



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 Computational Sciences



NEP aligned Curriculum Structure

for

**B. Tech - CSE (Artificial Intelligence and machine
Learning) Regular**

(Effective from AY: 2024-25)



JSPM University Pune

FACULTY OF SCIENCE AND TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCES

SECOND YEAR BACHELOR OF TECHNOLOGY (REGULAR)
(COMPUTER SCIENCE AND ENGINEERING - AIML)

COURSE STRUCTURE
(NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

01/07/2024

REVISION NO.

0.0 (NEP)

SEMESTER III (LEVEL 5)

| TYPE | CODE | COURSE NAME | TEACHING SCHEME | | | | EXAMINATION SCHEME AND MARKS | | | | | | | | TOTAL | CREDITS |
|-------|--------------|--|-----------------|---|---|----|---|------------------|---------------------------|--|--|--|--|--|-------|---------|
| | | | Hours / Week | | | | THEORY (Equal Weightage for CIE and ESE) | | | | PRACTICAL (Equal Weightage for CIE and ESE) | | ORAL (Equal Weightage for CIE and ESE) | | | |
| | | | 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 | 230GMAB07_03 | Ordinary Differential Equations and Multivariate Calculus | 2 | 1 | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| PCC | 230GCSB20_03 | Data Structures Using C++ | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 |
| | 230GAIB81_03 | Python Programming Language | 2 | - | - | 2 | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2.5 |
| | 230GAIB82_03 | Introduction to Artificial Intelligence and Machine Learning | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| VEC | 230USYB02_03 | Professional Laws, Ethics, Values and Harmony | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 |
| MMC | --- | Multidisciplinary Minor Course | 1 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 2 |
| IOC | --- | Interdisciplinary Open Course | 2 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2 |
| LC | 230GCSB21_03 | Data Structures Using C++ Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 |
| | 230GAIB88_03 | Python Programming Language Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 |
| LLC | 230HFSB80_03 | Health and Nutrition | 1 | - | - | 2 | - | - | - | - | - | - | 50 | - | 50 | 1.5 |
| TOTAL | | | 15 | 1 | 6 | 4 | | | | | | | | | 750 | 20 |



L-Lecture

Format No.: JSPMUn/ACAD/001

T-Tutorial

Rev. No.:0.0

P-Practical Session (Laboratory)


Rev. Date:01/07/2024

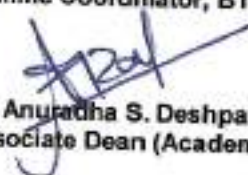
EL-Experiential Learning


Page 1 of 2


| Multidisciplinary Minor Course (MMC) | | | |
|--------------------------------------|----------------------------------|-----------------------------------|---|
| Course Code | 230GMTB01_03 | 230VBFB04_03 | 230GRAB55_03 |
| Course Name | Sensors and Actuators | Digital Banking | Industrial Robots |
| Course Code | 230GETB34_03 | 230VBFB02_03 | 230GRAB53_03 |
| Course Name | IoT and Applications | Basics of Stock Market | Robot Operating Systems |
| Course Code | 230GETB36_03 | 230VBCB09_03 | 230GMTB52_03 |
| Course Name | Microcontroller and Applications | Financial Literacy | Autronics |
| Course Code | 230GETB41_03 | 230VBCB08_03 | 240GFRB55_03 |
| Course Name | Introduction to Embedded Systems | Software for Financial Accounting | Legal Aspects of Fire Safety Health and Environment |


| Interdisciplinary Open Course (IOC) | | | | |
|-------------------------------------|-------------------------------|-------------------------|--|----------------------|
| Course Code | 230HFSB16_03 | 230GETB33_03 | 230VMSM09_03 | 230GCEB29_03 |
| Course Name | Biology for Engineers | EV Technology | Ethics And Sustainability for Business | Smart Cities |
| Course Code | 230GETB32_03 | 230VBCB15_03 | 230GCEB58_03 | 230GMEB64_03 |
| Course Name | Cyber Physical Systems | Finance for Non-Finance | Sustainable Development Goals and Policies | Smart Materials |
| Course Code | 230GCEB40_03 | 230VBCB04_03 | 230VBBB25_03 | 230VBCB04_03 |
| Course Name | Intelligent Transport Systems | Basics of Accounting | Economics for Management | Basics of Accounting |


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Programme Coordinator, BTech-AIML


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2024-2025

RELEASE DATE

01/07/2024

REVISION NO.

0.0 (NEP)

SEMESTER IV (LEVEL 5)

| TYPE | CODE | COURSE NAME | TEACHING SCHEME | | | | EXAMINATION SCHEME AND MARKS | | | | | | | | TOTAL | CREDITS | |
|---------------------|--------------|--|-----------------|----------|-----------|----------|---|------------------|---------------------------|--|--|--|--|--|------------|-----------|---|
| | | | Hours / Week | | | | THEORY (Equal Weightage for CIE and ESE) | | | | PRACTICAL (Equal Weightage for CIE and ESE) | | ORAL (Equal Weightage for CIE and ESE) | | | | |
| | | | 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 | 230GMAB08_04 | Vector Calculus and Partial Differential Equations | 2 | 1 | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 | |
| PCC | 231GCSB12_04 | Object Oriented Programming | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 | |
| | 230GCSB51_04 | Computer Algorithms | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 | |
| AEC | 230UENB02_04 | Communicative Proficiency Skills | 1 | - | 2 | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 | |
| EEC | 230GCEB02_04 | Environment and Sustainability | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 | |
| MMC | --- | Multidisciplinary Minor Course | 1 | - | 2 | - | - | - | - | 50 | - | - | - | - | 50 | 2 | |
| SEC | 231GCSB17_04 | Development Tools for Artificial Intelligence and Machine Learning | 2 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 2 | |
| LC | 231GCSB14_04 | Object Oriented Programming Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 3 | |
| | 230GCSB52_04 | Computer Algorithms Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 | |
| IITP/ FP/ CEP | 230GCSB16_04 | Internship / Field Project / Community Engagement Programme | 4 to 6 weeks | | | | - | - | - | - | - | - | - | 50 | 50 | 50 | 2 |
| TOTAL | | | 14 | 1 | 10 | - | | | | | | | | | 750 | 22 | |
| DSH | 231GAIB83_04 | Machine Learning Techniques | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 | |
| | 230GAIB84_04 | Deep Learning and Neural Networks | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 | |
| LC | 230GAIB89_04 | Machine Learning Techniques Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 | |
| | 230GAIB90_04 | Deep Learning and Neural Networks Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 | |
| MLC* | --- | Audit Course | 1 | - | - | - | - | - | - | 50 | - | - | - | - | 50 | 1 | |



| Multidisciplinary Minor Course (MMC) | | | |
|--------------------------------------|----------------------------------|-----------------------------------|-------------------------|
| Course Code | 230GMTB01_04 | 230GETB36_04 | 230GRAB55_04 |
| Course Name | Sensors and Actuators | Microcontroller and Applications | Industrial Robots |
| Course Code | 230GETB34_04 | 230VBCB09_04 | 230VBFB04_03 |
| Course Name | IoT and Applications | Financial Literacy | Digital Banking |
| Course Code | 230GETB09_04 | 230VBFB02_04 | 230GRAB53_04 |
| Course Name | Wireless Sensor Network | Basics of Stock Market | Robot Operating Systems |
| Course Code | 230GETB41_04 | 230VBCB08_04 | 230GMTB52_04 |
| Course Name | Introduction to Embedded Systems | Software for Financial Accounting | Autotronics |

| Mandatory Learning Course (MLC ^o) Audit Course | | | |
|--|-------------------------------------|---------------------|---|
| Course Code | 230GCSB206_04 | 230GCSB207_04 | 230GAIB101_04 |
| Course Name | Robotic Process Automation | Selenium Automation | Gen AI |
| Course Code | 230GCSB208_04 | 230GCSB209_04 | 230GDSB120_04 |
| Course Name | Agile Software Development | Jira and Git | Data Analytics with Python and Power BI |
| Course Code | 230UPOB02_07 | | |
| Course Name | Introduction to Indian Constitution | | |

Note: A Diploma will be awarded if a student exits after second year.


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

a) An internship / OJT of 8 - 10 weeks (4 credits) over and above semester 4 internship of minimum 4 weeks.

b) Additional one Course of 4 credits (Course offered will be Vocational Skill Course (VSC) or Skill Enhancement Course (SEC) or a mini project).



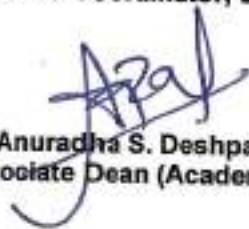
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SCHOOL OF COMPUTATIONAL SCIENCES

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W. E. F

2025-2026

RELEASE DATE

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THIRD YEAR BACHELOR OF TECHNOLOGY (REGULAR)
(COMPUTER SCIENCE AND ENGINEERING - AIML)

REVISION NO.

0.0 (NEP)

SEMESTER V (LEVEL 5.5)

| TYPE | CODE | COURSE NAME | TEACHING SCHEME | | | | EXAMINATION SCHEME AND MARKS | | | | | | | | TOTAL | CREDITS |
|------------------|--------------|---|-----------------|----------|----------|----------|--|------------------|---------------------------|---|--|---|--|--|------------|-----------|
| | | | Hours / Week | | | | THEORY (Equal Weightage for CIE and ESE) | | | PRACTICAL (Equal Weightage for CIE and ESE) | | ORAL (Equal Weightage for CIE and ESE) | | | | |
| | | | L | T | P | EL | CONTINUOUS INSEMESTER EVALUATION (100 / 25 Marks) | | | END SEMESTER EXAMINATION (100 / 75 / 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) | | | | | | | |
| PSMC | 231GCSB25_05 | Discrete Mathematics and Graph Theory | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| PCC | 230GCSB81_05 | Operating Systems and Compiler Constructions | 3 | - | - | 2 | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3.5 |
| | 231GCSB37_05 | Introduction to Soft Computing | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | |
| PEC | --- | Programme Elective Course | 3 | - | - | - | | | | | - | - | - | - | 100 | 3 |
| HSSM | 231VBCB27_05 | Finance for Engineers | | | | | | | 25 | 75 | - | - | - | - | 100 | 3 |
| MMC | --- | Multidisciplinary Minor Course | 1 | - | - | 4 | - | - | - | - | - | - | 50 | 50 | 50 | 2 |
| IOC | --- | Interdisciplinary Open Course | 1 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 2 |
| VSC | 230INB02_05 | Innovation | 2 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2 |
| LC | 230GCSB82_05 | Operating Systems and Compiler Constructions Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 |
| | 231GCSB40_05 | Introduction to Soft Computing Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 |
| TOTAL | | | 17 | - | 6 | 8 | | | | | | | | | 800 | 22 |
| DSH | 230GAIB85_05 | Computational Linguistics and Natural Language Processing | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| LC | 230GAIB91_05 | Computational Linguistics and Natural Language Processing Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 |
| MLC ^o | --- | Audit Course | 1 | - | - | - | - | - | - | 50 | - | - | - | - | 50 | 1 |

| Programme Elective Course (PEC) | | | |
|---------------------------------|---|---|-------------------------------------|
| Course Code | 230GCSB53_05 | 230GCSB210_05 | 230GAIB26_05 |
| Course Name | Cyber Security and Privacy (NPTEL_MOOC) | Foundations of Virtual Reality (NPTEL_MOOC) | Reinforcement Learning (NPTEL_MOOC) |

| Multidisciplinary Minor Course (MMC) | | | |
|--------------------------------------|----------------------------------|-----------------------------------|-------------------------|
| Course Code | 230GMTB01_03 | 230GETB09_04 | 230GRAB55_03 |
| Course Name | Sensors and Actuators | Wireless Sensor Network | Industrial Robots |
| Course Code | 230GETB34_04 | 230VBCB09_04 | 230VBFB04_03 |
| Course Name | IoT and Applications | Financial Literacy | Digital Banking |
| Course Code | 230GETB36_04 | 230VBFB02_04 | 230GRAB53_04 |
| Course Name | Microcontroller and Applications | Basics of Stock Market | Robot Operating Systems |
| Course Code | 230GETB41_05 | 230VBCB08_04 | 230GMTB52_04 |
| Course Name | Introduction to Embedded Systems | Software for Financial Accounting | Autotronics |

| Interdisciplinary Open Course (IOC) | | | |
|-------------------------------------|--|-------------------------|--|
| Course Code | 230VMSM09_03 | 230GCEB29_03 | 230GMEB64_03 |
| Course Name | Ethics And Sustainability for Business | Smart Cities | Smart Materials |
| Course Code | 250GBTB01_05 | 230GETB33_05 | 230GCEB58_05 |
| Course Name | Bioengineering | EV Technology | Sustainable Development Goals and Policies |
| Course Code | 230GETB32_05 | 230VBCB15_05 | 230GETB10_05 |
| Course Name | Cyber Physical Systems | Finance for Non-Finance | Fundamentals of Signals and Systems |



| Mandatory Learning Course (MLC*) Audit Course | | | |
|---|-------------------------------------|---------------------|---|
| Course Code | 230GCSB206_05 | 230GCSB207_05 | 230GAIB101_05 |
| Course Name | Robotic Process Automation | Selenium Automation | Gen AI |
| Course Code | 230GCSB208_05 | 230GCSB209_05 | 230GDSB120_05 |
| Course Name | Agile Software Development | Jira and Git | Data Analytics with Python and Power BI |
| Course Code | 230UPOB02_07 | | |
| Course Name | Introduction to Indian Constitution | | |

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COURSE STRUCTURE
(NEP 2020 Aligned)

W. E. F

2025-2026

RELEASE DATE

01/07/2025

REVISION NO.

0.0 (NEP)

SEMESTER VI (LEVEL 5.5)

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 / 25 Marks) | | | END SEMESTER EXAMINATION (100 / 75 / 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) | | | | | | | |
| | | | | | | | | | | | | | | | | |
| PCC | 230GCSB83_06 | Data Mining Techniques | 2 | - | - | 2 | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2.5 |
| | 230GCSB28_06 | Database Management Systems | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 |
| | 230GCSB26_06 | Computer Networks | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 |
| PEC | --- | Programme Elective Course | 3 | - | - | - | 25 | | | 75 | - | - | - | - | 50 | 2 |
| AEC (HSMC) | 230UENB03_06 | Soft Skill Development | 1 | - | 2 | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 |
| HSSM | 230UEEB19_06 | Engineering Economics | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 |
| MMC | --- | Multidisciplinary Minor Course | 1 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 2 |
| VSC | 230IESB03_06 | Entrepreneurship | 1 | - | - | 2 | - | - | - | - | - | - | 50 | 50 | 50 | 1.5 |
| LC | 231GCSB60_06 | Java Programming Lab | - | - | 4 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 2 |
| | 230GCSB35_06 | Database Management Systems Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 |
| IITP/FP/CEP | 230GCSB16_06 | Internship / Field Project / Community Engagement Programme | 4 to 6 weeks | | | | - | - | - | - | - | - | 50 | 50 | 50 | 2 |
| TOTAL | | | 14 | - | 10 | 4 | | | | | | | | 750 | 22 | |
| DSH | 230GAIB86_06 | Pattern Recognition and Anomaly Detection | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| LC | 230GAIB92_06 | Pattern Recognition and Anomaly Detection Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 |
| MLC* | --- | Audit Course | 1 | - | - | - | - | - | - | 50 | - | - | - | - | 50 | 1 |



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

T-Tutorial
Rev. No.:0.0

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

EL-Experiential Learning
Page 1 of 2

| Programme Elective Course (PEC) | | | |
|---------------------------------|--------------------|--------------------|--------------------|
| Course Code | 230GAIB25_05 | 230GAIB26_05 | 230GAIB27_05 |
| Course Name | NPTEL_MOOC_AIML 10 | NPTEL_MOOC_AIML 11 | NPTEL_MOOC_AIML 12 |
| Course Code | 230GAIB28_06 | 230GAIB29_06 | 230GAIB30_06 |
| Course Name | NPTEL_MOOC_AIML_13 | NPTEL_MOOC_AIML_14 | NPTEL_MOOC_AIML_15 |

| Multidisciplinary Minor Course (MMC) | | | |
|--------------------------------------|----------------------------------|-----------------------------------|-------------------------|
| Course Code | 230GMTB01_03 | 230GETB09_04 | 230GRAB55_03 |
| Course Name | Sensors and Actuators | Wireless Sensor Network | Industrial Robots |
| Course Code | 230GETB36_04 | 230VBCB09_04 | 230VBFB04_03 |
| Course Name | Microcontroller and Applications | Financial Literacy | Digital Banking |
| Course Code | 230GETB41_05 | 230VBFB02_04 | 230GRAB53_04 |
| Course Name | Introduction to Embedded Systems | Basics of Stock Market | Robot Operating Systems |
| Course Code | 230GETB34_06 | 230VBCB08_04 | 230GMTB52_04 |
| Course Name | IoT and Applications | Software for Financial Accounting | Autotronics |



| Mandatory Learning Course (MLC*) Audit Course | | | |
|---|-------------------------------------|---------------------|---|
| Course Code | 230GCSB206_06 | 230GCSB207_06 | 230GAIB101_06 |
| Course Name | Robotic Process Automation | Selenium Automation | Gen AI |
| Course Code | 230GCSB208_06 | 230GCSB209_06 | 230GDSB120_06 |
| Course Name | Agile Software Development | Jira and Git | Data Analytics with Python and Power BI |
| Course Code | 230UPOB02_07 | | |
| Course Name | Introduction to Indian Constitution | | |

Note: A Bachelor's Degree in Vocation (B. Voc.) or B. Sc. (Engg./Tech.) will be awarded if a student exits after third year. For Exit at the end of third year the student must complete: (Total credits = 8)

a) An internship / OJT of 8 - 10 weeks (4 credits)

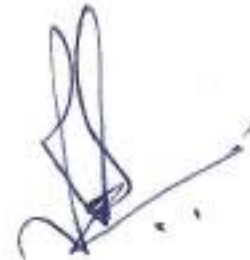
b) Additional Course 1 (4 credits) (Vocational Skill Course (VSC) / Skill Enhancement Course (SEC))




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SEMESTER VII – SCHEME A (LEVEL 6)

| TYPE | CODE | COURSE NAME | TEACHING SCHEME | | | | EXAMINATION SCHEME AND MARKS | | | | | | | | TOTAL | CREDITS |
|--------------|--------------|---|-----------------|----------|----------|----------|--|------------------|---------------------------|---|--|---|--|--|-----------|---------|
| | | | Hours / Week | | | | THEORY (Equal Weightage for CIE and ESE) | | | PRACTICAL (Equal Weightage for CIE and ESE) | | ORAL (Equal Weightage for CIE and ESE) | | | | |
| | | | L | T | P | EL | CONTINUOUS INSEMESTER EVALUATION (100 / 25 Marks) | | | END SEMESTER EXAMINATION (100 / 75 / 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) | | | | | | | |
| PCC | 231GCSB84_07 | Optimization and Information Theory | 3 | - | - | 2 | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3.5 |
| PCC | 231GAIB09_07 | Evolutionary Computation and Swarm Intelligence | 3 | - | - | 2 | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3.5 |
| PEC | --- | Programme Elective Course | 3 | - | - | - | 25 | | | 75 | - | - | - | - | 100 | 3 |
| MMC | --- | Multidisciplinary Minor Course | 1 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 2 |
| MMC | --- | Multidisciplinary Minor Course | 1 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 2 |
| IOC | --- | Interdisciplinary Open Course | 2 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2 |
| RMC | 230IRMB02_07 | Research Methodology, Methods and Techniques | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| LC | 230GAIB10_07 | Evolutionary Computation and Swarm Intelligence Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 |
| PROJ | 230GAIB11_07 | Project Phase I | - | - | 2 | 4 | - | - | - | - | - | - | 50 | 50 | 50 | 2 |
| TOTAL | | | 16 | - | 8 | 8 | | | | | | | | 800 | 22 | |
| DSH | 230GAIB87_07 | Applications of Machine Learning in Industries | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| ILC* | --- | Audit Course | 1 | - | - | - | - | - | - | 50 | - | - | - | - | 50 | 1 |



| Programme Elective Course (PEC) | | | |
|---------------------------------|---|---|-------------------------------------|
| Course Code | 230GCSB20_05 | 230GCSB210_05 | 230GAIB26_05 |
| Course Name | Cyber Security and Privacy (NPTEL_MOOC) | Foundations of Virtual Reality (NPTEL_MOOC) | Reinforcement Learning (NPTEL_MOOC) |
| Course Code | 230GAIB28_06 | 230GAIB29_06 | 230GAIB30_06 |
| Course Name | NPTEL_MOOC_AIML_13 | NPTEL_MOOC_AIML_14 | NPTEL_MOOC_AIML_15 |
| Course Code | 230GAIB31_07 | 230GAIB32_07 | 230GAIB33_07 |
| Course Name | NPTEL_MOOC_AIML_16 | NPTEL_MOOC_AIML_17 | NPTEL_MOOC_AIML_18 |

| Multidisciplinary Minor Course (MMC) | | | |
|--------------------------------------|----------------------------------|-----------------------------------|-------------------------|
| Course Code | 230GETB36_04 | 230VBCB09_04 | 230GRAB55_03 |
| Course Name | Microcontroller and Applications | Financial Literacy | Industrial Robots |
| Course Code | 230GETB41_05 | 230VBFB02_05 | 230VBFB04_03 |
| Course Name | Introduction to Embedded Systems | Basics of Stock Market | Digital Banking |
| Course Code | 230GETB34_06 | 230VBCB08_05 | 230GRAB53_04 |
| Course Name | IoT and Applications | Software for Financial Accounting | Robot Operating Systems |
| Course Code | 230GETB09_07 | 230GMTB01_07 | 230GMTB52_04 |
| Course Name | Wireless Sensor Network | Sensors and Actuators | Autotronics |

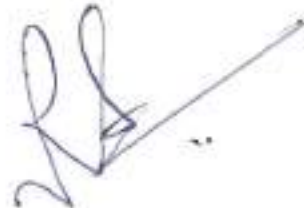
| Interdisciplinary Open Course (IOC) | | | |
|-------------------------------------|--|-------------------------------------|--|
| Course Code | 230VMSM09_03 | 230GCEB29_03 | 230VBCB15_03 |
| Course Name | Ethics And Sustainability for Business | Smart Cities | Finance for Non-Finance |
| Course Code | 250GBTB01_05 | 230GETB33_05 | 230GCEB58_05 |
| Course Name | Bioengineering | EV Technology | Sustainable Development Goals and Policies |
| Course Code | 230GETB32_07 | 230GETB10_07 | 230GMEB61_07 |
| Course Name | Cyber Physical Systems | Fundamentals of Signals and Systems | Industry 4.0 and IIOT |



| Mandatory Learning Course (MLC ^o) Audit Course | | | |
|--|-------------------------------------|---------------------|---|
| Course Code | 230GCSB206_06 | 230GCSB207_06 | 230GAIB101_06 |
| Course Name | Robotic Process Automation | Selenium Automation | Gen AI |
| Course Code | 230GCSB208_06 | 230GCSB209_06 | 230GDSB120_06 |
| Course Name | Agile Software Development | Jira and Git | Data Analytics with Python and Power BI |
| Course Code | 230UPOB02_07 | | |
| Course Name | Introduction to Indian Constitution | | |


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COURSE STRUCTURE
(NEP 2020 Aligned)

W. E. F

2026-2027

RELEASE DATE

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REVISION NO.

0.0 (NEP)

SEMESTER VIII – SCHEME A (LEVEL 6)

| COURSE | | TEACHING SCHEME | | | | EXAMINATION SCHEME AND MARKS | | | | | | | | TOTAL | CREDITS | |
|--------|--------------|---------------------------|--------------|---|----|------------------------------|--|------------------|---------------------------|---|--|---|--|-------|---------|--|
| 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) | | | | |
| | | | L | T | P | EL | CONTINUOUS INSEMESTER EVALUATION (100 / 25 Marks) | | | END SEMESTER EXAMINATION (100 / 75 / 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) | | | | | | | |
| PEC | --- | Programme Elective Course | 3 | - | - | - | 25 | | | 75 | - | - | - | - | 100 | 3 |
| | --- | Programme Elective Course | 3 | - | - | - | 25 | | | 75 | - | - | - | - | 100 | 3 |
| PROJ | 231GAIB12_08 | Project Phase II | - | - | 12 | 24 | - | - | - | - | 150 | 150 | 100 | 100 | 250 | 10 |
| TOTAL | | | 6 | - | 12 | 24 | | | | | | | | 450 | 16 | |



L-Lecture

Format No.: JSPMUni/ACAD/001

T-Tutorial

Rev. No.:0.0

P-Practical Session (Laboratory)

Rev. Date:01/07/2026

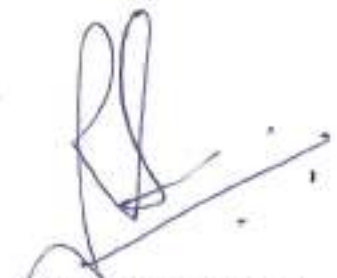
EL-Experiential Learning

Page 1 of 2

| Programme Elective Course (PEC) | | | |
|---------------------------------|--------------------|--------------------|--------------------|
| Course Code | 230GAIB25_05 | 230GAIB26_05 | 230GAIB27_05 |
| Course Name | NPTEL_MOOC_AIML 10 | NPTEL_MOOC_AIML 11 | NPTEL_MOOC_AIML 12 |
| Course Code | 230GAIB28_06 | 230GAIB29_06 | 230GAIB30_06 |
| Course Name | NPTEL_MOOC_AIML 13 | NPTEL_MOOC_AIML 14 | NPTEL_MOOC_AIML 15 |
| Course Code | 230GAIB31_07 | 230GAIB32_07 | 230GAIB33_07 |
| Course Name | NPTEL_MOOC_AIML 16 | NPTEL_MOOC_AIML 17 | NPTEL_MOOC_AIML 18 |
| Course Code | 230GAIB34_08 | 230GAIB35_08 | 230GAIB37_08 |
| Course Name | NPTEL_MOOC_AIML 19 | NPTEL_MOOC_AIML 20 | NPTEL_MOOC_AIML 21 |
| Course Code | 230GAIB38_08 | 230GAIB39_08 | 230GAIB40_08 |
| Course Name | NPTEL_MOOC_AIML 22 | NPTEL_MOOC_AIML 23 | NPTEL_MOOC_AIML 24 |



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SEMESTER VII – SCHEME B (LEVEL 6)

| TYPE | CODE | COURSE NAME | TEACHING SCHEME | | | | EXAMINATION SCHEME AND MARKS | | | | | | | | TOTAL | CREDITS |
|--------------|---------------|---|-----------------|----------|----------|-----------|--|------------------|---------------------------|---|--|---|--|--|------------|-----------|
| | | | Hours / Week | | | | THEORY (Equal Weightage for CIE and ESE) | | | PRACTICAL (Equal Weightage for CIE and ESE) | | ORAL (Equal Weightage for CIE and ESE) | | | | |
| | | | L | T | P | EL | CONTINUOUS INSEMESTER EVALUATION (100 / 25 Marks) | | | END SEMESTER EXAMINATION (100 / 75 / 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) | | | | | | | |
| PCC | 231GCSB84_07 | Optimization and Information Theory | 3 | - | - | 2 | 30 | 30 | 40 | 50 | - | - | - | - | 100 | 3.5 |
| PCC | 231GAIB09_07 | Evolutionary Computation and Swarm Intelligence | 3 | - | - | 2 | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3.5 |
| PEC | --- | Programme Elective Course | 3 | - | - | - | 25 | | | 75 | - | - | - | - | 100 | 3 |
| MMC | --- | Multidisciplinary Minor Course | 1 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 2 |
| MMC | --- | Multidisciplinary Minor Course | 1 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 2 |
| IOC | --- | Interdisciplinary Open Course | 2 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2 |
| RMC | 230IRMB02_07 | Research Methodology, Methods and Techniques | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| LC | 230GAIB10_07 | Evolutionary Computation and Swarm Intelligence Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 |
| SLC | 230GCSB197_07 | Seminar | - | - | - | 8 | - | - | - | - | - | - | - | 50 | 50 | 2 |
| TOTAL | | | 16 | - | 6 | 12 | - | - | - | - | - | - | 50 | 50 | 800 | 22 |
| DJSH | 230GAIB87_07 | Applications of Machine Learning in Industries | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| ILC* | --- | Audit Course | 1 | - | - | - | - | - | - | 50 | - | - | - | - | 50 | 1 |



| Programme Elective Course (PEC) | | | |
|---------------------------------|---|---|-------------------------------------|
| Course Code | 230GCSB30_05 | 230GCSB210_05 | 230GAIB26_05 |
| Course Name | Cyber Security and Privacy (NPTEL_MOOC) | Foundations of Virtual Reality (NPTEL_MOOC) | Reinforcement Learning (NPTEL_MOOC) |
| Course Code | 230GAIB28_06 | 230GAIB29_06 | 230GAIB30_06 |
| Course Name | NPTEL_MOOC_AIML_13 | NPTEL_MOOC_AIML_14 | NPTEL_MOOC_AIML_15 |
| Course Code | 230GAIB31_07 | 230GAIB32_07 | 230GAIB33_07 |
| Course Name | NPTEL_MOOC_AIML_16 | NPTEL_MOOC_AIML_17 | NPTEL_MOOC_AIML_18 |

| Multidisciplinary Minor Course (MMC) | | | |
|--------------------------------------|----------------------------------|-----------------------------------|-------------------------|
| Course Code | 230GETB36_04 | 230VBCB09_04 | 230GRAB55_03 |
| Course Name | Microcontroller and Applications | Financial Literacy | Industrial Robots |
| Course Code | 230GETB41_05 | 230VBFB02_04 | 230VBFB04_03 |
| Course Name | Introduction to Embedded Systems | Basics of Stock Market | Digital Banking |
| Course Code | 230GETB34_06 | 230VBCB08_04 | 230GRAB53_04 |
| Course Name | IoT and Applications | Software for Financial Accounting | Robot Operating Systems |
| Course Code | 230GETB09_07 | 230GMTB01_07 | 230GMTB52_04 |
| Course Name | Wireless Sensor Network | Sensors and Actuators | Autotronics |

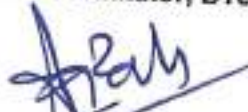
| Interdisciplinary Open Course (IOC) | | | |
|-------------------------------------|--|-------------------------------------|--|
| Course Code | 230VMSM09_03 | 230GCEB29_03 | 230VBCB15_03 |
| Course Name | Ethics And Sustainability for Business | Smart Cities | Finance for Non-Finance |
| Course Code | 250GBTB01_05 | 230GETB33_05 | 230GCEB58_05 |
| Course Name | Bioengineering | EV Technology | Sustainable Development Goals and Policies |
| Course Code | 230GETB32_07 | 230GETB10_07 | 230GMEB61_07 |
| Course Name | Cyber Physical Systems | Fundamentals of Signals and Systems | Industry 4.0 and IIOT |



| Mandatory Learning Course (MLC ³) Audit Course | | | |
|--|-------------------------------------|---------------------|---|
| Course Code | 230GCSB206_06 | 230GCSB207_06 | 230GAIB101_06 |
| Course Name | Robotic Process Automation | Selenium Automation | Gen AI |
| Course Code | 230GCSB208_06 | 230GCSB209_06 | 230GDSB120_06 |
| Course Name | Agile Software Development | Jira and Git | Data Analytics with Python and Power BI |
| Course Code | 230UPOB02_07 | | |
| Course Name | Introduction to Indian Constitution | | |



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REVISION NO.

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SEMESTER VIII – SCHEME B (LEVEL 6)

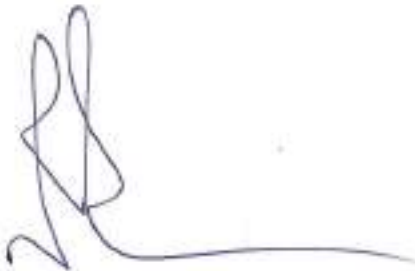
| TYPE | CODE | COURSE NAME | TEACHING SCHEME | | | | EXAMINATION SCHEME AND MARKS | | | | | | | | TOTAL | CREDITS |
|--------------|---------------|---------------------------|-----------------|----------|-----------|-----------|--|------------------|---------------------------|---|--|---|--|--|------------|-----------|
| | | | Hours / Week | | | | THEORY (Equal Weightage for CIE and ESE) | | | PRACTICAL (Equal Weightage for CIE and ESE) | | ORAL (Equal Weightage for CIE and ESE) | | | | |
| | | | L | T | P | EL | CONTINUOUS INSEMESTER EVALUATION (100 / 25 Marks) | | | END SEMESTER EXAMINATION (100 / 75 / 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) | | | | | | | |
| PEC | --- | Programme Elective Course | 3 | - | - | - | 25 | | | 75 | - | - | - | - | 100 | 3 |
| PEC | --- | Programme Elective Course | 3 | - | - | - | 25 | | | 75 | - | - | - | - | 100 | 3 |
| PROJ | 230GCSB198_08 | Internship with Project | - | - | 10 | 20 | - | - | - | - | 150 | 150 | 100 | 100 | 250 | 10 |
| TOTAL | | | 6 | - | 10 | 20 | | | | | | | | | 450 | 16 |




| Programme Elective Course (PEC) | | | |
|---------------------------------|---|---|-------------------------------------|
| Course Code | 230GCSB30_05 | 230GCSB210_05 | 230GAIB26_05 |
| Course Name | Cyber Security and Privacy (NPTEL_MOOC) | Foundations of Virtual Reality (NPTEL_MOOC) | Reinforcement Learning (NPTEL_MOOC) |
| Course Code | 230GAIB28_06 | 230GAIB29_06 | 230GAIB30_06 |
| Course Name | NPTEL_MOOC_AIML_13 | NPTEL_MOOC_AIML_14 | NPTEL_MOOC_AIML_15 |
| Course Code | 230GAIB31_07 | 230GAIB32_07 | 230GAIB33_07 |
| Course Name | NPTEL_MOOC_AIML_16 | NPTEL_MOOC_AIML_17 | NPTEL_MOOC_AIML_18 |
| Course Code | 230GAIB34_08 | 230GAIB35_08 | 230GAIB37_08 |
| Course Name | NPTEL_MOOC_AIML_19 | NPTEL_MOOC_AIML_20 | NPTEL_MOOC_AIML_21 |
| Course Code | 230GAIB38_08 | 230GAIB39_08 | 230GAIB40_08 |
| Course Name | NPTEL_MOOC_AIML_22 | NPTEL_MOOC_AIML_23 | NPTEL_MOOC_AIML_24 |


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