



JSPM UNIVERSITY PUNE

Recognized by UGC u/s 2 (f) of UGC Act 1956 and enacted by the
State Government of Maharashtra - JSPM University Act, 2022 (Mah.IV of 2023)

JSPM University Pune
Faculty of Science and Technology
School of Basic and Applied Sciences



NEP aligned Curriculum Structure

For

**B.Sc. (DATA SCIENCE AND
ARTIFICIAL INTELLIGENCE)**

(Effective from AY: 2025-26)



JSPM University Pune

FACULTY OF SCIENCE & TECHNOLOGY

SCHOOL OF BASICS AND APPLIED SCIENCES

FIRST YEAR BACHELOR SCIENCE (DATA SCIENCE AND ARTIFICIAL INTELLIGENCE)

COURSE STRUCTURE
(NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

01/07/2025

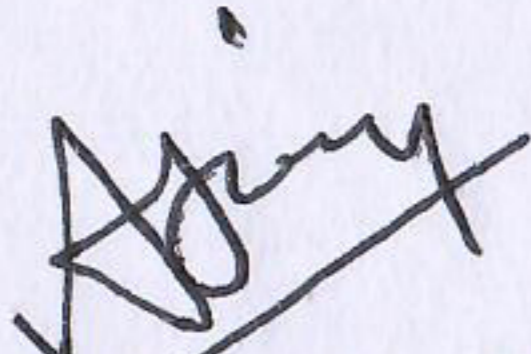
REVISION NO.


1.0 (NEP)


SEMESTER I (LEVEL 4.5)

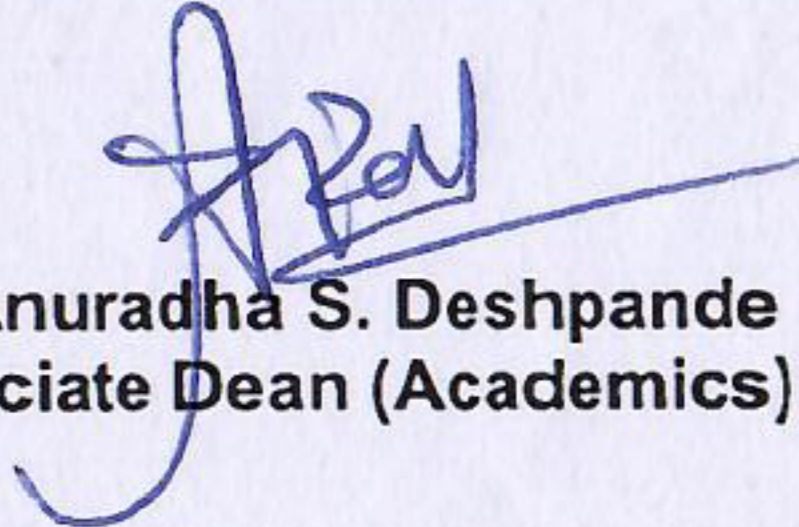
| TYPE | CODE | COURSE NAME | TEACHING SCHEME | | | | EXAMINATION SCHEME AND MARKS | | | | | | | | | | CREDITS |
|--------------|--------------|--|-----------------|----------|----------|----------|--|---------------|------------------------|---|---|-------------------------------------|---|-------------------------------------|------------|-----------|---------|
| | | | Hours / Week | | | | THEORY (Equal Weightage for CIE and ESE) | | | | PRACTICAL (Equal Weightage for CIE and ESE) | | ORAL (Equal Weightage for CIE and ESE) | | TOTAL | | |
| | | | L | T | P | EL | CONTINUOUS INSEMESTER EVALUATION (100 Marks) | | | END SEMESTER EXAMINATION (100 / 50 Marks) | CONTINUOUS INSEMESTER EVALUATION (50 Marks) | END SEMESTER EXAMINATION (50 Marks) | CONTINUOUS INSEMESTER EVALUATION (50 Marks) | END SEMESTER EXAMINATION (50 Marks) | | | |
| | | | | | | | T1 (30 Marks) | T2 (30 Marks) | Assignments (40 Marks) | | | | | | | | |
| BSC | 230GMAB02_01 | Discrete Mathematics | 2 | 1 | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 | |
| PCC | 231GSCB02_01 | Database Management Systems | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 | |
| IOC | --- | Interdisciplinary Open Course | 2 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2 | |
| SEC | 240GSCB01_01 | Problem Solving using C Programming | 2 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 3 | |
| VSC | 230IDCB01_01 | Design Thinking and Creativity | 1 | - | - | 2 | - | - | - | - | - | - | 50 | 50 | 50 | 1.5 | |
| AEC | 230UENB01_01 | Effective Communication Skills | 1 | - | 2 | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 | |
| IKS | 250UIKB02_01 | Wisdom through Ancient Indian History | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 | |
| VEC | 231GCEB02_01 | Environment and Sustainability | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 | |
| LC | 230GSCB04_01 | Database Management Systems Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 | |
| | 240GDIB01_01 | Data Manipulation and Representation using Excel | 1 | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 2 | |
| LLC | 231UPYB02_01 | Mindfulness and Well-being | 1 | - | - | 2 | - | - | - | - | - | - | 50 | - | 50 | 1.5 | |
| TOTAL | | | 16 | 1 | 8 | 4 | | | | | | | | | 700 | 22 | |

| Interdisciplinary Open Course (IOC) | |
|-------------------------------------|-------------------------------------|
| Course Code | 240GPHB03 |
| Course Name | Semiconductor Physics |
| Course Code | 230GETB29 |
| Course Name | Fundamentals of Digital Electronics |
| Course Code | 230VBBB06 |
| Course Name | Essentials of Management |
| Course Code | 240VBBB06 |
| Course Name | Introduction to Digital Marketing |
| Course Code | 230VBCB14 |
| Course Name | E-Commerce |
| Course Code | 230UEEB01 |
| Course Name | Macro-Economics |
| Course Code | 230VBBB57 |
| Course Name | Essentials of Business Law |
| Course Code | 240UPOB36_01 |
| Course Name | Technology in Democracy |



 Associate Prof. Dr. Ajay D. Nagne
 Coordinator, B.Sc. DSAI


 Dr. G. A. Patil
 Director, School of Computational Sciences


 Dr. R. S. Deshpande
 Dean, Faculty of Science and Technology


 Dr. Anuradha S. Deshpande
 Associate Dean (Academics)




 Prof. B.B. Ahuja
 Vice Chancellor, JSPM University Pune



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W. E. F

2024-2025

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SEMESTER II (LEVEL 4.5)

COURSE

TEACHING SCHEME

EXAMINATION SCHEME AND MARKS

| TYPE | CODE | COURSE NAME | Hours / Week | | | | THEORY (Equal Weightage for CIE and ESE) | | | | | | | | PRACTICAL (Equal Weightage for CIE and ESE) | | ORAL (Equal Weightage for CIE and ESE) | | TOTAL | CREDITS |
|--------------|--------------|---|--------------|---|---|----|--|---------------|------------------------|---|--|-------------------------------------|--|-------------------------------------|--|-----|---|--|-------|---------|
| | | | L | T | P | EL | CONTINUOUS INSEMESTER EVALUATION (100 Marks) | | | END SEMESTER EXAMINATION (100 / 50 marks) | CONTINUOUS INSEMESTER EVALUATION (50marks) | END SEMESTER EXAMINATION (50 marks) | CONTINUOUS INSEMESTER EVALUATION (50marks) | END SEMESTER EXAMINATION (50 marks) | | | | | | |
| | | | | | | | T1 (30 Marks) | T2 (30 Marks) | Assignments (40 Marks) | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| BSC | 230GMAB03_02 | Linear Algebra | 2 | 1 | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 | | | | |
| PCC | 231GSCB06_02 | Relational Database Management Systems | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 100 | 3 | | | | |
| | 230GSCB13_02 | Data Communication Networks | 2 | - | - | 2 | 30 | 30 | 40 | 100 | - | - | - | - | 50 | 2 | | | | |
| MDM | --- | Multi-Disciplinary Minor | 2 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2.5 | | | | |
| SEC | 240GSCB02_02 | Programming using Python | 2 | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 2 | | | | |
| AEC | 230UENB02_02 | Communicative Proficiency Skills | 1 | - | 2 | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 3 | | | | |
| VEC | 230UPYB03_02 | Ethics and Moral Values | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 | | | | |
| LC | 230GSCB07_02 | Relational Database Management Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 2 | | | | |
| | --- | Multi-Disciplinary Minor Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 | | | | |
| LLC | 231UPYB01_02 | Yoga and Fitness | - | - | 2 | 2 | - | - | - | - | 50 | 50 | - | - | 50 | 1 | | | | |
| IITP/FP/CEP | 230GSCB08_02 | Internship / Field Project / Community Engagement Programme | 4 to 6 weeks | | | | - | - | - | - | - | - | - | 50 | - | 50 | 1.5 | | | |
| TOTAL | | | 13 | 1 | 6 | 4 | | | | | - | - | - | 50 | 50 | 50 | 2 | | | |
| | | | | | | | | | | | - | - | - | 50 | 50 | 50 | 22 | | | |

Note: A Certificate will be awarded if a student exits after first year.

L-Lecture
Format No.: JSPMUni/ACAD/001

T-Tutorial
Rev. No.:1.0

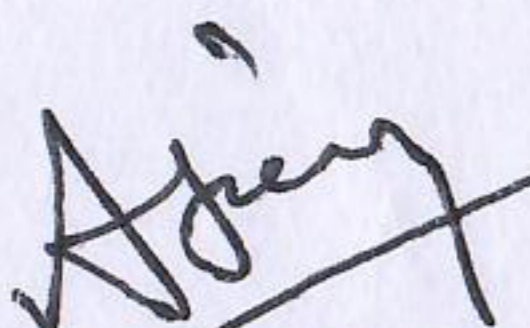
P-Practical Session (Laboratory)
Rev. Date:01/07/2025


EL-Experiential Learning
Page 1 of 2

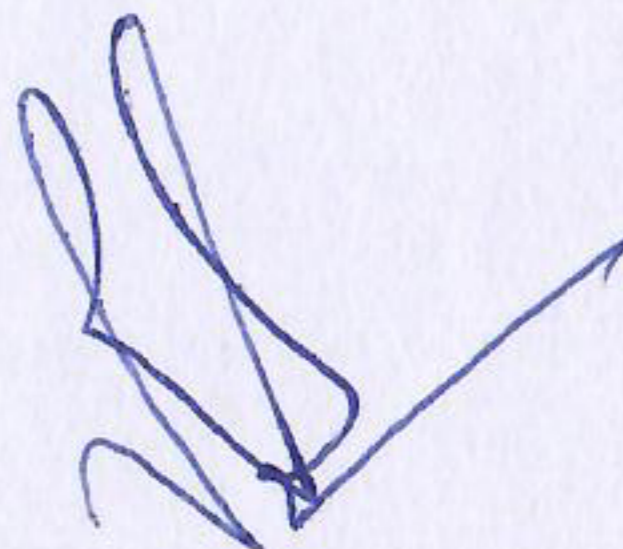
For "Exit" at the end of First Year the student must complete a total of 8 additional credits.

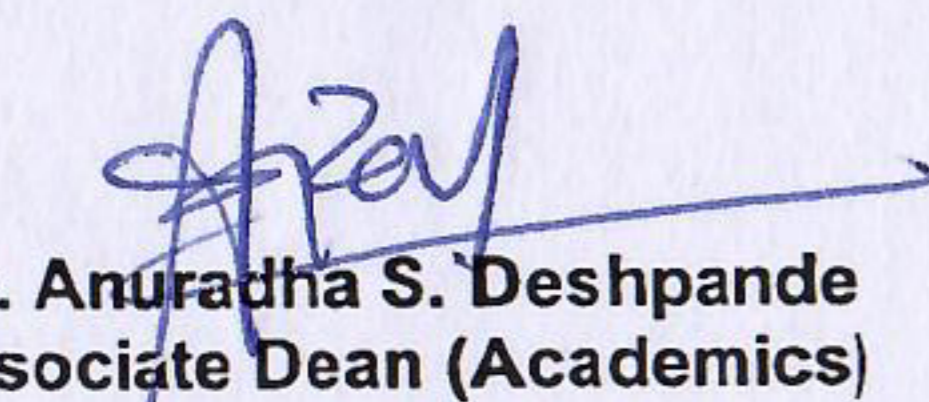
- An internship / OJT of 8 - 10 weeks (4 credits) over and above semester 2 internship of minimum 4 weeks.
- Additional one Course of 4 credits (Course offered will be Vocational Skill Course (VSC) or Skill Enhancement Course (SEC) or a mini project).

| Sem. | Multi-Disciplinary Minor (MDM) | |
|------|--------------------------------|-----------------------------------|
| | Specialization | IoT and Application |
| II | Course Code | 230GETB103_02 |
| | Course Name | Introduction to Electronics |
| | Course Code | 230GETB104_02 |
| | Course Name | Introduction to Electronics Lab |
| III | Course Code | 230GETB58_03 |
| | Course Name | Sensors and Interfacing |
| | Course Code | 230GETB59_03 |
| | Course Name | Sensors and Interfacing Lab |
| IV | Course Code | 230GETB60_04 |
| | Course Name | Foundations of IoT |
| | Course Code | 230GETB61_04 |
| | Course Name | Foundations of IoT Lab |
| V | Course Code | 230GETB62_05 |
| | Course Name | Wireless Technologies for IoT |
| | Course Code | 230GETB63_05 |
| | Course Name | Wireless Technologies for IoT Lab |
| VI | Course Code | 230GETB64_06 |
| | Course Name | Industrial Internet of Things |

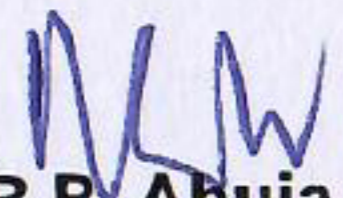

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