



☆☆☆ Affiliated to



**Osmania University**

University with Potential for Excellence (UPE)

Accredited by NAAC A+ Grade

**BS**

**BACHELOR OF SCIENCE  
AI-ML- DATA SCIENCE**

**FOUR YEAR MULTIDISCIPLINARY COURSE**

**BS****BACHELOR OF SCIENCE  
in COMPUTER SCIENCE****FOUR YEAR MULTIDISCIPLINARY COURSE****AI - ML - DATA SCIENCE - BIGDATA**

The Bachelor of Science (Computer Science) is a four-year multidisciplinary undergraduate course in Computer Science with interdisciplinary specializations such as Big Data, Business Analytics, Artificial Intelligence and Machine Learning along with multidisciplinary courses. The Course Curriculum is developed from various disciplines like Mathematics, Statistics, Economics and Business Management.

**Duration of the course:**

The course shall be for a period of 4 years spread over eight semesters.

**Eligibility:**

Any 10+2 in CBSE / ISC / any State Board in Commerce, Science or Arts or Intermediate AP / TS with MPC, BiPC, MEC or CEC.

**BS****BACHELOR OF SCIENCE  
in ECONOMICS****FOUR YEAR MULTIDISCIPLINARY COURSE****BANKING - ANALYTICS - BIGDATA**

The Bachelor of Science (Economics) is a four-year undergraduate degree in Economics with multidisciplinary and interdisciplinary specializations in Mathematics, Statistics, Computer Sciences and Business Management.

**Duration of the course:**

The course shall be for a period of 4 years spread over eight semesters.

**Eligibility:**

Any 10+2 in CBSE / ISC / any State Board in Commerce, Science or Arts or Intermediate AP / TS with MPC, BiPC, MEC or CEC.

# BS – MS COURSES IN INDIA

The Government of India has established Indian Institute of Science Education and Research IISERs at Berhampur, Bhopal, Kolkata, Mohali, Pune, Thiruvananthapuram and Tirupati to integrate and promote interdisciplinary and multidisciplinary courses.

The Telangana State Council of Higher Education has granted approval to Vishwa Vishwani Institute of Systems and Management to offer **Five Year Integrated Dual Degree BS-MS Computer Science and BS-MS Economics under Osmania University Hyderabad.**

Osmania University, being a Category-I University, has approved the Introduction of Five Year Integrated Dual Degree BS-MS Courses in Computer Science and Economics in its' Affiliated Institution - Vishwa Vishwani Institute of Systems and Management, Hyderabad.

The BS-MS Computer Science and BS-MS Economics are new and innovative courses, which are recognised and relevant at national and international level. The BS-MS Dual Degree programme aims to integrate the conventional bachelor's and master's programs into a more holistic educational experience, bringing together the Computer Science, Mathematics, Statistics, Business Management and Economics.

**The following National Level Institutions offering BS-MS Courses in India IISER, IIT Bombay..**



# OSMANIA UNIVERSITY HYDERABAD , TELANGANA



Osmania University – Hyderabad is the First and Foremost State University to Introduce the **Five Year Integrated Dual Degree BS-MS Courses in Computer Science, Economics.**

Osmania University was the First of its' kind to be Established in 1918, in the erstwhile princely state of Hyderabad. The Century old University is the 7<sup>th</sup> oldest university in the country, and has significantly contributed to the academic and economic development of the state and the country at large.

The Five Year Integrated Dual Degree BS-MS Courses in Computer Science & Economics are approved by TSCHE and Affiliated to Osmania University.

The University has a vision of developing, enhancing, and improving the quality of human resources to meet the challenges of regional, national and global socio-economic changes. It has been working on the mission to achieve excellence in teaching and research to create opportunities for the students to contribute to the national and regional development.

Osmania University is re-accredited by the National Assessment and Accreditation Council (an Autonomous Institution of the University Grants Commission) as 'A+' Grade University.



Vishwa Vishwani is the first private affiliated Institution under a State Government University to offer BS-MS Courses in India apart from Central Government Sponsored National Institutions such as IISER-Bhopal, IISc-Bangalore and IIT-Bombay.

Vishwa Vishwani Institute of Systems and Management is one of the premier business schools in South India, promoted by Graham Bell Educational Academy, Hyderabad. It has been grooming aspiring students into budding managers for the last 24 years.

The alumni of the Vishwa Vishwani are spread across the world handling diverse and challenging roles in the world of business and acting as our brand ambassadors.

The institute is spread across 15 acres with state-of-the-art infrastructure.





# BS (COMPUTER SCIENCE)

## FOUR YEAR MULTIDISCIPLINARY COURSE

The BS Computer Science course curriculum aims to ensure that the students graduating from the program not only know the core topics of Computer Science but also develop an equal appreciation of humanities, management sciences and human values. The students are also exposed to emerging topics such as Analytics, Machine Learning, Cloud Computing, Internet of Things etc to make them industry ready at the end of four years of study.

The BS Degree with four year duration is globally accepted Degree Nomenclature, which will enable Indian students for the credit transfer and helps them to join in twinning programs in USA and European Universities.

### Eligibility:

Any 10+2 in CBSE / ISC / any State Board in Commerce, Science or Arts or Intermediate AP / TS with MPC, BiPC, MEC or CEC.

### Admission Criteria

- ◆ The applicant should become eligible as per the specified eligibility criteria
- ◆ The applicant should score at least 50% in the Selection Criteria – Aptitude Test & Personal Interview
- ◆ Candidates with valid score in JEE Mains / NEET / CLAT / IPM / TSEAMCET / APEAPCET / MHCET / UGAT / SAT are preferred

### How to Apply:

You can apply online on our website <http://www.vishwavishwani.ac.in>. The **Application Fee is Rs.600/-**. You can pay the Application fees through our secure payment gateway after filling the required details.

# COURSE STRUCTURE

SEMESTER 1	SEMESTER 2	SEMESTER 3	SEMESTER 4
English - I	English - II	English - III	English - IV
Second language-I	Second language-II	Second language - III	Second Language IV
Principles of Micro Economics	Operating System	Principles of Marketing	Human Resource Management
Mathematical Foundations of Computer Science	Data Structures and Algorithm	E-Commerce	Software Engineering
Fundamentals of Computer Science & Language	Web Programming	Core Java Programming	Unix Programming
Indian Heritage & Culture - I	Principles of Financial Accounting	Relational Database Management System	Software Design with UML
Human values and Ethics - I	Indian Heritage & Culture – II	Environmental Studies - I	Environmental Studies - II
C++ , Language Lab	Human values and Ethics – II	Core Java Programming - Lab	Unix Lab
IT lab(MS-Office)	Web Programming Lab	RDBMS - Lab	Software Design with UML
---	Data Structures Using c++ Lab	---	Technical Seminar (Mini- Project)
SEMESTER 5	SEMESTER 6	SEMESTER 7	SEMESTER 8
Computer Networks	Organizational Behavioral and Development	Strategic Management	Consumer Behavior
Probability and Statistics	Advanced Machine Learning	Research Methodology	Data Visualization
Data Security	Big Data Platforms	Cloud Computing	Ethical Data Science
Artificial intelligence	Operations Research	Pitfalls of Data Science	Deep Learning
Machine learning	Data Mining	Internet of Things	AI and its Scientific Application
Big Data Environment	Software Project management	Statistical Analysis using R programming	Deep Learning lab
Science & Civilization - I	Science & Civilization – II	Cloud Computing Lab	Ethical Data Science Lab
Machine Learning Lab	Big Data Platforms – Python – Lab	Statistical Analysis using R programming – Lab	Project-1
Artificial intelligence Lab	Data Mining Lab	---	---

## DIFFERENCE BETWEEN THE B.TECH, E , B.PHARMACY & BS COMPUTER SCIENCE

Factor	BS Computer Science
Full Name	Bachelor of Science
Stream	Computer Science, Economics and Management
Duration	4 Years
Specialization	Multidisciplinary
Discipline	Interdisciplinary - AI, ML, Data Science & Big Data
Eligibility	MPC / BPC / MEC / CEC
Course Type	Techno Managerial
Focus	Technology and Management
Orientation	Scientific and Techno - Managerial
Employability	High
Eligibility for Govt Jobs	Yes
Approved by	TSCHE
Eligible for MS in US / UK	Yes
Affiliated to	Osmania University

## DIFFERENCE BETWEEN THE B.TECH, E , B.PHARMACY & BS COMPUTER SCIENCE

Factor	B.Tech (CSE)	B. Pharmacy
Full Name	Bachelor of Technology	Bachelor of Pharmacy
Stream	Technology	Pharmaceutical Science
Duration	4 Years	4 Years
Specialization	Computers Only	Pharmacy only
Discipline	Computer Science	Pharmacy
Eligibility	MPC	BPC / MPC
Course Type	Purely Technical	Scientific
Focus	Purely Technical	Scientific
Orientation	Technical	Scientific
Employability	Average	Average
Eligibility for Govt Jobs	Yes	Yes
Approved by	AICTE	PCI
Eligible for MS in US / UK	Yes	Yes
Affiliated to	Technical University	Technical University



# BS (ECONOMICS)

## FOUR YEAR MULTIDISCIPLINARY COURSE

The **Bachelor of Science (Economics)** is a four-year undergraduate degree in Economics with multidisciplinary and interdisciplinary specializations in Mathematics, Statistics, Computer Sciences and Business Management.

It aims to train some of the brightest young minds of our country, through some of the best practitioners of economics in India and students are encouraged to take part in research activities, thus providing them a symbiotic environment of education and research.

The BS (Economics) aims to produce well-trained professionals with interdisciplinary and multidisciplinary skills for Applied Economic Analysis. The BS (Economics) seeks to impart education to students to become more efficient analysts / decision-making professionals in the area of business & public policy and development administration. Industrial houses, banks and government / semi-government agencies and research organizations are increasingly demanding graduates with these kinds of skills and capabilities.

### Eligibility:

Any 10+2 in CBSE / ISC / any State Board in Commerce, Science or Arts or Intermediate AP / TS with MPC, BiPC, MEC or CEC.

### Admission Criteria

- ◆ The applicant should become eligible as per the specified eligibility criteria
- ◆ The applicant should score at least 50% in the Selection Criteria – Aptitude Test & Personal Interview
- ◆ Candidates with valid score in JEE Mains / NEET / CLAT / IPM / TSEAMCET / APEAPCET / MHCET / UGAT / SAT are preferred

### How to Apply:

You can apply online on our website <http://www.vishwavishwani.ac.in>. The **Application Fee is Rs.600/-**. You can pay the Application fees through our secure payment gateway after filling the required details.

# COURSE STRUCTURE

SEMESTER 1	SEMESTER 2	SEMESTER 3	SEMESTER 4
English - I	English – II	English - III	English - IV
Second language - I	Second language-II	Second Language - III	Second Language - IV
Micro Economics - I	Micro Economics – II	Econometrics - I (Theory + lab)	Fundamentals of Business Economics
Macro Economics - I	Macro Economics – II	Economics of Environment	Econometrics - II (theory + lab)
Mathematical Economics - I	Statistical Methods for Economics	Principles of Marketing	Money & Banking
Introduction to Management	Fundamentals of Financial Accounting	Mathematical Economics - II	Fundamentals of IT (Theory & Lab)
Indian Heritage & Culture - I	Indian Heritage & Culture – II	Environmental Studies - I	Environmental Studies - II
Human values and Ethics - I	Human values and Ethics – II	---	---

SEMESTER 5	SEMESTER 6	SEMESTER 7	SEMESTER 8
International Economics - I	International Economics – II	Game Theory and Economic Analysis	International Organizations and Regional Cooperation
Developmental Economics - I	Developmental Economics – II	Theory of Pricing and Distribution	Economics of Growth and Development
Public Finance	Telangana Economy	Economics Electives I	Economics Elective II
Indian Economy	Data Analytics (Theory & Lab – SPSS)	4.A. Labor Economics	4.A. Economics of Infrastructure
Business Research Methods	Organizational Behaviour & Development	4.B. Health Economics	4.B. Economics of Natural Resources
E-Commerce	Financial Institutions & Markets	E - Views	Mini Project + Viva
Science & Civilization – I	Science & Civilization – II	Strategic Management	Consumer Behavior
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# CAREER OPPORTUNITIES FOR BS COMPUTER SCIENCE & BS ECONOMICS

**Vishwa Vishwani Institute of Systems and Management** is uniquely placed to offer BS Computer Science and BS Economics with skill set in Multidisciplinary Courses in Mathematics and Statistics, Computer Science, Management Sciences and Economics, and will be supplemented with interdisciplinary courses for enhancing domain knowledge in Big Data Sciences, Business Data Analytics, Artificial Intelligence and Machine learning.

The Computer Science and Economics Graduates with expertise in Big Data, Business Data Analytics, Artificial Intelligence and Machine learning are needed in virtually every job sector, not just in technology. In fact, the five biggest tech companies Google, Amazon, Apple, Microsoft, and Facebook only employ one half of one percent of U.S. employees.

**Companies Offering Lucrative Salary for Graduates, who have expertise in Big Data, Business Data Analytics, Artificial Intelligence and Machine learning.**



Flipkart is a major e-commerce player in India, selling everything from fashion and lifestyle products to consumer electronics. It employs data scientists in various roles, giving them an average salary of Rs 17,00,000 annually.



Walmart has its modern wholesale stores spread across 8 locations in India. It hires for many data science positions, paying an average annual compensation of Rs 22,75,000. Typically, the compensation ranges between Rs 17,00,000 and Rs 28,00,000 per annum.



Being one of the biggest e-commerce players globally, Amazon needs data science talent for numerous core functions. Some of them include supply chain optimization, detection of frauds and fake reviews, inventory and sales forecasting. Amazon has several offices in India that hire data scientists. Glassdoor estimates the salary range at Rs 5,78,000 - Rs 19,98,000, depending on the role.



IT solutions by HPE aim to assist customers by managing and assessing their data. Data scientists at HPE can make anywhere from Rs 8,00,000 to Rs 22,00,000.



IBM is a leader in providing valuable collaborative tools to data scientists, application developers, and other experts. Data scientists at IBM make it easier to work with structured and unstructured data and train models at scale. They make an average salary of Rs 13,50,000 in India.



Deloitte uses advanced statistical methods to offer end-to-end business solutions to practitioners in the field of data science. This Big Four firm employs professionals in different roles with total compensation between Rs 12 and 13 lakh per annum.



This prominent global professional services firm designs strategies and delivers them using integrated data resources. The typical salary of data scientists at Accenture is Rs. 10, 50,000 p.a.



[24]7.ai is a leader in customer-driven solutions that help companies interact with consumers using artificial intelligence. Data science jobs at this firm pay Rs 16,00,000 p.a. on average.



LinkedIn operates through web and mobile apps, providing employment-related services to millions of people worldwide. Data scientist salaries start from Rs 13,00,000 p.a. & touch Rs 22,00,000 p.a. for high-level positions.



This US-based multinational corporation offers networking, cloud computing, and SaaS in India. The analytics and research teams at Citrix undertake data science projects for attaining a competitive advantage in the market and predict results to align its work with the mission. Annual pay for data science and related jobs starts from Rs 6,00,000 and can go up to Rs 27,00,000 p.a.



It is the second-largest analytics firm in India. Fractal hires data science professions at annual packages of around Rs 15,00,000.



This software development firm in Bangalore works mainly in the financial domain. The average salary range for data scientists at Two Roads Tech is Rs 23,00,000 p.a. to Rs 35,00,000 p.a.

Source: upgrad.com



# FAQ'S

## **01** I have studied BiPC in Intermediate / 12th. Will I be able to cope up with the subjects in the BS?

The subjects in the BS courses are new not only to BiPC students but also to the students belonging to other groups. This course aims to break the barrier of traditional rigid mindset and create more options for students. Teaching will begin in each subject from the fundamentals and due care is taken to ensure the Learning effectiveness in the students.

## **02** I have studied MEC/CEC in Intermediate / 12th. Which is better for me, BS-Computer Science or BS-Economics?

It depends on what direction you want to give to your career. You are eligible for both.

## **03** What are the career prospects for BS-Computer Science?

BS-Computer Science gives you a 360-degree learning opportunity in the field unlike other similar courses which are one-dimensional. For example, you can get an opportunity to work in the Analytics domain in a Bank, as you have all the required ingredients to excel in the role.

## **04** What are the career prospects for BS-Economics?

BS-Economics gives you a multi-dimensional approach where you get exposure to Mathematical Economics, Econometrics, Statistics,

Management, Data Analysis and Analytics. You become a complete package with key skills which are much needed in the Industry. You are going to be a potential resource for a lot of Public and Private sector organizations.

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### **05 Who awards the BS (4 years) Degree / BS-MS (5 years) Dual Degree?**

The degrees for BS (4 years) / BS-MS (5 years) are awarded by Osmania University, Hyderabad.

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### **06 Which is better – BS or B.Tech in Computer Science?**

Both the BS and B.Tech in Computer Science prepare students well for graduate work or for professional positions in Computing and Information Technology fields. The primary difference is that the BS program provides a more Concentrated approach to computer science combining with Economics, Mathematics, Statistics and Business Management, while the B.Tech program focuses only on computer science and IT. BS - MS Degree are Globally Accepted and whereas B.Tech is offered only in India.

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### **07 How do I apply and what is the Application Fees?**

You can apply online on our website <http://www.vishwavishwani.ac.in>  
The Application Fee is Rs.600/- . You can pay the Application fees through our secure payment gateway after filling the required details.

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### **08 What is the Admission process?**

Admission is based on merit and marks obtained in 12<sup>th</sup> as per TSCHE and Osmania University. Preference shall be given to those who have Good Score/rank in JEE Mains / TSEAMCET / APEAPCET / CLAT / LawCET / IPMAT / NEET. Online Aptitude Test and Career Counseling is conducted to each and every candidate after short listing to brief about the Career Prospects.

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### **09 Does reservation policy apply for Admission?**

Yes, reservation is implemented as per the policies of Govt. of Telangana for SC, ST, BC, OBC, EWS and others.





## INFORMATION TECHNOLOGY - DESTINATION HYDERABAD

### BS (COMPUTER SCIENCE) & BS (ECONOMICS) @ HYDERABAD

#### Hyderabad – The Futuristic City

Hyderabad with its vibrant economy and growth rate is offering a wide canvas of career opportunities for fresh Computer Science graduates when compared to even large metropolitan cities like Mumbai, Delhi, Chennai, Kolkata, Bangalore and Pune.

#### Robust Infrastructure and a High Growth Destination

Hyderabad is one of the fastest growing cities with IT corridor, special economic zones, investment parks and new townships.

Hyderabad is home to more than 1300 IT and ITES firms, that includes Global conglomerates like Google, Apple, Microsoft, IBM, Infosys, Deloitte, Tech Mahindra, TCS, HSBC, Dell and many more.



#### Admissions Office:

#601, Mahaveer Chambers (Stanza Bilding),  
Liberty X Roads, Himayatnagar, Hyderabad - 29.  
Ph: 040-2322 8333, 2322 8399  
Helplines: 9849 247 333 / 9948 341 333

#### Campus:

Boston House, Thumkunta (P.O), Shamirpet Road,  
Hakimpet (Via), Hyderabad - 500 078.  
Ph: 9849 464 333 / 9849 309 333

Approved by Telangana State Council of Higher Education, Govt. of Telangana. Affiliated to Osmania University.

FIRST & FOREMOST AFFILIATED INSTITUTION  
TO OFFER BS-MS COURSES IN INDIA

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