

DIPLOMA IN  
**BIG DATA**



Our aim is simple: We strive to create high-impact,  
on-campus hands-on experiences that prepare students for  
meaningful and productive careers".

# PROGRAM HIGHLIGHTS

## PG Certification from IREU Education

Differentiate yourself from your peers by earning the industry recognised Post Graduate Certification from IREU Education Bangalore.

## 360 Degree Career Assistance

Receive 360 degree career support from access to IREU Education job opportunities portal, 1:1 profile reviews, career mentorship from industry experts and much more.

## Personalised Mentorship

Get unparalleled personalised mentorship and doubt resolution from IREU Education faculty and our panel of industry experts.

## Dedicated Student Success Mentor

Get a dedicated student mentor with proactive support every step of the way to ensure a seamless learning experience

## For the Industry, by the Industry

Learn and apply concepts on industry projects along with personalised industry mentorship.

## Unparalleled Learning Experience

Learn the concepts from experienced IREU Education faculty & understand the applications from Industry experts to get a blend of theoretical knowledge and practical-hands on experience.

# LEARNING EXPERIENCE

## Industry-relevant Curriculum

Designed and taught by best in class industry experts and IREU Education Bangalore's faculty.

## Blended Learning

Learn with the ease and flexibility of recorded sessions as well as live sessions, designed to ensure a wholesome learning experience

## Re-learn the Concepts

Get program access for upto 3 years to refresh your concepts

## Discussion Forums

Learn from your peers and teaching assistants, and for timely doubt resolution.

## Career Assistance

Access to IREU Education job opportunities portal, career mentorship, profile review and more.

## Hands-On Projects

Multiple case studies & assignments & a mini capstone project to choose from and apply learnings to it.

# CURRICULUM

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## CO. PYTHON PREP

INTRODUCTION TO PYTHON AND LIBRARIES 2 Weeks  
Learn and practice Python programming

## C1. DISTRIBUTED PROGRAMMING

DISTRIBUTED SYSTEMS AND PROGRAMMING MODEL 1 Week  
Get introduced to distributed systems and understand the underlying programming model

PARALLEL / DISTRIBUTED ALGORITHMS 1 Week  
Learn and practice various distributed algorithms

DISTRIBUTED PROGRAMMING PATTERNS 1 Week  
Learn a myriad of patterns for distributed systems

ADAPTING ALGORITHMS FOR DISTRIBUTED SYSTEMS 1 Week  
Learn to implement algorithms for distributed systems

## C2. PLATFORMS FOR BIG DATA

RESILIENT DISTRIBUTED COMPUTING 2 Weeks  
Learn about Apache Hadoop - An ecosystem for distributed data processing frameworks

IN-MEMORY PROCESSING OF BIG DATA 2 Weeks  
Learn and practice the in-memory processing using Apache Spark

BATCH PROCESSING VS. STREAM PROCESSING 1 Week  
Understand the two mainstream data processing frameworks - Batch and Stream

BIG DATA PROCESSING 2 Weeks  
Learn about the enterprise big data tools on the cloud

**Exam Week: Exam (Course 1, Course 2)** **1 WEEK**

# Curriculum

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## C3. LARGE SCALE DATABASES

DATA WAREHOUSING	2 Weeks
Learn to build a data warehouse using the concepts of dimensional modelling	
LARGE SCALE INGESTION & AD-HOC PROCESSING	1 Week
Learn to ingest the batch and real-time data into big data systems	
NOSQL & OBJECT DATABASES	1 Week
Learn about NoSQL databases and how objects can be mapped	
DISTRIBUTED DATABASES & PROPERTIES	1 Week
Learn about the various design consideration for Distributed Databases	

## C4. TOPICS IN BIG DATA ENGINEERING

STREAMING ALGORITHMS	2 Weeks
Learn about the underlying algorithms for stream processing applications	
WEB MINING SOLUTIONS	2 Weeks
Learn about implementing web mining and the application/s for doing so	

**Exam Week: Exam (Course 3, Course 4)      1 WEEK**

## C5. CAPSTONE

CAPSTONE PROJECT	4 WEEK
Solve an industry-grade problem by applying the concepts learned during the programs.	

## IREU TECH EDUCATION PVT LTD

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