

**Bachelor of Engineering (B.E)**  
**Artificial Intelligence**  
**& Data Science**  
**Scheme (2024 Scheme)**  
**I to VIII Semester**

**BE Programs:** CSE, ISE, AI&DS, ECE, CS-AI&ML, EEE, ME, CE, AE, AI&ML  
**PG Programs:** M.Tech(CSE), M.Tech(Structural Engg), MBA  
**Ph.D Programs:** VTU Affiliated Research Centers in Engineering

Global Academy of Technology, Bengaluru  
Scheme of Teaching and Examinations (Effective from the academic year 2024- 25)

I Semester (CSE Stream) (Physics Group)													
Sl. No	Course and course code		Course title	TD/PSB	Teaching Hours/Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	ASC(IC)	BMATS24101	Mathematics-I for CSE Stream(Integrated)	Maths	2	2	2	0	03	50	50	100	04
2	ASC(IC)	BPHYS24102	Applied Physics for CSE stream(Integrated)	Physics	2	2	2	0	03	50	50	100	04
3	ESC	BPOPS24103	Principles of Programming Using C (Integrated)	CSE	2	0	2	0	03	50	50	100	03
4	ESC-I	BESCK24104x	Engineering Science Course-I	Respective Engg Dept	3	0	0	0	03	50	50	100	03
5	ETC-I	BETCK24105x	Emerging Technology Course-I	Any Dept	3	0	0	0	03	50	50	100	03
	OR												
	PLC-I	BPLCK24105x	Programing Languages Course-I		2	0	2	0	03				
6	AEC	BENGK24106	Communicative English	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BPWSK24106	Professional Writing Skills in English										
7	HSMC	BKSKK24107 BKBKK24107	Samskrutika Kannada/ Balake Kannada	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BICOK24107	Indian Constitution										
8	AEC/SDC	BIDTK24108	Innovation and Design Thinking	Any Dept	1	0	0	0	01	50	50	100	01
		OR											
		BSFHK24108	Scientific Foundations of Health										
TOTAL										400	400	800	20

Global Academy of Technology, Bengaluru  
Scheme of Teaching and Examinations (Effective from the academic year 2024- 25)

II Semester(CSE Stream) (For students attended 1 <sup>st</sup> semester under Physics Group)													
Sl. No	Course and course code		Course title	TD/PSB	Teaching Hours/Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	*ASC(IC)	BMATS24201	Mathematics-II for CSE Stream(Integrated)	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BCHE24202	Applied Chemistry for CSE Stream(Integrated)	Chemistry	2	2	2	0	03	50	50	100	04
3	ESC	BCEDK24203	Computer-Aided Engineering Drawing	Civil/Mech Engg dept	2	0	2	0	03	50	50	100	03
4	ESC-II	BESCK24204x	Engineering Science Course-II	Respective Engg. Dept	3	0	0	0	03	50	50	100	03
5	PLC-II	BPLCK24205x	Programming Language Course-II	Any Dept	2	0	2	0	03	50	50	100	03
	OR												
	ETC-II	BETCK24205x	Emerging Technology Course-II		3	0	0	0	03				
6	AEC	BPWSK24206	Professional Writing Skills in English	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BENGG24206	Communicative English										
7	HSMS	BICOK24207	Indian Constitution	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BKSKK24207/ BKBKK24207	Sanskritika Kannada/ Balake Kannada										
8	HSMS	BSFHK24208	Scientific Foundations of Health	Any Dept	1	0	0	0	01	50	50	100	01
		OR											
		BIDTK24208	Innovation and Design Thinking										
TOTAL										400	400	800	20

Global Academy of Technology, Bengaluru  
Scheme of Teaching and Examinations (Effective from the academic year 2024- 25)

I Semester (CSE Stream)														(For Chemistry Group)				
Sl. No	Course and course code		Course title	TD/PSB	Teaching Hours/Week				Examination				Credits					
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks						
														L	T	P	S	
1	*ASC(IC)	BMATS24101	Mathematics-I for CSE Stream(Integrated)	Maths	2	2	2	0	03	50	50	100	04					
2	#ASC(IC)	BCHES24102	Applied Chemistry for CSE Stream(Integrated)	Chemistry	2	2	2	0	03	50	50	100	04					
3	ESC	BCEDK24103	Computer-Aided Engineering Drawing	Civil/Mech Engg dept	2	0	2	0	03	50	50	100	03					
4	ESC-I	BESCK24104x	Engineering Science Course-I	Respective Engg Dept	3	0	0	0	03	50	50	100	03					
5	ETC-I	BETCK24105x	Emerging Technology Course-I	Any Dept	3	0	0	0	03	50	50	100	03					
	OR																	
	PLC-I	BPLCK24105x	Programing Language Course-I		2	0	2	0	03									
6	AEC	BPWSK24106	Professional Writing Skills in English	Humanities	1	0	0	0	01	50	50	100	01					
		OR																
		BENGK24106	Communicative English															
7	HSMS	BICOK24107	Indian Constitution	Humanities	1	0	0	0	01	50	50	100	01					
		OR																
		BKSKK24107/ BKBKK24107	Sanskrutika Kannada/ Balake Kannada															
8	HSMS	BSFHK24108	Scientific Foundations of Health	Any Dept	1	0	0	0	01	50	50	100	01					
		OR																
		BIDTK24108	Innovation and Design Thinking															
TOTAL										400	400	800	20					

Global Academy of Technology, Bengaluru  
Scheme of Teaching and Examinations-2024  
Outcome-Based Education (OBE) and Choice Based Credit System (CBCS)  
(Effective from the academic year 2024-25)

II Semester (CSE Streams) (For students who attended 1 <sup>st</sup> semester under Chemistry Group)													
Sl. No	Course and course code		Course title	TD/PSB	Teaching Hours/Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	*ASC(IC)	BMATS24201	Mathematics-II for CSE Stream(Integrated)	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BPHYS24202	Applied Physics for CSE Stream(Integrated)	Physics	2	2	2	0	03	50	50	100	04
3	ESC	BPOPS24203	Principles of Programming Using C	CSE	2	0	2	0	03	50	50	100	03
4	ESC-II	BESCK24204x	Engineering Science Course-II	Respective Engg dept	3	0	0	0	03	50	50	100	03
5	PLC-II	BPLCK24205x	Programming Language Course-II	Any Dept	2	0	2	0	03	50	50	100	03
	OR												
	ETC-II	BETCK24205x	Emerging Technology Course-II		3	0	0	0	03				
6	AEC	BENGG24206	Communicative English	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BPWSK24206	Professional Writing Skills in English										
7	HSMC	BKSKK24207 BKBKK24207	Sanskritika Kannada/ Balake Kannada	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BICOK24207	Indian Constitution										
8	AEC/SDC	BIDTK24208	Innovation and Design Thinking	Any Dept	1	0	0	0	01	50	50	100	01
		OR											
		BSFHK24208	Scientific Foundations of Health										
TOTAL										400	400	800	20

<b>(ESC-I/II) Engineering Science Courses-I/II</b>					<b>(ETC-I/II) Emerging Technology Courses-I/II</b>				
<b>Code</b>	<b>Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Code</b>	<b>Title</b>	<b>L</b>	<b>T</b>	<b>P</b>
BESCK24104/204A	INTRODUCTION TO CIVIL ENGINEERING	3	0	0	BETCK24105/205A	INTRODUCTION TO ARTIFICIAL INTELLIGENCE	3	0	0
BESCK24104/204B	INTRODUCTION TO ELECTRONICS AND COMMUNICATION	3	0	0	BETCK24105/205B	INTRODUCTION TO EMBEDDED SYSTEM	3	0	0
BESCK24104/204C	INTRODUCTION TO ELECTRICAL ENGINEERING	3	0	0	BETCK24105/205C	SENSOR SYSTEMS	3	0	0
BESCK24104/204D	INTRODUCTION TO C PROGRAMMING (INTEGRATED)	2	0	2	BETCK24105/205D	ELECTROMECHANICAL SYSTEMS & MEASUREMENTS	3	0	0
BESCK24104/204E	INTRODUCTION TO ENGINEERING MECHANICS	3	0	0	BETCK24105/205E	WASTE MANAGEMENT	3	0	0
BESCK24104/204F	ENGINEERING GEOLOGY (INTEGRATED)	2	0	2	BETCK24105/205F	GREEN BUILDINGS	3	0	0
BESCK24104/204G	INTRODUCTION TO AERONAUTICAL ENGINEERING(Integrated)	2	0	2	BETCK24105/205G	SMART MATERIALS AND SYSTEMS	3	0	0
BESCK104H/204H	INTRODUCTION TO MECHANICAL ENGINEERING	2	0	2	BETCK24105/205H	INTRODUCTION TO NANO TECHNOLOGY	3	0	0
					BETCK24105/205I	INTRODUCTION TO SUSTAINABLE ENGINEERING	3	0	0
					BETCK24105/205J	RENEWABLE ENERGY SOURCES	3	0	0
					BETCK24105/205K	EMERGING APPLICATIONS OF BIOSENSORS	3	0	0
					BETCK24105/205L	INTRODUCTION TO INTERNET OF THINGS (IOT)	3	0	0
					BETCK24105/205M	INTRODUCTION TO CYBER SECURITY	3	0	0
					BETCK24105/205N	INTRODUCTION TO EMBEDDED SYSTEMS	3	0	0
<b>(PLC-I/II) Programming Language Courses-I/II</b>									
<b>Code</b>	<b>Title</b>	<b>L</b>	<b>T</b>	<b>P</b>					
BPLCK24105/205A	PROGRAMMING IN C (INTEGRATED)	2	0	2					
BPLCK24105/205B	INTRODUCTION TO PYTHON PROGRAMMING(INTEGRATED)	2	0	2					
BPLCK24105/205C	BASICS OF JAVA PROGRAMMING(INTEGRATED)	2	0	2					
BPLCK24105/205D	ADVANCED PROGRAMMING IN C(INTEGRATED)	2	0	2					
BPLCK24105/205E	INTRODUCTION TO WEB PROGRAMMING	2	0	2					
BPLCK24105/205F	INTRODUCTION TO C++ PROGRAMMING	2	0	2					

CSE stream students shall opt for any course from ESC-I or ESC-II during the I or II semester except BESCK24104D/204D – Introduction to C programming (integrated)



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## B.E. in Artificial Intelligence and Data Science Scheme of Teaching and Examinations 2025



### III SEMESTER

Sl. No	Course	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	BSC	BMATS24301	Discrete Mathematics	TD & PSB: MAT	3	0	0	0	03	50	50	100	3
2	IPCC	BAD24302	Operating Systems	TD & PSB: AIDS	3	0	2	0	03	50	50	100	4
3	IPCC	BAD24303	Data Science with Python	TD & PSB: AIDS	3	0	2	0	03	50	50	100	4
4	PCC	BAD24304	Data Structures and its Applications	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
5	PCCL	BADL24305	Data Structures Lab	TD & PSB: AIDS	0	0	2	0	03	50	50	100	1
6	ETC/PLC	BAD24306x	ETC/PLC	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
7	UHV	BSCK24307	Social Connect and Responsibility	Any Department	1	0	0	0	01	100	---	100	1
8	AEC/ SEC	BAD24358X	Ability Enhancement Course/Skill Enhancement Course - III	TD & PSB: AIDS	1	0	0	0	01	50	50	100	1
					0	0	2	0	02				
9	MC	BNSK24359	National Service Scheme (NSS)	NSS coordinator	0	0	2	0		100	---	100	0
		BPEK24359	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK24359	Yoga	Yoga Teacher									
		BLAK24359	Liberal Arts	Prominent NGO									
<b>Total</b>									<b>550</b>	<b>350</b>	<b>900</b>	<b>20</b>	

**PCC:** Professional Core Course, **PCCL:** Professional Core Course laboratory, **UHV:** Universal Human Value Course, **MC:** Mandatory Course (Non-credit), **AEC:** Ability Enhancement Course, **SEC:** Skill Enhancement Course, **L:** Lecture, **T:** Tutorial, **P:** Practical **S= SDA:** Skill Development Activity, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation. **K:** This letter in the course code indicates common to all the stream of engineering. **ESC:** Engineering Science Course, **ETC:** Emerging Technology Course, **PLC:** Programming Language Course

Dept. of Artificial Intelligence & Data Science  
Global Academy of Technology  
Bengaluru - 560 090

R. K. Kulkarni  
12/06/2025  
Global Academy of Technology  
Rajarajeshwari Nagar, Bengaluru-90

Emerging Technology Course /Programming Language Course (ETC/PLC)			
BAD24306A	Data Science and Statistics	BAD24306C	Computer Organization and Architecture
BAD24306B	Fuzzy logic and Decision making	BAD24306D	Introduction to Internet of Things
Ability Enhancement Course/Skill Enhancement Course - III			
BAD24358A	Unix Shell Programming	BAD24358C	PHP Programming
BAD24358B	Data Analytics using Excel	BAD24358D	MERN

  
**Head of the Department**  
 Dept. of Artificial Intelligence & Data Science  
 Global Academy of Technology  
 Bengaluru - 560 098.

  
 12/06/25  
**Dean Academic**  
 Global Academy of Technology,  
 Rajarajeshwarinagar, Bengaluru-98

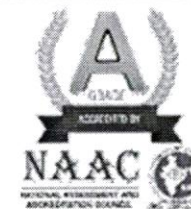


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## B.E. in Artificial Intelligence and Data Science

### Scheme of Teaching and Examinations 2025



#### IV SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Self-Study	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P	S					
1	BSC	BMATS24401	Probability and Graph Theory	TD & PSB: MAT	3	0	0	0	03	50	50	100	3
2	IPCC	BAD24402	Machine Learning - 1	TD & PSB: AIDS	3	0	2	0	03	50	50	100	4
3	PCC	BAD24403	Design and Analysis of Algorithms	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
4	PCC	BAD24404	Computer Networks	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
5	PCCL	BADL24405	Algorithms Laboratory	TD & PSB: AIDS	0	0	2	0	03	50	50	100	1
6	ETC/PLC	BAD24406X	ETC/PLC	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
7	AEC/ SEC	BAD24457X	Ability Enhancement Course/Skill Enhancement Course- IV	TD & PSB: AIDS	1	0	0	0	01	50	50	100	1
					0	0	2	0	02				
8	BSC	BBOK24407	Biology For Engineers	TD & PSB: BT, CHE	1	0	0	0	01	50	50	100	1
9	UHV	BUHK24408	Universal human values course	Any Department	1	0	0	0	01	50	50	100	1
10	MC	BNSK24459	National Service Scheme (NSS)	NSS coordinator	0	0	2	0		100	---	100	0
		BPEK24459	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK24459	Yoga	Yoga Teacher									
		BLAK24459	Liberal Arts	Prominent NGO									
<b>Total</b>										<b>550</b>	<b>450</b>	<b>1000</b>	<b>20</b>

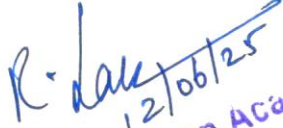
**PCC:** Professional Core Course, **PCCL:** Professional Core Course laboratory, **UHV:** Universal Human Value Course, **MC:** Mandatory Course (Non-credit), **AEC:** Ability Enhancement Course, **SEC:** Skill Enhancement Course, **L:** Lecture, **T:** Tutorial, **P:** Practical **S= SDA:** Skill Development Activity, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation, **K:** This letter in the course code indicates common to all the stream of engineering.

Head of the Department  
Dept. of Artificial Intelligence & Data Science  
Global Academy of Technology  
Bengaluru - 560 088

R. Raju  
12/06/25  
Global Academy of Technology  
Rajarajeshwari Nagar, Bengaluru-09

Emerging Technology Course /Programming Language Course (ETC/PLC)			
BAD24406A	Image Processing	BAD24406C	Object Oriented Programming with C++
BAD24406B	Introduction to Data Mining	BAD24406D	Object Oriented Programming with Java
Ability Enhancement Course / Skill Enhancement Course – IV			
BAD24457A	Data Analytics with R	BAD24457C	Optimization Technique
BAD24457B	Project Management with GIT	BAD24457D	Mastering Data Visualization

  
**Head of the Department**  
 Dept. of Artificial Intelligence & Data Science  
 Global Academy of Technology  
 Bengaluru - 560 098.

  
 12/06/25  
**Dean Academic**  
**Global Academy of Technology,**  
 Rajarajeshwaram, Bengaluru-98



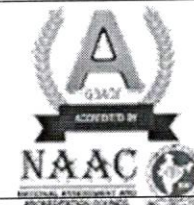


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# Global Academy of Technology

## B.E. in Artificial Intelligence and Data Science

### Scheme of Teaching and Examinations 2025



#### V SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P	S					
1	HSMC	BAD24501	Economics Management for IT Engineers	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
2	IPCC	BAD24502	Database Management & Systems	TD & PSB: AIDS	3	0	2	0	03	50	50	100	4
3	PCC	BAD24503	Machine Learning – 2	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
4	PCCL	BADL24504	Machine Learning Lab	TD & PSB: AIDS	0	0	2	0	03	50	50	100	1
5	PEC	BAD24505X	Professional Elective Course-1	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
6	AEC/SEC	BAD24556X	Skill Enhancement Course/Ability Enhancement Course-V	TD & PSB: AIDS	1	0	0	0	01	50	50	100	1
					0	0	2	0	02				
7	PROJ	BADP24507	Mini Project	TD & PSB:AIDS	0	0	4	0	03	100	-	100	2
8	AEC	BRMK24557	Research Methodology and IPR	Any Dept	2	2	0	0	03	50	50	100	3
9	MC	BESK24508	Environmental Studies	Civil	1	0	0	0	01	100	-	100	0
10	MC	BNSK24559	National Service Scheme (NSS)	NSS coordinator	0	0	2	0		100	-	100	0
		BPEK24559	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK24559	Yoga	Yoga Teacher									
		BLAK24559	Liberal Arts	Prominent NGO									
<b>Total</b>									<b>650</b>	<b>350</b>	<b>1000</b>	<b>20</b>	

**PCC:** Professional Core Course, **PCCL:** Professional Core Course laboratory, **UHV:** Universal Human Value Course, **MC:** Mandatory Course (Non-credit), **AEC:** Ability Enhancement Course, **SEC:** Skill Enhancement Course, **L:** Lecture, **T:** Tutorial, **P:** Practical **S= SDA:** Skill Development Activity, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation, **K:** This letter in the course code indicates common to all the stream of engineering. **ESC:** Engineering Science Course, **ETC:** Emerging Technology Course, **PLC:** Programming Language Course

Dept. of Artificial Intelligence & Data Science  
Global Academy of Technology  
Bengaluru - 560 095

R. Nay  
12/06/25  
Global Academy of Technology  
Rajarajeshwari Nagar, Bengaluru-56

Professional Elective Course-1			
BAD24505A	Advanced Image Processing	BAD24505C	Social Network Analysis
BAD24505B	Full Stack Development	BAD24505D	Advance Java
Skill Enhancement Course/Ability Enhancement Course-V			
BAD24556A	AI tools for Data Engineers	BAD24556C	Applied Generative AI with Python and LangChain
BAD24556B	Data Analytics for IoT	BAD24556D	Ethics and Public Policy for AI

  
**Head of the Department**  
 Dept. of Artificial Intelligence & Data Sci  
 Global Academy of Technology,  
 Bengaluru - 560 098.

  
 12/06/25  
**Dean Academic**  
**Global Academy of Technology,**  
 Rajarajeshwari Nagar, Bengaluru-98

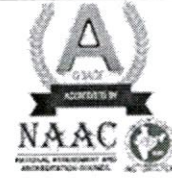


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## B.E. in Artificial Intelligence and Data Science

### Scheme of Teaching and Examinations 2025



#### VI SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	IPCC	BAD24601	Big Data Analytics	TD & PSB: AIDS	3	0	2	0	03	50	50	100	4
2	PCC	BAD24602	Data Visualization using Tableau	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
3	PCC	BAD24603	Neural Networks & Deep Learning	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
4	PEC	BAD24604X	Professional Elective Course-2	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
5	OEC	BAD24605X	Open Elective Course-1	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
6	PROJ	BADP24606	Project Phase I	TD & PSB: AIDS	0	0	4	0	03	100	--	100	2
7	PCCL	BADL24607	Data Visualization Lab	TD & PSB: AIDS	0	0	2	0	03	50	50	100	1
8	SDC/AEC	BAD24657X	Skill Development Course (Online) / Ability Enhancement Course-VI	TD & PSB: AIDS	1	0	0	0	01	50	50	100	1
					0	0	2	0	02				
9	IKS	BIKS24608	Indian Knowledge System	Any Dept.	1	0	0	0	01	100	-	100	0
10	MC	BNSK24659	National Service Scheme (NSS)	NSS coordinator	0	0	2	0		100	---	100	0
		BPEK24659	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK24659	Yoga	Yoga Teacher									
		BLAK24659	Liberal Arts	Prominent NGO									
<b>Total</b>									<b>650</b>	<b>350</b>	<b>1000</b>	<b>20</b>	

**PCC:** Professional Core Course, **PCCL:** Professional Core Course laboratory, **UHV:** Universal Human Value Course, **MC:** Mandatory Course (Non-credit), **AEC:** Ability Enhancement Course, **SEC:** Skill Enhancement Course, **L:** Lecture, **T:** Tutorial, **P:** Practical **S= SDA:** Skill Development Activity, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation. **K:** This letter in the course code indicates common to all the stream of engineering. **ESC:** Engineering Science Course, **ETC:** Emerging Technology Course, **PLC:** Programming Language Course

Head of Department  
Dept. of Artificial Intelligence and Data Science  
Global Academy of Technology  
Bengaluru - 560 098.

R. Narayana  
12/06/25  
Dean Academic  
Global Academy of Technology,  
Rajajeshwarinagar, Bengaluru-98

Professional Elective Course-2			
BAD24604A	Software Engineering with AGILE Methodologies	BAD24604C	Quantum Computing
BAD24604B	Cryptography and Network Security	BAD24604D	Cloud Computing
Open Elective Course-1			
BAD24605A	Foundations of Data Science	BAD24605C	Introduction to Machine Learning
BAD24605B	Introduction to Big Data	BAD24605D	Introduction to Algorithms
Skill Development Course (Online) / Ability Enhancement Course-VI			
BAD24657A	Agentic AI Systems and Applications	BAD24657B	MLOps: Deployment and Management of ML Systems

  
 Head of the Department  
 Dept. of Artificial Intelligence & Data Sci  
 Global Academy of Technology,  
 Bengaluru - 560 098.

  
 12/06/25  
 Dean Academic  
 Global Academy of Technology,  
 Rajarajeshwari Nagar, Bengaluru-98



# Global Academy of Technology

(An Autonomous Institution, affiliated to VTU, Belagavi, recognized by Karnataka and Approved by AICTE, New Delhi.)

## B.E. in Artificial Intelligence and Data Science

### Scheme of Teaching and Examinations (AY 2024-25)



#### VII SEMESTER

Sl. No	Course	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P	S					
1	IPCC	BAD24701	Natural Language Processing	TD & PSB: AIDS	3	0	2	0	03	50	50	100	4
2	IPCC	BAD24702	Prompt Engineering	TD & PSB: AIDS	3	0	2	0	03	50	50	100	4
3	PCC	BAD24703	Deep Learning for Computer Vision	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
4	PEC	BAD24704X	Professional Elective Course III	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
5	OEC	BAD24705X	Open Elective Course II	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
6	PROJ	BADP24706	<b>Major Project Phase-II</b>	TD & PSB: AIDS	0	0	14	0	03	100	100	200	7
										<b>350</b>	<b>350</b>	<b>700</b>	<b>24</b>

#### Professional Elective Course III

BAD24704A	Generative AI	BAD24704C	Parallel Programming
BAD24704B	AI in Cybersecurity	BAD24704D	UI/UX Design

#### Open Elective Course II

BAD24705A	Data Visualization	BAD24705C	Business Intelligence
BAD24705B	Introduction to NLP	BAD24705D	Data Security and Privacy

**PCC:** Professional Core Course, **PCCL:** Professional Core Course laboratory, **PEC:** Professional Elective Course, **OEC:** Open Elective Course **PR:** Project Work, **L:** Lecture, **T:** Tutorial, **P:** Practical **S= SDA:** Skill Development Activity, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation. **TD-** Teaching Department, **PSB:** Paper Setting department, **OEC:** Open Elective Course, **PEC:** Professional Elective Course. **PROJ:** Project work

#### Note: VII and VIII semesters of IV years of the program

(1) Institutions can swap the VII and VIII Semester Schemes of Teaching and Examinations to accommodate research internships/ industry internships after the VI semester.

(2) Credits earned for the Courses of VII and VIII Semester Scheme of Teaching and Examinations shall be counted against the corresponding semesters whether the VII or VIII semesters is completed during the beginning of the IV year or the later part of IV years of the program.

Dept. of Artificial Intelligence & Data Science  
Global Academy of Technology  
Bengaluru - 560 086

12/06/24  
R. K. ...  
Global Academy of Technology  
Rajarajeshwari Nagar, Bengaluru-08



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## B.E. in Artificial Intelligence and Data Science

### Scheme of Teaching and Examinations (AY 2024-25)



#### VIII SEMESTER

Sl. No	Course	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P	S					
1	PEC	BAD24801X	Professional Elective (Online Courses) IV	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
2	PEC	BAD24802X	Professional Elective (Online Courses) V	TD & PSB: AIDS	3	0	0	0	03	50	50	100	3
3	INT	BAD24803	Internship (Industry/Research) (14 - 20 weeks)	TD & PSB: AIDS	0	0	12	0	03	100	100	200	10
										<b>200</b>	<b>200</b>	<b>400</b>	<b>16</b>

#### Professional Elective Course IV

BAD24801A	Generative AI for Computer Vision	BAD24801C	Cyber Security and Privacy
BAD24801B	Scalable Data Science	BAD24801D	Reinforcement Learning

#### Professional Elective Course V

BAD24802A	Responsible & Safe AI Systems	BAD24802C	Social Networks
BAD24802B	Introduction to Large Language Models (LLMs)	BAD24802D	Ethical Hacking

**L:** Lecture, **T:** Tutorial, **P:** Practical **S= SDA:** Skill Development Activity, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation. **TD-** Teaching Department, **PSB:** Paper Setting department, **OEC:** Open Elective Course, **PEC:** Professional Elective Course. **PROJ:** Project work, **INT:** Industry Internship / Research Internship / Rural Internship

#### Note: VII and VIII semesters of IV years of the program

##### Swapping Facility

- Institutions can swap VII and VIII Semester Scheme of Teaching and Examinations to accommodate **research internships/ industry internships/Rural Internship** after the VI semester.
- Credits earned for the courses of VII and VIII Semester Scheme of Teaching and Examinations shall be counted against the corresponding semesters whether VII or VIII semester is completed during the beginning of IV year or later part of IV year of the program.

##### Elucidation:

Head of the Department  
 Dept. of Artificial Intelligence & Data Science  
 Global Academy of Technology  
 Bengaluru - 560 008

R. Jay  
 12/06/25  
 Dean Academic  
 Global Academy of Technology,  
 Rajarajeshwari Nagar, Bengaluru-56

At the beginning of IV years of the program i.e., after VI semester, VII semester classwork and VIII semester **Research Internship /Industrial Internship / Rural Internship** shall be permitted to be operated simultaneously by the University so that students have ample opportunity for an internship. In other words, a good percentage of the class shall attend VII semester classwork and a similar percentage of others shall attend to Research Internship or Industrial Internship or Rural Internship.

Research/Industrial /Rural Internship shall be carried out at an Industry, NGO, MSME, Innovation center, Incubation centre, Start-up, centre of Excellence (CoE), Study Centre established in the parent institute and /or at reputed research organizations/institutes.

The mandatory Research internship /Industry internship / Rural Internships for 14 to 20 weeks. The internship shall be considered as a head of passing and shall be considered for the award of a degree. Those, who do not take up/complete the internship shall be declared to fail and shall have to complete it during the subsequent University examination after satisfying the internship requirements.

**Research internship:** A research internship is intended to offer the flavor of current research going on in the research field. It helps students get familiarized with the field and imparts the skill required for carrying out research.

**Industry internship:** Is an extended period of work experience undertaken by students to supplement their degree for professional development. It also helps them learn to overcome unexpected obstacles and successfully navigate organizations, perspectives, and cultures. Dealing with contingencies helps students recognize, appreciate, and adapt to organizational realities by tempering their knowledge with practical constraints.

**Rural Internship:** Rural development internship is an initiative of Unnat Bharat Abhiyan Cell, RGIT in association with AICTE to involve students of all departments studying in different academic years for exploring various opportunities in techno-social fields, to connect and work with Rural India for their upliftment.

The faculty coordinator or mentor has to monitor the student's internship progress and interact with them to guide for the successful completion of the internship.

The students are permitted to carry out the internship anywhere in India or abroad. University shall not bear any expenses incurred in respect of the internship.

With the consent of the internal guide and Principal of the Institution, students shall be allowed to carry out the internship at their hometown (**within or outside the state or abroad**), provided favorable facilities are available for the internship and the student remains regularly in contact with the internal guide. **University shall not bear any cost involved in carrying out the internship by students.** However, students can receive any financial assistance extended by the organization.

**Professional Elective /Open Elective Course:** These are ONLINE courses suggested by the respective Board of Studies. Details of these courses shall be made available for students on the VTU web portal.

  
Head of the Department  
Dept. of Artificial Intelligence & Data Sci  
Global Academy of Technology,  
Bangalore - 560 098.

  
12/06/25  
Dean Academic  
Global Academy of Technology,  
Rajarajeshwarinagar, Bengaluru-98