Parvathaneni Brahmayya
Siddhartha College of Arts and Science, Vijayawada (Autonomous)

Programme:

B.Sc. Honours (Artificial Intelligence)

Program Objectives

The broad goals and objectives of the B.Sc. Honours (Artificial Intelligence) programme are as follows:

- To prepares students to develop artificial intelligence applications.
- To develop strong analytical thinking skills and problem-solving abilities that benefit graduates personally and professionally.
- To open the door to new and exciting career paths.
- To develop purposeful competencies in Artificial Intelligence and Data Science.

Pedagogy

Course work delivered through class room teaching, assignments, DIY, group discussions, seminars, research initiatives and capstone projects. Evaluations carried out in terms of assignments, topic presentations, tests and TEE, Industry Internship

Course Duration

Four Academic Years

Specializations

- Decision Making and Robotics
- Machine Learning
- Perception and Language
- Human-AI Interaction

Intake

- 50

Highlights of program

- Designed to reflect the aspirations of NEP 2020

- Core, Discipline Specific, Multi-Disciplinary Courses, Ability Enhancement, Skill Enhancement Courses, Practicals, Research and Internship, Core related Modular Electives courses well packaged into the curriculum
- A 4-credit capstone AI project in semester 4
- Optional choice based of modular electives in semester 5/6
- A 12-credit full semester Industry Internship in semester 5/6
- Multiple exit options within the programme with appropriate certifications

Why Study B.Sc Honours (Artificial Intelligence)?

The following are the best reasons to pursue BSc in Artificial Intelligence:

- B.Sc Honours (Artificial Intelligence) is one of those courses that are set to not lose its pertinence in several coming years.
- Knowledge about artificial Intelligence can be considered the skill of the century due to its relevance in today's life.
- With the coming of different technologies, apps and the internet, the amount of data generated, by both humans and machines, has made it impossible to manually process this 'big data' and make complex decisions based on it.
- BSc Artificial Intelligence is a course to go for because artificial intelligence is the basis of all computer learning and is the future of complex decision making.
- B. Sc. Artificial Intelligence makes the best utilization of the existing large data and design an application which will simplify the task of decision making and also predict the future to see as What-if Analysis. What could be the result if we take this decision? It guides us to take right decision at right time.

Syllabus for BSc Honours (Artificial Intelligence):

The course syllabus usually follows the pattern given below

Pre-preparatory Content Statistics Essential

- Introduction to Python for Data Analysis Investment Assignment
- Python for Data Science Analytics Problem Solving
- Data Visualization in Python Inferential Statistics
- Data Analysis using SQL Exploratory Data Analysis
- Math for Machine Learning

Machine Learning
- Model Selection
- Model Selection – Practical Considerations
- Principal Component Analysis
- Supervised Learning: Linear Regression Advanced Regression
- Boosting
- Unsupervised Learning: Clustering

Natural Language Processing Reinforcement Learning
- Lexical Processing Classical Reinforcement Learning
- Syntactic Processing Deep Reinforcement Learning
- Syntactic Processing – Assignment Reinforcement Learning Project
- Semantic Processing
- Building Chatbots

Deep Learning
- Introduction to Neural Networks
- Syntactic Processing
- Convolution Neural Networks – Industry Applications
- Recurrent Networks
- Neural Networks – Assignment
- Neural Networks Projects – Gesture Recognition

Placement/Job Prospects & Salary after BSc Artificial Intelligence

The salary of professionals working in the artificial intelligence industry may range from INR 8 Lakh- to 1 Crore. The more varied the application and the job role are, the more is their respective salary package is. For example, the entry-level salary for professionals working in the Artificial Intelligence sector in India earns around Rs. 6,00,000, but the mid-level as well as senior-level artificial intelligence salary could earn more than Rs. 50,00,000.

Placement in this industry may range in fields as vast as

- **Healthcare**
- Financial services
- Technology
- IoT-enabled systems
- Government and military
- National security
- **Media**

- **Marketing**
- **Agriculture**
- Retail
- Gaming

B.Sc Honours (Artificial Intelligence) Admission Process

Admissions to **B. Sc Honours (Artificial Intelligence)** are done on the basis of merit. The government of Andhra Pradesh notifies the admission process and asks registration for convener quota of 35 seats. The remaining 15 seats will be in management quota. For management quota consult the college office or use chat bot for enquiry.

B.Sc Honours (Artificial Intelligence) Eligibility

Students who wish to pursue **B.Sc Honours (Artificial Intelligence)** courses should fulfil the following eligibility criteria in order to get through colleges offering **B.Sc Honours (Artificial Intelligence)** course,

- Students should clear class 12th board exams with Mathematics as one of the subjects.
- They should clear their class 12th board exams from a recognized board

Proposed Minor courses

Data Science/Data Analytics/Robotics