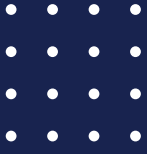




Indian Institute of Information Technology Vadodara
भारतीय सूचना प्रौद्योगिकी संस्थान वडोदरा



B.Sc. in Data Science & Analytics

Your Blueprint to Excelling in a Data-Driven World



3 years | Online | Graduate from an IIIT



Where Technology Meets Vision: **Building Tomorrow's IT Leaders**

Indian Institute of Information Technology Vadodara (IIIT-V) was established in 2013 by the Ministry of Education, Government of India, as an Institute of National Importance under a Public-Private Partnership (PPP) framework. It aims to advance knowledge in IT and provide globally competitive manpower for the industry. The institute's partners include the Government of India, Government of Gujarat, Gujarat State Fertilizers and Chemicals Ltd, and Tata Consultancy Services.

Currently operating from the Government Engineering College (Gandhinagar), IIIT-V is set to move to its new 62.5-acre Vadodara campus by July 2025. A satellite campus, IIITV-ICD, was established in Diu in 2020 with state-of-the-art facilities.

With 1,231 students enrolled, the institute offers UG and PG programs, including B.Tech. in CSE, IT, ECE, AI, and an early exit B.Sc. in CS. PG programs include M.Tech. in CSE (AI/Data Analytics), MCA, and Ph.D. programs. IIIT-V is expanding its digital presence with online B.Sc. programs in CS, AI/ML, and Data Science.

Over the last five years, an average of 67 companies have visited the campus for recruitment, with 80+ global recruiters offering placements and internships.

Director's Message

Prof. Dharmendra Singh
Director, IIIT Vadodara



Dear Students,

Welcome to IIIT Vadodara, where innovation meets excellence.

The nation is progressively heading towards “Viksit Bharat 2047”. The objective of e-programs at IIIT Vadodara is to contribute to nation building by imparting quality skill oriented education for knowledge enhancement in the field of Computer Science, Information Technology, Artificial Intelligence, Data Analytics and allied areas.

As an institution, academia has been a cornerstone of inspiration, driving both individual and organizational motivation. It is through quality education that we broaden our horizons for personal growth and contribute significantly to societal advancement in technical innovation and development. Over the years, I have witnessed first-hand the transformative impact that high-quality education has on students, organizations, and society.

At IIIT Vadodara, our vision is clear: to harness the boundless talents of our youth and propel them towards global innovation. We are committed to building a community of motivated individuals and organizations dedicated to national growth and advancement. Through robust outreach programs, we tackle societal challenges head-on, fostering a culture of innovation, leadership, and entrepreneurial spirit. Our personalized educational approach ensures that our students emerge as world leaders and lifelong learners.

As a proponent of people-centric leadership, I firmly believe that diversity, equality, and inclusion are the bedrocks of any successful organization. My leadership approach is rooted in consensus-building and inclusive decision-making, involving all stakeholders at every step. Upholding ethical standards will remain the foundation of our institution, guiding every action and decision we make.

I extend a warm welcome to all who wish to join us. You are about to become part of a vibrant and dynamic community dedicated to excellence. Your journey at IIIT Vadodara will be rich with learning, discovery, and growth. Seize the opportunities, engage deeply with your peers and faculty, and make the most of the resources available to you. This experience will shape not only your career but also your character and vision for the future.

Together, let's elevate IIIT Vadodara to a beacon of excellence, innovation, and societal impact. I am here to support each of you on your academic and professional journeys.

Welcome aboard.

Warm regards,
Prof. Dharmendra Singh
Director, IIIT Vadodara

Program Overview

Indian Institute of Information Technology, Vadodara (IIIT Vadodara), offers an Online B.Sc. in Data Science and Analytics, a program aimed at preparing students to excel in data-driven environments. This program blends theoretical understanding with practical application, focusing on areas like business analytics, statistical methods, and data visualization. Students will develop proficiency in industry-standard tools such as Python, Power BI, and Tableau, while mastering concepts like database design, machine learning, and advanced data analysis.

The program ensures that graduates are well-versed in ethical data practices and regulatory compliance, enabling them to approach data science challenges responsibly. With a combination of academic rigor and practical exposure through projects and labs, students will be prepared for careers in data analytics, business intelligence, and decision-making roles across diverse sectors. Graduates will also have the critical thinking and communication skills required to present insights effectively to stakeholders and lead data-driven strategies.



Eligibility Criteria

Class 12 or equivalent (list of equivalents)

The final examination of the 10+2 system, conducted by a Central or State Board recognized by the Association of Indian Universities (AIU).

Intermediate or two-year Pre-University examination conducted by a Board or University recognized by the Association of Indian Universities.

Final examination of the two-year course of the Joint Services Wing of the National Defence Academy.

Senior Secondary School Examination conducted by the National Institute of Open Schooling with a minimum of five subjects.

Any Public School, Board or University examination in India or in a foreign country recognised as equivalent to the 10+2 system by the AIU.

H.S.C. vocational examination.

A Diploma recognized by the All-India Council for Technical Education (AICTE) or a State Board of Technical Education of at least 3 years duration.

General Certificate Education (GCE) examination (London, Cambridge or Sri Lanka) at the Advanced (A) level.

High School Certificate Examination of the Cambridge University or International Baccalaureate Diploma of the International Baccalaureate Office, Geneva.

Candidates who have completed Class XII (or equivalent) examination outside India or from a Board not specified above should produce a certificate from the AIU to the effect that the examination they have passed is equivalent to the Class XII examination.

In case the Class XII examination is not a public examination, the candidate must have passed at least one public (Board or Pre-University) examination earlier.



Year	Total Profit
2020	\$6,789
2021	13,678
2022	11,892

For International Applicants

If an applicant has obtained their senior secondary/high school education from an institution located outside of India: they must provide an Equivalence Certificate issued by the Association of Indian Universities - which recognises their senior secondary/high school education as equivalent to Class 12 certificate issued from a recognised central or state board in India.

The process to apply for an equivalence Certificate is detailed here (<https://www.aiu.ac.in/evaluation.php>)

To apply for Equivalence, students must start by applying here (<https://evaluation.aiu.ac.in/Student/login/>)

If an applicant's educational documents (mark sheets and certificates) were issued in a language other than English: they must provide copies of such documents translated into English by a sworn translator.



Who is this program for?

- Learners passionate about data science, analytics, and visualization.
- Those looking to develop expertise in handling and analyzing large datasets using modern tools like Python, SQL, Power BI, and Tableau.
- Students interested in applying data-driven decision-making frameworks to solve business challenges.
- Candidates with a science background (10+2) with mathematics, aiming for roles in data-driven industries such as business analytics or technical consulting.

Why Choose IIIT Vadodara for Your B.Sc. Data Science and Data Analytics Journey?



Recognized Degree:

Complete the program and earn a prestigious certification from IIIT Vadodara, a testament to your skills and excellence.



Renowned Faculty:

Study under the guidance of industry-leading experts in diverse business areas.



Industry-Relevant Tools and Skills:

Learn to work with advanced data tools like Power BI, Tableau, Python, and SQL, making you a valuable asset in today's data-centric job market.



Practical Learning Approach:

A mix of theoretical foundations, real-world data challenges, and project-based learning ensures you're well-prepared to solve complex business problems using data science techniques.



Data-Driven Decision Making:

This program prepares you for technical and business roles that require data-driven insights by equipping you with skills in business analytics, data visualization, and machine learning.

Salient Features of the Program

- ❖ Flexible Learning Schedule (Morning and Evening)
- ❖ Semester duration ~ 14-15 Weeks
- ❖ Unique Instructional Module with stress on hands on sessions and problem solving
- ❖ 40% Hands on and Tutorial
- ❖ Every Theory session is augmented with Hands on session and interactive problem solving session
- ❖ On successful completion of the program, guaranteed Internships/ Apprenticeship opportunities for 10% of the enrolled students
- ❖ Graduates of B.Sc. program will be inducted as IIIT Vadodara alumni
- ❖ B.Sc. Degree from IIIT Vadodara
- ❖ Unique Campus Immersion Program
- ❖ Access to IIIT Vadodara E-Cell (Entrepreneurship cell) for student startup



Program Objectives

Provide students with proficiency in statistical methods, business analytics, and machine learning algorithms.

Equip graduates with skills in managing large datasets, creating databases, and using data visualization tools like Power BI and Tableau.

Train students to analyze and interpret data to make informed business decisions across industries.

Instill ethical data practices and ensure students understand privacy and regulatory concerns when dealing with data.

Develop strong problem-solving abilities to design and implement data-driven strategies for organizations.

Teach practical skills in modern data science tools and technologies, including Python, SQL, Hadoop, and cloud services.

Foster the ability to integrate analytics across domains, making informed decisions in business, healthcare, and technology.

Improve communication skills, enabling students to present complex data insights clearly to both technical and non-technical stakeholders.

Provide opportunities for hands-on experience through labs, projects, and internships, applying data science concepts to real-world scenarios.

Course Structure

Semester I

Course Code	Course Name	L	T	P	C	Pre-requisites
BSCCS 101	Introduction to Computer and Problem-Solving Techniques	3	1	0	4	None
BSCCS 102	Programming Lab	0	0	4	2	None
BSCCS 103	Discrete Mathematics	3	1	0	4	None
BSCCS 104	Environmental Sustainability and Climate Change	2	0	0	2	None
BSCCS 105	Introduction to Data Science and Analytics	3	0	0	3	None
BSCCS 106	Communication Skill - 1	2	0	0	2	Basic English
BSCCS 106	Ethics and Social Implications of AI	3	0	0	3	None

Total Credits for Semester I: 20

Semester II

Course Code	Course Name	L	T	P	C	Pre-requisites
BSCCS 201	Object Oriented Programming	3	1	0	4	BSCCS 101
BSCCS 202	Object Oriented Programming Lab	0	0	4	2	None
BSCCS 203	Computer Networks	3	1	0	4	BSCCS 103
BSCCS 204	Computer Organization and Architecture	3	1	0	4	None
BSCCS 205	Elective	2	0	0	2	Varies
BSCCS 206	Elective Lab	0	0	4	2	Varies
BSCCS 206	Communication Skill - 2	2	0	0	2	None

Electives

Course Code	Elective Name	L	T	P	C	Pre-requisites
BSCCS 207	Introduction to Cloud Computing	3	1	0	4	None
BSCCS 208	Introduction to Cloud Computing Lab	0	0	4	2	None
BSCCS 209	Advance MS-Office	3	1	0	4	BSCCS 101
BSCCS 210	Advance MS-Office Lab	3	1	0	4	None

Total Credits for Semester II: 20

Semester III

Course Code	Course Name	L	T	P	C	Pre-requisites
BSCCS 301	Data Structures and Algorithms	3	1	0	4	BSCCS 201
BSCCS 302	Data Structures and Algorithms Lab	0	0	2	1	None
BSCCS 303	Python Programming	3	1	0	4	BSCCS 101
BSCCS 304	Python Programming Lab	0	0	2	1	None
BSCCS 305	DBMS	3	1	0	4	None
BSCCS 306	DBMS Lab	0	0	2	1	None
BSCCS 307	Introduction to Software Engineering	2	0	0	2	None
BSCCS 308	Introduction to Power BI and Tableau	2	1	0	3	None
BSCCS 309	Seminar	0	0	4	2	None

Total Credits for Semester III: 22



Semester IV

Course Code	Course Name	L	T	P	C	Pre-requisites
BSCCS 401	EDA and Visualization	3	1	0	4	BSCCS 303
BSCCS 402	EDA and Visualization Lab	0	0	2	1	None
BSCCS 403	Introduction to Operating System	3	1	0	4	None
BSCCS 404	Machine Learning	2	0	0	2	BSCCS 303
BSCCS 405	Machine Learning Lab	0	0	4	2	BSCCS 303
BSCCS 406	Statistics for Data Analysis	3	1	0	4	None
BSCCS 407	Internship / Project	0	0	4	2	None
BSCCS 408	Power BI and Tableau Lab	0	0	4	2	BSCCS 308

Total Credits for Semester IV: 21

Semester V

Course Code	Course Name	L	T	P	C	Pre-requisites
BSCCS 501	Introduction to Artificial Intelligence	3	1	0	4	BSCCS 404
BSCCS 502	Artificial Intelligence Lab	0	0	2	2	BSCCS 501
BSCCS 503	Data Science Applications	3	0	0	3	BSCCS 303
BSCCS 504	Research Methodology	2	0	0	2	None
BSCCS 505	Business Analytics	3	0	0	3	Varies
BSCCS 506	Data Analytics using Python	0	0	2	1	Varies
BSCCS 507	Mini Project	0	0	12	6	Varies

Total Credits for Semester V: 21

Semester VI

Course Code	Course Name	L	T	P	C	Pre-requisites
BSCCS 601	Deep Learning	3	0	0	3	BSCCS 406
BSCCS 602	Deep Learning Lab	0	0	2	1	BSCCS 406
BSCCS 603	Data Science Applications in Analytics	3	0	0	3	Varies
BSCCS 604	Advanced Data Science and Analytics	3	0	2	3	
BSCCS 605	Elective – 2	2	0	0	2	Varies
BSCCS 606	Elective – 2 Lab	0	0	2	1	
BSCCS 607	Major Project	0	0	20	10	Varies

Electives

Course Code	Elective Name	L	T	P	C	Pre-requisites
BSCCS 608	Cyber Security	3	0	0	3	None
BSCCS 609	Generative AI and its Application	3	0	0	3	None
BSCCS 610	Computer Vision	3	0	0	3	None
BSCCS 611	Pattern Recognition	3	0	0	3	None
BSCCS 612	Business Intelligence	2	0	0	2	None
BSCCS 614	IoT	2	0	0	2	None
BSCCS 615	Cloud Computing Lab					
BSCCS 616	Generative AI and its Application Lab					
BSCCS 617	Computer Vision Lab					
BSCCS 618	Pattern Recognition Lab					
BSCCS 619	Business Intelligence Lab					
BSCCS 620	Data Analytics using python Lab					
BSCCS 621	IoT Lab					

Total Credits for Semester VI: 23

Total Program Credits: 20 + 20 + 22 + 21 + 21 + 23 = 127

Pedagogy and Assessment



Combination of theoretical lectures, practical labs, and real-world projects.



Continuous assessment through quizzes, assignments, and lab work.



Final evaluations through exams, project reports, and presentations.

Program Outcomes

- Graduates will possess proficiency in statistical methods, business analytics, and machine learning algorithms, as well as in-depth understanding of data analysis technique using programming languages (e.g., Python, SQL) and data manipulation tools.
- Graduates will be capable of managing large datasets, designing databases, and utilizing advanced data visualization tools such as Power BI and Tableau, effectively communicating insights through dashboards, graphs, and reports.
- Graduates will understand ethical and privacy concerns in data collection, storage, and analysis, and will implement responsible practices that ensure compliance with data protection regulations, particularly in the context of analytics and business intelligence
- Graduates will be proficient in the theoretical foundations of analytics, including descriptive, diagnostic, predictive, and prescriptive analytics, enabling them to derive actionable insights and make data-driven decisions across industries
- Graduates will possess strong problem-solving and critical thinking skills, utilizing data science and analytics techniques to solve complex business problems and develop data-driven strategies for organizations
- Graduates will be proficient in the use of modern data science tools like Python, SQL, Hadoop, Spark, and cloud computing services, and will demonstrate practical expertise in handling real-world data analytics challenges using Power BI and Tableau.
- Graduates will be able to apply data-driven decision-making frameworks, supporting strategic business decisions through the use of advanced analytics models and techniques.
- Graduates will demonstrate effective communication skills, presenting data findings to both technical and non-technical stakeholders, and collaborating on data science and analytics projects within multidisciplinary teams.

Admission Process



STEP 1:
Online Application



STEP 2:
Payment of Application Fees
(Non Refundable)



STEP 3:
Document Verification



STEP 4:
Payment of Admission Fees



STEP 5:
Acknowledgement

Fee Structure

Sr No	Fees Components	Sem I	Sem II	Sem III	Sem IV	Sem V	Sem VI
1	Caution Deposit (Refundable)	10000	10000	-	-	-	-
2	I Card Fee (One time)	100	-	-	-	-	-
3	Institute Development Contribution (IDC) (One time)	-	-	-	-	-	-
4	Tuition Fee	37500	37500	37500	37500	37500	37500
5	Campus Immersion Fee	3000	-	-	-	-	3000
6	Institute Registration Fees	1000	1000	1000	1000	1000	1000
7	Alumni Fee	1000	1000	1000	1000	1000	1000
8	Convocation Fee	1000	1000	1000	1000	1000	1000
9	Life Insurance*	100		100		100	
10	Medical Insurance*	1400		1400		1400	
	Total	55100	50500	42000	40500	42000	43500

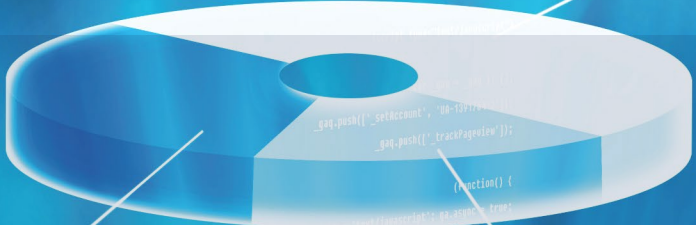
Note

- ❖ All fees are non-refundable.
- ❖ Additional fees may be incurred in case of repetition of courses.
- ❖ You have the option to learn at your own pace and can also register for fewer courses than prescribed in a given semester.
- ❖ There is no minimum credit requirement each semester, however, if you plan to not register for any credit in a semester, you need to maintain your active enrollment by paying a Program Continuation Fee of Rs. 3,000 per semester
- ❖ Medical insurance (group insurance) fees may change depending on the cohort size.



SEARCHING...

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Contact Us :

For application and any other information please get in touch with us

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