Symbiosis Artificial Intelligence Institute (SAII)

Bachelor of Science (Artificial Intelligence) – Honours/ Honours with Research

Programme Structure 2025-29

Semester – 1				
Title of the Course	**Semester**	**Course Category**	**Theory**	**Practical**
Foundational Mathematics for AI	Sem 1	Major Foundation	4	0
Introduction to AI	Sem 1	Major Foundation	2	0
Database Management System with SQL	Sem 1	Major Foundation	3	1
Data Preprocessing and Exploratory Data Analysis	Sem 1	Major Foundation	0	2
Business Communication	Sem 1	Ability Enhancement	3	0
Python Programming	Sem 1	Skill Enhancement	1	2
Indian Knowledge System	Sem 1	Value Added	2	0
Total Credits: 20			**15**	**5**

Semester – 2				
Title of the Course	**Semester**	**Course Category**	**Theory**	**Practical**
Data Structures and Algorithms	Sem 2	Major Foundation	3	1
Machine Learning and Deep Learning	Sem 2	Major Foundation	3	1
Basics of Operating Systems	Sem 2	Major Foundation	2	0
Statistics for Data Science	Sem 2	Major Foundation	2	0
Multidisciplinary Course I *	Sem 2	MDC	3	0
Technical Communication Skills	Sem 2	Ability Enhancement	3	0
Data Analytics using MS-Excel	Sem 2	Skill Enhancement	1	2
Creative and Critical Thinking	Sem 2	Value Added	2	0
Health and Wellness Module I	Sem 2	Non Letter Graded		
Total Credits: 23			**19**	**4**

Note: Students exiting at the end of the second semester and earning 43 credits will be awarded a "Certificate in Artificial Intelligence" provided they successfully complete the additional 4 credits of vocational course offered during the summer term.

* Student will choose any one course from the University basket of Multidisciplinary Courses.

Semester – 3				
Title of the Course	**Semester**	**Course Category**	**Theory**	**Practical**
Natural Language Processing	Sem 3	Major Foundation	3	1
Introduction to Environment and Sustainability	Sem 3	Value Added	2	0
Health and Wellness Module II	Sem 3	Non Letter Graded		
Major Specializations (Choose Any One Group) **Note: Once a Major is chosen, student has to continue the same for rest of the Programme**				
Group 1 (Health Sciences)				
Introduction to Medical Imaging	Sem 3	Major	3	1
Foundation of Health Data Analytics	Sem 3	Major	4	0
Health Data Management	Sem 3	Major	4	0
Group 2 (Sports Sciences)				
Sports Biomechanics	Sem 3	Major	4	0
Anatomy and Physiology	Sem 3	Major	4	0
Data Analytics for Sports	Sem 3	Major	3	1
Group 3 (Agriculture)				
Introduction to Agriculture and Finance	Sem 3	Major	3	1
AI and Precision Agriculture	Sem 3	Major	4	0
Agri Supply Chain Management	Sem 3	Major	4	0
Group 4 (Data Science)				
Data Visualization	Sem 3	Major	4	0
Business Analytics	Sem 3	Major	4	0
Open Source Tools for Data Science	Sem 3	Major	3	1
Group 5 (Cyber Security)				
Introduction to Cybersecurity	Sem 3	Major	4	0

Network Security	Sem 3	Major	4	0
Cryptography	Sem 3	Major	3	1
Minor Specializations (Choose Any One Group other than the chosen Major) **Students can choose Minor from B.Sc(AI)/ B.B.A(AI)** **Note: Once a Minor is chosen, student has to continue the same for rest of the Programme**				
Group 1 (Health Sciences)				
Introduction to Medical Imaging	Sem 3	Minor	3	1
Foundation of Health Data Analytics	Sem 3	Minor	4	0
Group 2 (Sports Sciences)				
Sports Biomechanics	Sem 3	Minor	4	0
Data Analytics for Sports	Sem 3	Minor	3	1
Group 3 (Agriculture)				
Introduction to Agriculture and Finance	Sem 3	Minor	3	1
AI and Precision Agriculture	Sem 3	Minor	4	0
Group 4 (Data Science)				
Data Visualization	Sem 3	Minor	4	0
Open Source Tools for Data Science	Sem 3	Minor	3	1
Group 5 (Cyber Security)				
Introduction to Cybersecurity	Sem 3	Minor	4	0
Cryptography	Sem 3	Minor	3	1
Total Credits: 26				

Semester – 4				
Title of the Course	**Semester**	**Course Category**	**Theory**	**Practical**
Service Learning	Sem 4	Major	0	2
Multidisciplinary Course II *	Sem 4	MDC	3	0
Cloud Computing Essentials for AI	Sem 4	Skill Enhancement	2	0
Vasudhaiva Kutumbakam	Sem 4	Non Letter Graded		
Major Specializations (Choose Any One Group) **Note: Once a Major is chosen, student has to continue the same for rest of the Programme**				
Group 1 (Health Sciences)				

Bioinformatics	Sem 4	Major	3	1
Patient Care Technology	Sem 4	Major	4	0
Group 2 (Sports Sciences)				
Performance Analysis Using AI	Sem 4	Major	3	1
Fan Engagement and Smart Venues	Sem 4	Major	4	0
Group 3 (Agriculture)				
IoT for Smart Irrigation Systems	Sem 4	Major	4	0
Image Analytics for Agriculture	Sem 4	Major	3	1
Group 4 (Data Science)				
Time Series Analysis and Forecasting	Sem 4	Major	3	1
Big Data: Storage and Analytics	Sem 4	Major	4	0
Group 5 (Cyber Security)				
AI for Cyber Security	Sem 4	Major	4	0
Ethical Hacking	Sem 4	Major	3	1
Minor Specializations (Choose Any One Group other than the chosen Major) **Students can choose Minor from B.Sc(AI)/ B.B.A(AI)** **Note: Once a Minor is chosen, student has to continue the same for rest of the Programme**				
Group 1 (Health Sciences)				
Bioinformatics	Sem 4	Minor	3	1
Patient Care Technology	Sem 4	Minor	4	0
Group 2 (Sports Sciences)				
Performance Analysis Using AI	Sem 4	Minor	3	1
Fan Engagement and Smart Venues	Sem 4	Minor	4	0
Group 3 (Agriculture)				
IoT for Smart Irrigation Systems	Sem 4	Minor	4	0
Image Analytics for Agriculture	Sem 4	Minor	3	1
Group 4 (Data Science)				
Time Series Analysis and Forecasting	Sem 4	Minor	3	1
Big Data: Storage and Analytics	Sem 4	Minor	4	0
Group 5 (Cyber Security)				
AI for Cyber Security	Sem 4	Minor	4	0
Ethical Hacking	Sem 4	Minor	3	1

Total Credits: 23				
Note: Students exiting at the end of the fourth semester and earning 92 credits will be awarded a "Diploma in Artificial Intelligence," provided they successfully complete the additional 4 credits of vocational courses offered during the summer term. * Student will choose any one course from the University basket of Multidisciplinary Courses.				

Semester – 5				
Title of the Course	**Semester**	**Course Category**	**Theory**	**Practical**
Project (Major Specialization)	Sem 5	Project	0	4
Major Specializations (Choose Any One Group) **Note: Once a Major is chosen, student has to continue the same for rest of the Programme**				
Group 1 (Health Sciences)				
AI-Driven Healthcare Data Solutions	Sem 5	Major	3	1
Health Information Security and Privacy	Sem 5	Major	4	0
Mental Health Analytics	Sem 5	Major	4	0
Group 2 (Sports Sciences)				
Content Creation in Sports using AI	Sem 5	Major	3	1
Applications in Sports Business	Sem 5	Major	4	0
AI for Training Personalization	Sem 5	Major	4	0
Group 3 (Agriculture)				
Data Science for Climate Resilience Study	Sem 5	Major	3	1
Design Thinking for Agribusiness Innovation	Sem 5	Major	4	0
Post-Harvest Technology and Logistics Optimisation	Sem 5	Major	4	0
Group 4 (Data Science)				
Data Science for FinTech	Sem 5	Major	4	0
Predictive Analytics	Sem 5	Major	4	0
Computer Vision	Sem 5	Major	3	1
Group 5 (Cyber Security)				
Data Privacy and Identity Access Control	Sem 5	Major	4	0
AI in Threat Detection	Sem 5	Major	3	1

Digital Forensic	Sem 5	Major	4	0
Minor Specializations (Choose Any One Group other than the chosen Major) **Students can choose Minor from B.Sc(AI)/ B.B.A(AI)** **Note: Once a Minor is chosen, student has to continue the same for rest of the Programme**				
Group 1 (Health Sciences)				
AI-Driven Healthcare Data Solutions	Sem 5	Minor	3	1
Health Information Security and Privacy	Sem 5	Minor	4	0
Group 2 (Sports Sciences)				
Content Creation in Sports using AI	Sem 5	Minor	3	1
Applications in Sports Business	Sem 5	Minor	4	0
Group 3 (Agriculture)				
Data Science for Climate Resilience Study	Sem 5	Minor	3	1
Design Thinking for Agribusiness Innovation	Sem 5	Minor	4	0
Group 4 (Data Science)				
Data Science for FinTech	Sem 5	Minor	4	0
Computer Vision	Sem 5	Minor	3	1
Group 5 (Cyber Security)				
Data Privacy and Identity Access Control	Sem 5	Minor	4	0
AI in Threat Detection	Sem 5	Minor	3	1
Total Credits: 24				

Semester – 6				
Title of the Course	**Semester**	**Course Category**	**Theory**	**Practical**
Internship	Sem 6	Internship	0	8
Research Methodology	Sem 6	Major Foundation	4	0
Total Credits: 12				
Note: Students exiting at the end of the sixth semester and earning 128 credits will be awarded a “Bachelor of Science (Artificial Intelligence)” degree. Total Credits at the end of the Third year (Major 66, Minor 24, Multidisciplinary 6, Ability Enhancement Courses 6, Skill Enhancement Courses 8, Internship 8, Common Value-Added Courses 6, Project 4).				

Semester – 7 (Honours)				
Title of the Course	**Semester**	**Course Category**	**Theory**	**Practical**
GEN AI and LLM Essentials	Sem 7	Major	3	1
MLops	Sem 7	Major	4	0
Responsible AI	Sem 7	Major	4	0
Reinforcement Learning	Sem 7	Major	2	0
NOSQL Databases	Sem 7	Minor	4	0
Recommender Systems	Sem 7	Minor	4	0
Total Credits: 22				

Semester – 7 (Honours with Research)				
Title of the Course	**Semester**	**Course Category**	**Theory**	**Practical**
Literature Review	Sem 7	Major	4	0
Scientific Paper Writing	Sem 7	Major	4	0
Ethics in Research	Sem 7	Major	4	0
AI for Research	Sem 7	Major	4	0
Project	Sem 7	Minor	4	0
Total Credits: 20				

Semester – 8 (Honours)				
Title of the Course	**Semester**	**Course Category**	**Theory**	**Practical**
Capstone Project	Sem 8	Project	0	12
Seminar	Sem 8	Major	4	0
Total Credits: 16				

Semester – 8 (Honours with Research)				
Title of the Course	**Semester**	**Course Category**	**Theory**	**Practical**
Intellectual Property Rights	Sem 8	Major	2	0
Advanced Research Methods	Sem 8	Minor	4	0
Research Project	Sem 8	Project	12	0
Total Credits: 18				

Total Credits at the end of Fourth year for Bachelor of Science (Artificial Intelligence)-Honours – 166 (Major 80, Minor 32, Multidisciplinary 6, Ability Enhancement Courses 6, Skill Enhancement Courses 8, Internship 8, Research Project/Seminar 20, Common Value-Added Courses 6).

Credits at the end of Fourth year for Bachelor of Science (Artificial Intelligence) - Honours with Research – 166 (Major 80, Minor 32, Multidisciplinary 6, Ability Enhancement Courses 6, Skill Enhancement Courses 8, Internship 8, Research Project/Seminar 20, Common Value-Added Courses 6).