

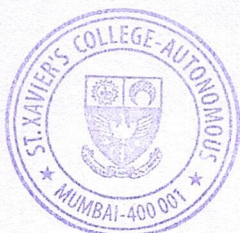


# Syllabus

## Fourth Semester Courses in M.Sc. Big Data Analytics 2024-2025

Contents:

- Syllabus for Core Courses:
  - PSBDA6502RP1: Internship based Project

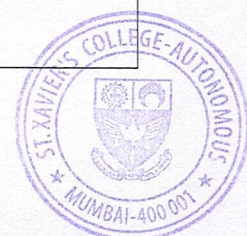


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PRINCIPAL  
ST. XAVIER'S COLLEGE  
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MUMBAI - 400 001.

<b>M.Sc(Big Data Analytics)</b>		
<b>Course Title: Internship based project</b>		<b>Course Code: PSBDA6501IP1</b>
Credits 22: 15 weeks internship (600 Hours)		
<b>No.</b>	<b>Course Objectives</b>	
1	Apply advanced analytics techniques including natural language processing, time series analysis, and deep learning for specialized data analytics tasks.	
2	Deploy and manage big data infrastructure using platforms like Hadoop, Spark, and related tools for scalable data processing and analysis.	
3	Build and evaluate machine learning models for predictive analytics, classification, regression, and clustering tasks.	
4	Collect and preprocess large datasets from diverse sources ensuring data quality and consistency.	
5	Demonstrate project management skills by planning, executing, and documenting analytical projects from inception to completion.	
<b>CO</b>	<b>Course Outcomes</b> <b>On completing the course, the learner will be able to</b>	<b>Bloom's Taxonomy Level (BT level)</b>
1	Demonstrate applied understanding of big data analytics principles, methodologies, and techniques in real-world scenarios.	Understanding
2	Develop proficiency in problem-solving within the context of big data analytics by applying appropriate tools, algorithms, and techniques.	Applying
3	. Perform advanced data analysis using statistical methods, machine learning algorithms, and visualization techniques to derive meaningful insights from large datasets.	Applying

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4	Enhance communication skills by effectively conveying analytical findings, insights, and recommendations through presentations, reports, and visualizations.	Analyzing and understanding
5	Develop professionalism, adaptability, and self-motivation through exposure to real-world challenges and industry practices in analytics.	Evaluating and understanding

A real life project has to be undertaken at an industry for 15 weeks. Each student will have two supervisors: one from academic institution and one from the industry. The project shall involve handling data extensively and use of methodologies learnt during the course work to derive meaningful inferences. A final project report has to be submitted and an “open” presentation has to be made.

The IT department will facilitate students in securing internships. Students have the flexibility to pursue internships anywhere in India. They may independently search for internship opportunities, but are required to obtain department approval upon receiving internship offers from organizations.

**Documents to be submitted by the student to department:**

- Internship offer letter:
- Internship completion certificate
- Project report with approval of the organization.

**Assessment**

Internal mentor will evaluate the student based on the weekly report and midterm presentation.

Distribution of Bloom’s Taxonomy levels for the course assessment

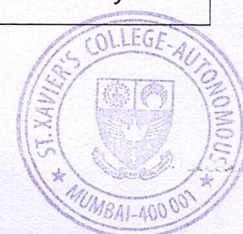
Units	Remembering	Understanding	Analyzing	Application	Evaluation	Creation
*Percentage		10-20	10-20	10-20	10-20	10-20

**Industry mentor: Evaluation**

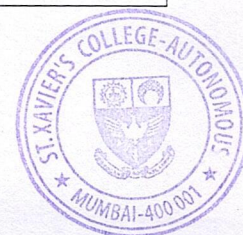
**Evaluation Grid of Industry mentor**

Timeliness and Efficiency:	Evaluate the intern's ability to meet deadlines and complete tasks within allocated time frames. Assess their efficiency in managing workloads and prioritizing tasks effectively.
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Teamwork and Collaboration	: Evaluate the intern's ability to work effectively in team settings, contribute constructively to group discussions, and collaborate with colleagues from diverse backgrounds. Look for evidence of effective communication, cooperation, and conflict resolution
Professionalism and Work Ethic:	Assess the intern's professionalism, reliability, and integrity in carrying out their duties. Evaluate factors such as attendance, punctuality, adherence to company policies, and ethical conduct in their work.
Problem-solving ability	Evaluate the intern's ability to analyze complex problems, identify potential solutions, and make informed decisions based on available data and evidence. Look for instances where they have demonstrated critical thinking, analytical reasoning, and sound judgment.
Adaptability and Flexibility:	Assess the intern's adaptability to changing environments, tasks, and requirements. Evaluate how well they handle unexpected challenges or changes in project scope, and their ability to adjust their approach accordingly.
Initiative and Proactiveness:	Measure the intern's willingness to take initiative and proactively seek out opportunities to contribute beyond assigned responsibilities. Look for instances where they have demonstrated creativity, innovation, or problem-solving skills.
Scope for learning and adapting	Measure the intern's progress in acquiring new skills, knowledge, and competencies relevant to the field of big data analytics. Assess their receptiveness to feedback, willingness to learn from experiences, and commitment to personal and professional growth.
Documentation and Reporting	Evaluate the intern's proficiency in documenting their work processes, methodologies, and outcomes. Assess the clarity, completeness, and accuracy of their reports, presentations, or other deliverables produced during the internship.
Project Management and Leadership	If relevant, evaluate the intern's leadership potential and project management skills. Assess their ability to plan, organize, and coordinate project activities, as well as their effectiveness in delegating tasks, providing direction, and motivating team members.
Overall performance of the intern	



Project Viva: There will be a panel of two industry experts and one academician to evaluate each student. 100 marks will be assigned to project documentation and 200 marks based on the work that done during the internship.

Each student will undergo a project viva, which will be evaluated by a panel consisting of two industry experts and one academician. The evaluation process will consist of two components: project documentation and internship work.

Project Documentation: This component will be allocated a total of 100 marks. It will assess the quality, completeness, and clarity of the documentation submitted by the student, including the project report, research methodology, findings, conclusions, and references.

Internship Work: This component will carry a weightage of 200 marks and will evaluate the practical work completed by the student during the internship period. The evaluation will consider the student's performance, contributions, and achievements in real-world scenarios related to big data analytics. This may include data analysis, problem-solving, application of analytical techniques, implementation of tools or technologies, and any other relevant tasks undertaken during the internship.

Distribution of Bloom’s Taxonomy levels for the course assessment

Units	Remembering	Understanding	Analyzing	Application	Evaluation	Creation
*percentage	0-10	10-20	10-20	10-20	10-20	10-20

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