department of Computer Science, NIT Raipur

#### Dr. R. K. Pateriya

Professor, Depart of CSE, MANIT Bhopal

#### Mr. Giridhari Lal Gupta

Associate at Goldman Sachs, Gwalior.

#### Mr. Aditya Marathe

Founder and CEO, Nugenix Robotics, Ichalkaranji, Maharashtra.

Dr. R. R. Singh

Coordinator, Center for Artificial Intelligence [Chairman, BoS]



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## **Centre for Artificial Intelligence**

#### **Scheme of Evaluation**

## B. Tech. VIII Semester (Information Technology (Artificial Intelligence and Robotics))

(for batch admitted in academic session 2020 – 21)

										UU	Duich	tuumu	ueu in	ucuu		ומשמ	sion 202	U = PI	
S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted							_	onta							
110.	Coue	Code		Theory Slot			Practical Slot			MOOCs			Hours per week						
					Term uation		inuous uation	End	Contin Evalua		Assign ment	Exa m	Total Marks	L	Т	P	Total Credits	Mode of Teaching	Mode of Exam
				End Sem. Exam.	<sup>8</sup> Proficiency in subject /course	Mid Sem. Exam.	Quiz/ Assignm ent	Sem. Exam.	Lab work & Sessional	Skill Based Mini Project									Exam
1.	DE	DE	Departmental Elective* (DE-5)	-	-	-	-	-	-	-	25	75	100	3		-	3	Online	MCQ
2.	OC	OC	Open Category* (OC-3)	-	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ
3.	240801	DLC	Internship/ Research Project/ Innovation & Start-up***	-	-	-	-	250	150	-	-	-	400	-	-	18	9	Offline	so
4.	240802	-	Professional Development <sup>#</sup>	-	-	-	-	50	-	-	-	ı	50	ı	-	4	2	Interactive	so
	Total			-	-	-	-	300	150	-	50	150	650	6	-	22	17	-	-
	Additional Course for Honours or minor Specialization				Permi	itted to	opt for m	aximum	two additio	nal cours	ses for tl	he awa	rd of Ho	nour	s or N	Minor	· specializ	zation	

<sup>\$</sup>Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral

	N	ing		Mode of Examination					
	Theory Lab PDC				Theory			Lab	Total Credits
Offline	Online	Blended	Offline	Interactive	PP	AO	MCQ	SO	
-	6	-	9	2	-	-	6	11	17
-	35.29	-	52.94	11.76		-	35.29	64.71	Credits %



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## B. Tech. VIII Semester (Information Technology (Artificial Intelligence and Robotics))

	DE -5*							
S. No. Subject Code Subject Name								
2	240861	Reinforcement Learning						
3	240862	Blockchain and its Applications						
4	240863	Natural Language Processing						
5	240864	Embedded System Design with ARM						

	OC-3*						
S. No. Subject Code Subject Name							
1	1 Data Analytics with Python						
2		Deep Learning - IIT Ropar					
3		Natural Language Processing					

# List of courses to be opted for Honours in VIII Semester

	Honours* (to be opted by students of Parent Department)										
Course Name Code											
HAI08241	Foundations of Cyber Physical Systems										
HAI08242	Computer Vision and Image Processing-Fundamentals and Applications										
HAI08243	Edge Computing										
HAI06234	The Joy of Computing using Python										
HAI06231	Artificial Intelligence: Knowledge Representation And Reasoning										
HAI06232	GPU Architectures And Programming										
HAI06233	Advanced Computer Architecture										

<sup>\*</sup> Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

**Note:** In each semester (starting from V to VIII semester), it is required to opt for new subjects towards Honours Degree/ Minor Specialization.



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#### **Scheme of Evaluation**

# B. Tech. VI Semester (Information Technology (Artificial Intelligence and Robotics)) (for batch admitted in academic session 2021 – 22)

							Maximu	m Mark	s Allotted	W/ -	- Juich uu		Contact				<i></i>		
				Theory Slot			]	Practical Slot			MOOCs		Hours p week						
S. No.	Subject Code	Category Code	Subject Name		nd Term aluation		inuous uation	- End	Continuous Evaluation				Total Marks				Total Credits	Mode of	Mode of
No.	Code	Code		End Sem. Exam.	<sup>§</sup> Proficiency in subject /course	Mid Sem. Exam	Quiz/ Assign ment	Sem. Exam.	Lab work & Sessional	Skill Based Mini Project	Assignme nt	Exam	Wiatks	L	Т	P	Credits	Teaching	Exam.
1.	240601	DC	AI for Robotics	50	10	20	20	-	-	-	-	-	100	3	1	-	4	Blended	PP
2.	240602	DC	Image Processing	50	10	20	20	60	20	20	-	-	200	3	-	2	4	Blended	PP
3.	240603	DC	Artificial Intelligence & Machine Learning	50	10	20	20	60	20	20	-	1	200	3	-	2	4	Blended	PP
4.	DE	DE	Departmental Elective* (DE-1)	-	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ
5.	OC	OC	Open Category (OC-1)	50	10	20	20	-	-	-	-	1	100	3	-	-	3	Blended	PP
6.	240604	DLC	Minor Project-II**	-	-	-	-	60	40	-	-	-	100	-	-	4	2	Offline	SO
7.	200XXX	CLC	Novel Engaging Course (Informal Learning)	-	-	-	-	50	-	-	-	-	50	1	-	2	1	Interactive	SO
	Total			200	40	80	80	230	80	40	25	75	850	15	1	10	21	-	_
8.	1000007	MAC	Intellectual Property Rights (IPR)	50	10	20	20	-	-	-	-	-	100	2	-	-	GRADE	Online	MCQ

Summer Internship-III (On Job Training) for Four weeks duration: Evaluation in VII Semester

**Additional Course for Honours or minor Specialization** 

Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization

SProficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

**MCQ:** Multiple Choice Question

**AO:** Assignment + Oral

**PP:** Pen Paper **SO:** Submission + Oral

	N	Mode of Teach	ing								
	Theory		Lab	NEC		Theory Lab NEC					
Offline	Online	Blended	Offline	Interactive	PP	PP AO MCQ SO SO					
-	3	13	4	1	13	-	3	4	1	21	
-	14.29	61.9	19.05	4.76	61.9	-	14.29	19.05	4.76	Credits %	



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## B. Tech. VI Semester (Information Technology (Artificial Intelligence and Robotics))

		DE -1*
S. No.	Subject Code	Subject Name
1	240661	Embedded System Design With ARM
2	240662	Robotics: Basics and Selected Advanced Concepts
3	240663	Blockchain and its Applications
4	240664	Compiler Design

	OC-1										
S. No.	Subject Code	Subject Name									
1		Information Security									
2		Data Mining & Warehousing									

# List of courses to be opted for Honours in VI Semester

#### Honours\* (to be opted by students of Parent Department) **Course Code Course Name Course Code Course Name Track 1: Information Security Track 2: Internet of Things** Secure Computation: Part I HAI06241 HAI06243 Sensors and actuators Information Security- 5 - Secure Systems Engineering Microprocessors and Microcontrollers HAI06242 HAI06244 HAI05233 **Introduction To Internet Of Things Track 3: High Performance Computing** HAI06245 Parallel Computer Architecture HAI06246 **GPU** Architectures and Programming

**Note:** In each semester (starting from V to VIII semester), it is required to opt for new subjects towards Honours Degree/ Minor Specialization.

<sup>\*</sup> Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform



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## **Centre for Artificial Intelligence**

#### **Scheme of Evaluation**

# B. Tech. VI Semester (Artificial Intelligence (AI) and Data Science)

(for batch admitted in academic session 2021 – 22)

						N	Maximum	Marks	Allotted				Contact								
					Theory	Slot		Practical Slot			MOOCs				urs p week				N4 - 1 -		
S. No.	Subject Code	Category Code	Subject Name		Term uation		nuous iation	End	Contir Evalu			Assignm ent Exam							Total Credits	Mode of Teaching	
				End Sem. Exam.	<sup>S</sup> Proficienc y in subject /course	Mid Sem. Exam.	Quiz/ Assign ment	Sem. Exam.	Lab work & Sessional	Skill Based Mini Project				L	Т	P			•		
1.	270601	DC	Data Mining & Warehousing	50	10	20	20	60	20	20	-	-	200	2	1	2	4	Blended	PP		
2.	270602	DC	Image Processing	50	10	20	20	60	20	20	-	-	200	3	-	2	4	Blended	PP		
3.	270603	DC	Deep Learning	50	10	20	20	60	20	20	-	-	200	3	-	2	4	Blended	PP		
4.	DE	DE	Departmental Elective* (DE-1)	-	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ		
5.	OC	OC	Open Category (OC-1)	50	10	20	20	-	-	-	-	1	100	3	-	-	3	Blended	PP		
6.	270604	DLC	Minor Project-II**	-	-	-	-	60	40	-	-	-	100	-	-	4	2	Offline	so		
7.	200XXX	CLC	Novel Engaging Course (Informal Learning)	-	-	-	-	50	-	-	-	-	50	-	-	2	1	Interactive	s so		
	Total		200	40	80	80	290	100	60	25	75	950	14	1	12	21	-	_			
8.	1000007	MAC	Intellectual Property Rights (IPR)	50	10	20	20	-	-	-	-	-	100	2	-	-	GRADE	Online	MCQ		

Summer Internship-III (On Job Training) for Four weeks duration: Evaluation in VII Semester

Additional Course for Honours or minor Specialization

Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization

SProficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject MCO: Multiple Choice Ouestion AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral

	N	Mode of Teach	ing								
	Theory		Lab	NEC		Theory		Lab	NEC	Total Credits	
Offline	Online	Blended	Offline	Interactive	PP	AO	MCQ	so	so		
-	3	12	5	1	12	-	3	5	1	21	
-	14.29	57.14	23.81	4.76	57.14	-	14.29	23.81	4.76	Credits %	



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## **Centre for Artificial Intelligence**

#### B. Tech. VI Semester (Artificial Intelligence (AI) and Data Science)

	DE -1*										
S. No.	<b>Subject Code</b>	Subject Name									
1	270661	Data Science for Engineers									
2	270662	Business Intelligence & Analytics									
3	270663	Blockchain and its Applications									
4	270664	Compiler Design									

	OC-1											
S. No.	<b>. . . . . .</b>											
1		Information Security										
2		Data Mining & Warehousing										

## List of courses to be opted for Honours or Minor specialization in VI Semester

	Honours*  (to be opted by students of Parent Department)										
Course Code	Course Name	Code									
	Track 1: Information Security	Track 2: Internet of Things									
HAI06241	Secure Computation: Part I	HAI06243	Sensors and actuators								
HAI06242	Information Security- 5 - Secure Systems Engineering	HAI06244	Microprocessors and Microcontrollers								
		HAI05233	Introduction To Internet Of Things								
	Track 3: High Performance	e Computing									
HAI06245	Parallel Computer Architecture										
HAI06246	GPU Architectures and Programming										

<sup>\*</sup> Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

**Note:** In each semester (starting from V to VIII semester), it is required to opt for new subjects towards Honours Degree/ Minor Specialization.



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## **Centre for Artificial Intelligence**

#### **Scheme of Evaluation**

# B. Tech. VI Semester (Artificial Intelligence (A<u>I</u>) and Machine Learning)

(for batch admitted in academic session 2021 – 22

							Maximum	Marks	Allotted				Contact						
					Theory	Slot		I	Practical S	lot	MOC	OCs			ours p week				
S. No.	Subject Code	Categor y Code			l Term luation		nuous iation	Continuous End Evaluation			A	Total Marks				Total Credits	Mode of Teaching	Mode of	
				End Sem. Exam.	<sup>\$</sup> Proficienc y in subject /course	Mid Sem. Exam.	Quiz/ Assign ment	Sem. Exam.	Lab work & Sessional	Skill Based Mini Project	Assignm ent	Exam		L	Т	P			
1.	280601	DC	Data Mining & Warehousing	50	10	20	20	60	20	20	-	-	100	2	1	2	4	Blended	PP
2.	280602	DC	Image Processing	50	10	20	20	60	20	20	-	-	200	3	-	2	4	Blended	PP
3.	280603	DC	Deep Learning	50	10	20	20	60	20	20	-	-	200	3	-	2	4	Blended	PP
4.	DE	DE	Departmental Elective* (DE-1)	-	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ
5.	OC	OC	Open Category (OC-1)	50	10	20	20	-	-	-	-	-	100	3	-	-	3	Blended	PP
6.	280604	DLC	Minor Project-II**	-	-	-	-	60	40	-	-	-	100	-	-	4	2	Offline	SO
7.	200XXX	CLC	Novel Engaging Course (Informal Learning)	-	-	-	-	50	-	-	-	-	50	-	-	2	1	Interactive	e SO
		Tot		200	40	80	80	290	100	60	25	75	950	14	1	12	21	-	-
8.	1000007	MAC	Intellectual Property Rights (IPR)	50	10	20	20	-	-	-	-	-	100	2	-	-	GRADE	Online	MCQ

Summer Internship-III (On Job Training) for Four weeks duration: Evaluation in VII Semester

Additional Course for Honours or minor Specialization Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization

<sup>s</sup>Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral

_	N	Mode of Teach	ing			<b>Mode of Examination</b>							
	Theory		Lab	NEC		Theory	NEC	Total Credits					
Offline	Online	Blended	Offline	Interactive	PP	AO	MCQ	SO	SO				
-	3	12	5	1	12	-	3	5	1	21			
_	14.29	57.14	23.81	4.76	57.14	_	14.29	23.81	4.76	Credits %			



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#### **Centre for Artificial Intelligence**

## B. Tech. VI Semester (Artificial Intelligence (AI) and Machine Learning)

	DE -1*											
S. No.	Subject Code	Subject Name										
1	280661	Data Analytics with Python										
2	280662	62 Artificial Intelligence: Knowledge Representation And Reasoning										
3	280663	Blockchain and its Applications										
4	280664	Compiler Design										

	OC-1										
S. No.	<b>Subject Code</b>	Subject Name									
1		Information Security									
2		Data Mining & Warehousing									

# List of courses to be opted for Honours or Minor specialization in VI Semester

#### Honours\* (to be opted by students of Parent Department) Course Course **Course Name Course Name** Code Code **Track 1: Information Security Track 2: Internet of Things** HAI06241 Secure Computation: Part I Sensors and actuators HAI06243 Information Security- 5 - Secure Systems Engineering HAI06244 Microprocessors and Microcontrollers HAI06242 HAI05233 **Introduction To Internet Of Things Track 3: High Performance Computing** Parallel Computer Architecture HAI06245 HAI06246 **GPU** Architectures and Programming

#### \* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

**Note:** In each semester (starting from V to VIII semester), it is required to opt for new subjects towards Honours Degree/ Minor Specialization.



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#### **Centre for Artificial Intelligence**

#### **Scheme of Evaluation**

### B. Tech. IV Semester (Information Technology (Artificial Intelligence and Robotics))

(for batch admitted in academic session 2022 – 23) Subject Category **Subject Name Maximum Marks Allotted Contact Hours** No. Code Code per week **Theory Slot Practical Slot End Term** Continuous **Continuous** L T P Mode Total Total Mode of **Evaluation Evaluation** End **Evaluation** of Marks Credits Teaching End Sem. SProficience Lab Work Mid Ouiz/ Sem. Skill Exam. Sem. Assign Exam & Based Exam. v in subject Sessional Mini Exam ment /course Project Calculus and 2240421 DC 50 10 20 20 100 3 1 4 Offline PP **Optimization Techniques** Modern Computer 2. 2240422 DC 3 50 10 20 20 100 1 4 Blended PP Architecture 3. 2240423 DC Control Systems 50 10 20 20 100 3 Blended PP 2240424 Robot Kinematics 50 3 DC 10 20 20 20 20 4 Blended PP 4. 60 200 \_ 5. 2240425 DC Information Security 50 10 20 20 3 3 Blended PP 100 6. 2240426 DLC 20 2 1 Offline SO Java Programming Lab 60 20 100 **Novel Engaging Course** 7. 200XXX CLC 50 50 2 1 SO Interactive (Informal Learning) 06 Total 250 **50** 170 40 750 15 02 20 100 100 40 Indian Constitution and 1000001 MAC 2 50 10 20 20 100 **GRADE** Blended MCO Traditional Knowledge Natural 9. 2 3000004 50 10 20 20 **GRADE** Sciences & Language 100 Blended **MCQ** Skills

Summer Internship Project-II (Soft skills Based) for two weeks duration: Evaluation in V Semester

Credits of Natural Sciences & Skills will be added in the VI Semester

MCO: Multiple Choice Ouestion AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral

		Teaching N	Mode								
	Theory		Lab	NEC		Theory Lab NEC					
Offline	Online	Blended	Offline	Interactive	PP	A+O	MCQ	so	so		
4	-	13	2	1	17	-	-	2	1	20	
20	-	65	10	5	85	-	-	10	5	Credits %	

<sup>&</sup>lt;sup>s</sup> proficiency in course/subject-includes the weightage towards ability/skill/competence/knowledge level/ expertise attained etc. in that particular course/subject. Natural Sciences & Skills: Engineering Physics/ Engineering Chemistry/ Environmental Engineering/ Language.



Natural

Sciences

& Skills

Language

3000004

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### **Centre for Artificial Intelligence**

#### **Scheme of Evaluation**

#### B. Tech. IV Semester (Artificial Intelligence (AI) and Data Science)

(for batch admitted in academic session 2022 – 23) Categor Maximum Marks Allotted **Contact Hours** Subject **Subject Name** No. Code y Code per week **Theory Slot Practical Slot End Term Continuous** T P **Continuous** Mode Total Total Mode of **Evaluation Evaluation** End **Evaluation** of Marks Credits **Teaching** End Sem. | \$Proficienc Mid Quiz/ Sem. Lab Work Skill Exam. & Sem. Assign Exam Based y in subject Exam. Sessional Mini Exam ment /course **Project** Calculus and Optimization 2270421 DC 50 20 20 3 4 Offline PР 1. 10 100 Techniques Modern Computer 2270422 DC 50 10 20 20 100 4 PР Blended Architecture 2270423 DC Software Engineering 50 10 20 20 100 3 3 Blended MCO Cloud Computing and 2270424 DC 50 10 20 20 60 20 20 200 3 2 4 PP Blended Virtualization 2270425 3 3 PP DC Information Security 50 10 20 20 100 Blended 2 2270426 Java Programming Lab 60 20 20 1 Offline SO DLC 100 **Novel Engaging Course** CLC 2 200XXX 50 50 1 Interactive SO (Informal Learning) 06 Total 250 50 100 100 170 40 40 750 15 02 20 Indian Constitution and 1000001 MAC 2 50 10 20 20 100 **GRADE** Online MCQ Traditional Knowledge

Summer Internship Project-II (Soft skills Based) for two weeks duration: Evaluation in V Semester

100

2

**GRADE** 

Blended

MCO

20

20

MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral

50

10

						Mode of Examination						
	Theory Lab NEC					Theory	•	Lab	NEC	<b>Total Credits</b>		
Offline	Online	Blended	Offline	Interactive	PP	A+O	MCQ	so	so			
3	-	13	3	1	13	-	3	3	1	20		
20	-	65	10	5	70	-	15	10	5	Credits %		

s proficiency in course/subject-includes the weightage towards ability/skill/competence/knowledge level/ expertise attained etc. in that particular course/subject.

Natural Sciences & Skills: Engineering Physics/ Engineering Chemistry/ Environmental Engineering/ Language.

Credits of Natural Sciences & Skills will be added in the VI Semester



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### **Centre for Artificial Intelligence**

#### **Scheme of Evaluation**

#### B. Tech. IV Semester (Artificial Intelligence (AI) and Machine Learning)

(for batch admitted in academic session 2022 – 23) **Subject Name Maximum Marks Allotted Contact Hours** Subject Categor No. Code y Code per week **Theory Slot Practical Slot End Term** T Continuous **Continuous** L Mode Total Total Mode of **Evaluation** Evaluation End **Evaluation** of Marks Credits **Teaching** End Sem. Proficienc Mid Quiz/ Sem. Lab Work Skill Exam. Assign Exam & Based y in subject Sem. Exam. Sessional Mini Exam ment /course **Project** Calculus and Optimization 2280421 DC 50 10 20 20 100 3 4 Offline PР Techniques Modern Computer 2280422 DC 50 10 20 20 100 3 4 Blended PР Architecture 2280423 50 3 3 Software Engineering 20 Blended DC 10 20 100 MCO Cloud Computing and 2280424 DC 3 4 50 10 20 20 60 20 20 200 2 Blended PP Virtualization 5. 2280425 3 3 DC Information Security 50 10 20 20 100 Blended PP 2280426 1 DLC Java Programming Lab 60 20 20 100 2 Offline SO **Novel Engaging Course** 200XXX CLC 50 1 SO Interactive (Informal Learning) 15 02 06 Total 250 50 100 100 170 40 40 750 20 Indian Constitution and 1000001 2 8. MAC 50 10 20 20 100 **GRADE** Online MCO Traditional Knowledge Natural 9. 3000004 50 10 20 20 100 2 **GRADE** MCQ Sciences Language Blended & Skills

Summer Internship Project-II (Soft skills Based) for two weeks duration: Evaluation in V Semester

MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral

				•			Mode of Exar	nination		
	Theory		Lab	NEC		Theory	•	Lab	NEC	<b>Total Credits</b>
Offline	Online	Blended	Offline	Interactive	PP	A+O	MCQ	SO	so	
3	-	13	3	1	13	-	3	3	1	20
20	-	65	10	5	70	-	15	10	5	Credits %

s proficiency in course/subject-includes the weightage towards ability/skill/competence/knowledge level/ expertise attained etc. in that particular course/subject.

Natural Sciences & Skills: Engineering Physics/ Engineering Chemistry/ Environmental Engineering/ Language.

Credits of Natural Sciences & Skills will be added in the VI Semester



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### **Centre for Artificial Intelligence**

#### **Scheme of Evaluation**

# B. Tech. II Semester (Information Technology (Artificial Intelligence and Robotics)) (for batch admitted in academic session 2023 – 24)

						Maximu	ım Marks A	llotted		(I)		Contac						
				Theory Slot				Practical Slot				Hours per week						
S. No.	Subject Code	Category Code		End Term Evaluation		Continuous Evaluation			Contin Evalu		Total Marks				Total Credits	Mode of Teaching	01	Duration of Exam.
				End Sem. Exam	sProficienc y in subject /course	Mid Sem. Exam.	Quiz/ Assignmen t	End Sem. Exam.	Lab Work & Sessional	Skill Based Mini Project		L	Т	P			Exam.	
1.	3240221	DC	Discrete structures	50	10	20	20	•	-	-	100	3	1	-	4	Offline	PP	2 Hrs
2.	3240222	DC	Modern Computer Architecture	50	10	20	20	-	-	-	100	3	1	-	4	Blended	PP	2 Hrs
3.	3240223	DC	Object Oriented Programming	50	10	20	20	40	30	30	200	2	1	2	4	Blended	AO	2 Hrs
4.	3240224	DC	Data Structures	50	10	20	20	40	30	30	200	2	1	2	4	Blended	PP	2 Hrs
5.	3240225	DC	Electronic Devices and Circuits	50	10	20	20	-	-	-	100	2	1	-	3	Blended	PP	2 Hrs
	Total			250	50	100	100	80	60	60	700	12	05	04	19	-	-	-
6.	3000002	Natural Sciences & Skills	I Engineering	50	10	20	20	30	10	10	150	1	-	2	GRADE	Blended	MCQ	1.5 Hrs

<sup>s</sup>Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

Natural Sciences & Skills: Engineering Physics / Engineering Chemistry / Environmental Engineering / Language

Credits of Natural Sciences & Skills will be added in the VI Semester

MCQ: Multiple Choice Question **AO:** Assignment + Oral **PP:** Pen Paper **SO:** Submission + Oral

	Mode of	f Teaching						
	Theory		Lab		Theory	Lab	Total Credits	
Offline	Online	Blended	Offline	PP	AO	so		
4	-	13	2	14	3	-	2	19
21.05	-	68.42	10.53	73.68	15.79	-	10.53	Credits %



**Total** 

Engineering

Chemistry

**Natural** 

Sciences

& Skills

3000002

## Madhav Institute of Technology & Science Gwalior (M.P.)

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### **Centre for Artificial Intelligence**

#### **Scheme of Evaluation**

#### B. Tech. II Semester (Artificial Intelligence (AI) and Data Science)

(for batch admitted in academic session 2023 – 24)

04

19

GRADE Blended

MCO

1.5 Hrs

**Maximum Marks Allotted** Contact Hours per **Theory Slot Practical Slot** week Mode of Mode Continuous Duration S. **Subject** Total **Total** Category End Term Continuous **Subject Name** Teaching of **Evaluation** No. Code Code Marks Credits of Exam. **Evaluation Evaluation** End Exam. Skill L T P Sem. Lab End Proficienc Mid Ouiz/ Based Exam. Work & Sem. Sem. Mini y in subject Assignmen Sessional Project /course Exam. Exam 3270221 3 PP DC Discrete Structures 50 10 20 20 100 1 4 Offline 2 Hrs Modern Computer DC 3 50 PP 3270222 10 20 20 100 4 Blended 2 Hrs Architecture Object Oriented DC 3270223 50 10 20 20 40 30 30 200 2 4 Blended AO 2 Hrs **Programming** 3270224 DC Data Structures 50 10 20 20 40 30 30 200 2 2 4 Blended PР 2 Hrs 2 3 3270225 DC **Operating Systems** 50 10 20 20 100 Blended PP 2 Hrs

80

30

60

10

60

10

700

150

12 05

1

<sup>s</sup>Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

100

20

Natural Sciences & Skills: Engineering Physics / Engineering Chemistry / Environmental Engineering / Language Credits of Natural Sciences & Skills will be added in the VI Semester

100

20

MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral

250

50

50

10

	<u> </u>							
	Mode of	f Teaching						
	Theory		Lab		Theory	Lab	Total Credits	
Offline	Online	Blended	Offline	PP	AO	MCQ	so	
4	-	13	2	14	3	-	2	19
21.05	-	68.42	10.53	73.68	15.79	-	10.53	Credits %



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### **Centre for Artificial Intelligence**

#### **Scheme of Evaluation**

# B. Tech. II Semester (Artificial Intelligence (AI) and Machine Learning) (for batch admitted in academic session 2023 – 24)

		1		1												iic bebbio		
						Maximu	ım Marks A	llotted				Contact Hours per						
				Theory Slot				]	Practical S	lot		week		C1				
S. No.	Subject Code	Category Code	Subject Name	End Term Evaluation		Continuous			Conti Evalu		Total Marks				Total Credits	Mode of Teaching	01	Duration of Exam.
					luation	Eva	luation	End Sem.	End Sem. Lab	Skill		L	Т	P			Exam	
				End Sem. Exam	<sup>s</sup> Proficienc y in subject /course	Mid Sem. Exam.	Quiz/ Assignmen t	Exam.	Work & Sessional	Based Mini Project		L	1	1				
1.	3280221	DC	Discrete Structures	50	10	20	20	-	-	-	100	3	1	-	4	Offline	PP	2 Hrs
2.	3280222	DC	Modern Computer Architecture	50	10	20	20	-	-	-	100	3	1	-	4	Blended	PP	2 Hrs
3.	3280223	DC	Object Oriented Programming	50	10	20	20	40	30	30	200	2	1	2	4	Blended	AO	2 Hrs
4.	3280224	DC	Data Structures	50	10	20	20	40	30	30	200	2	1	2	4	Blended	PP	2 Hrs
5.	3280225	DC	Operating Systems	50	10	20	20	-	-	-	100	2	1	-	3	Blended	PP	2 Hrs
	Total			250	50	100	100	80	60	60	700	12	05	04	19	-	-	-
6.	3000002	Natural Sciences & Skills	Chemistry	50	10	20	20	30	10	10	150	1	-	2	GRADE	Blended	MCQ	1.5 Hrs

<sup>s</sup>Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

Natural Sciences & Skills: Engineering Physics / Engineering Chemistry / Environmental Engineering / Language Credits of Natural Sciences & Skills will be added in the VI Semester

**SO:** Submission + Oral **MCQ:** Multiple Choice Question **AO:** Assignment + Oral **PP:** Pen Paper

 							**	
	Mode of	f Teaching						
	Theory		Lab		Theory	Lab	Total Credits	
Offline	Online	Blended	Offline	PP	AO	so		
4	-	13	2	14	3	-	2	19
21.05	-	68.42	10.53	73.68	15.79	-	10.53	Credits %