



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 Civil and Environmental Science



NEP aligned Curriculum Structure

For

M.Tech (Construction Management)

(Effective from AY: 2023-24)



JSPM University Pune

FACULTY OF SCIENCE & TECHNOLOGY

SCHOOL OF CIVIL AND ENVIRONMENTAL SCIENCES

FIRST YEAR MASTER OF TECHNOLOGY
(CONSTRUCTION MANAGEMENT)

COURSE STRUCTURE (NEP 2020 Aligned)

W. E. F

2023-2024

RELEASE DATE

01/07/2023

REVISION NO.

0.0 (NEP)

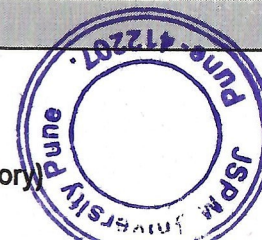
SEMESTER I (LEVEL 6.5)

COURSE

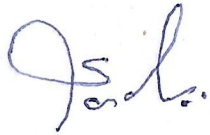
TEACHING SCHEME

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 (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 | 230GMAM03_01 | Probability and Statistics | 2 | 1 | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| PSBC | 230GCMM01_01 | Construction Project Planning and Management | 3 | - | - | 2 | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3.5 |
| PCC | 230GCMM02_01 | Construction Materials and Materials Management | 2 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2 |
| PCC | 230GTEM03_01 | Applications of Remote Sensing Geographic Information System | 2 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2 |
| MMC | - | Multidisciplinary Minor Course- I | 1 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 2 |
| SEC | 230GSEM19_01 | Building Information Modelling | 2 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 3 |
| VSC (HSMC) | 230IDCB01_01 | Design Thinking and Creativity | 1 | - | - | 2 | - | - | - | - | - | - | 50 | 50 | 50 | 1.5 |
| AEC (HSMC) | 230UENM01_01 | Communicative English for Professionals | 1 | - | 2 | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 |
| RMC | 230IRMM01_01 | Research Methodology | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 |
| LC | 230GCMM26_01 | Project Planning Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 |
| TOTAL | | | 16 | 1 | 8 | 4 | | | | | | | | | 800 | 22 |



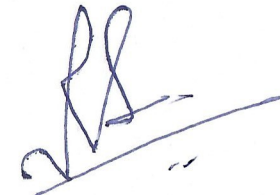
| Sem | Multidisciplinary Minor Course (MMC) | |
|------------------|--------------------------------------|-----------------------------|
| I (MMC – I) | Course Code | 230GRAM24_01 |
| | Course Name | Sensors and Automation |
| II (MMC – II) | Course Code | 230GETM16_02 |
| | Course Name | IoT Basics and Applications |



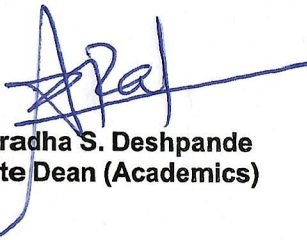
Ms. Sharayu Kadam
Programme Coordinator, MTech-CM



Dr. M. Nithya
Director, School of Civil and Environmental 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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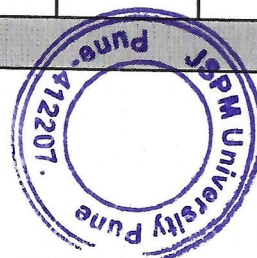
01/07/2023

REVISION NO.

0.0 (NEP)

SEMESTER II (LEVEL 6.5)

| 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 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) | | | | | | | | | |
| PCC | 230GCMM03_02 | Construction Contracts, Administration and Management | 2 | 1 | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 | | |
| PCC | 230GCMM04_02 | Construction Techniques | 2 | - | - | 2 | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2.5 | | |
| PCC | 230GCMM05_02 | Construction Equipment and Machinery | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 | | |
| MMC | - | Multidisciplinary Minor Course- II | 1 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 2 | | |
| SEC | 230GSEM20_02 | MATLAB for Engineers | 2 | - | 2 | - | - | - | - | - | 50 | 50 | 50 | 50 | 100 | 3 | | |
| VSC (HSMC) | 230IINB02_02 | Innovation | 1 | - | - | 2 | - | - | - | - | - | - | 50 | 50 | 50 | 1.5 | | |
| AEC (HSMC) | 230UENM02_02 | Business Communication | 1 | - | 2 | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 | | |
| RMC | 230IRMM02_02 | Research Design and Techniques | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 | | |
| LC | 230GCMM17_02 | Project Management Lab | - | - | 2 | - | - | - | - | - | 50 | 50 | - | - | 50 | 1 | | |
| IITP/FP/CEP | 230GCMM25_02 | Internship / Field Project / Community Engagement Programme | 4 to 6 weeks | | | | | | | | | | | 50 | 50 | 50 | 2 | |
| TOTAL | | | 14 | 1 | 8 | 4 | | | | | | | | | 750 | 22 | | |



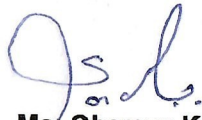
Note: A Postgraduate Diploma will be awarded if a student exits after first year.

For Exit at the end of first 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))

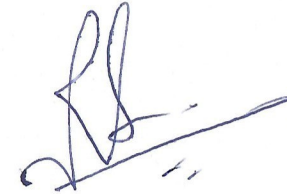
| Sem | Multidisciplinary Minor Course (MMC) | |
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| I (MMC - I) | Course Code | 230GRAM24_01 |
| | Course Name | Sensors and Automation |
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| | Course Name | IoT Basics and Applications |



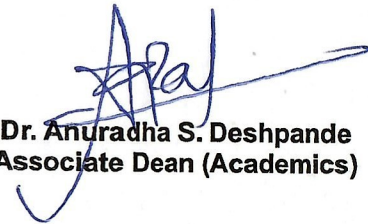
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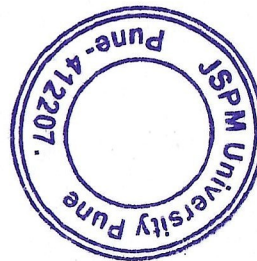
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W. E. F

2024-2025

RELEASE DATE

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REVISION NO.

0.0 (NEP)

SEMESTER III (LEVEL 7)

| 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 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) | | | | | | | |
| PEC | - | Program Elective-I / MOOCs | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| PEC | - | Program Elective-II / MOOCs | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| IOC | - | Interdisciplinary Open Course -I | 2 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2 |
| IOC | - | Interdisciplinary Open Course -II | 2 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 2 |
| VEC | 230USYB01_03 | Behavioral Science and Ethics | 2 | - | - | - | 30 | 30 | 40 | 50 | - | - | - | - | 50 | 2 |
| SLC | 230GCMM19_03 | Seminar | - | - | 4 | - | - | - | - | - | - | - | 100 | 100 | 100 | 2 |
| IITP/F P/CEP | 230GCMM20_03 | Internship / Field Project / Community Engagement Programme | - | - | 12 | - | - | - | - | - | - | - | 100 | 100 | 100 | 6 |
| TOTAL | | | 12 | 0 | 16 | 0 | | | | | | | | | 650 | 20 |



| Sem. | Interdisciplinary Open Course (IOC) | | |
|------|-------------------------------------|---|------------------------------------|
| | Specialization | Management (IOC - I) | Computer Science (IOC - II) |
| III | Course Code | 230VBCB04_03 | 230GCSM31_03 |
| | Course Name | Basics of Accounting | Artificial Intelligence for All |
| III | Course Code | 230VMSM05_03 | 230GCSM32_03 |
| | Course Name | Fundamentals of Financial Management | Machine Learning in Practice |
| III | Course Code | 230VMSM08_03 | 230GCSM33_03 |
| | Course Name | Startups and Entrepreneurship Development | Introduction to Python Programming |

| Sem. | Programme Elective Course (PEC) | | | |
|----------------|---------------------------------|--|---|--|
| | Specialization | Construction Management | | |
| III (PEC - I) | Course Code | 230GCMM06_03 | 230GCMM07_03 | 230GCMM08_03 |
| | Course Name | Construction Safety | Energy Efficient Buildings | Project Economics and Financial Management |
| III (PEC - II) | Course Code | 230GCMM09_03 | 230GCMM10_03 | 230GCMM11_03 |
| | Course Name | Quality Control in Construction | Infrastructure Development and Management | Building Services |
| IV (PEC - III) | Course Code | 230GCMM12_04 | 230GCMM13_04 | 230GCMM22_04 |
| | Course Name | Strategic Management | Project Risk Management | Airport Infrastructure Development |
| IV (PEC - IV) | Course Code | 230GCMM14_04 | 230GCMM15_04 | 230GCMM23_04 |
| | Course Name | Quality Control and Total Quality Management | Supply Chain Management | Repair, Retrofitting and Rehabilitation Techniques |

DBmt

Dr. Nikita Bhagat
Programme Coordinator, MTech- CM

f *Dr. M. Nithya*

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(CONSTRUCTION MANAGEMENT)

REVISION NO.

0.0 (NEP)

SEMESTER IV (LEVEL 7)

| 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 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) | | | | | | | |
| PEC | - | Program Elective-III/ MOOCs | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| PEC | - | Program Elective-IV/ MOOCs | 3 | - | - | - | 30 | 30 | 40 | 100 | - | - | - | - | 100 | 3 |
| PROJ | 230GCMM21_04 | Project / Internship with Project | - | - | 24 | - | - | - | - | - | - | - | 200 | 200 | 200 | 12 |
| TOTAL | | | 6 | 0 | 24 | 0 | | | | | | | | | 400 | 18 |
| MLC# | - | Audit Course - I | 1 | - | - | - | - | - | - | 50 | - | - | - | - | 50 | 1 |



| Interdisciplinary Open Course (IOC) | | | |
|-------------------------------------|----------------|---|------------------------------------|
| Sem. | Specialization | Management (IOC – I) | Computer Science (IOC – II) |
| III | Course Code | 230VBCB04_03 | 230GCSM31_03 |
| | Course Name | Basics of Accounting | Artificial Intelligence for All |
| III | Course Code | 230VMSM05_03 | 230GCSM32_03 |
| | Course Name | Fundamentals of Financial Management | Machine Learning in Practice |
| III | Course Code | 230VMSM08_03 | 230GCSM33_03 |
| | Course Name | Startups and Entrepreneurship Development | Introduction to Python Programming |

| Programme Elective Course (PEC) | | | | |
|---------------------------------|----------------|--|---|--|
| Sem. | Specialization | Construction Management | | |
| III (PEC – I) | Course Code | 230GCMM06_03 | 230GCMM07_03 | 230GCMM08_03 |
| | Course Name | Construction safety | Energy Efficient Buildings | Project Economics and Financial Management |
| III (PEC – II) | Course Code | 230GCMM09_03 | 230GCMM10_03 | 230GCMM11_03 |
| | Course Name | Quality Control in Construction | Infrastructure Development and Management | Building Services |
| IV (PEC – III) | Course Code | 230GCMM12_04 | 230GCMM13_04 | 230GCMM22_04 |
| | Course Name | Strategic Management | Project Risk Management | Airport Infrastructure Development |
| IV (PEC – IV) | Course Code | 230GCMM14_04 | 230GCMM15_04 | 230GCMM23_04 |
| | Course Name | Quality Control and Total Quality Management | Supply Chain Management | Repair, Retrofitting and Rehabilitation Techniques |

| Sem. | Mandatory Learning Course (MLC#) - Audit Course | |
|-----------------------|---|-------------------------------------|
| IV (Audit Course - I) | Course Code | 230UPOB02_04 |
| | Course Name | Introduction to Indian Constitution |



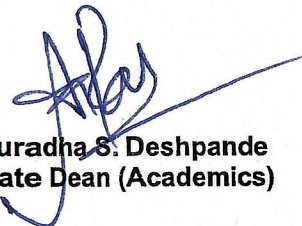
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