



SANDIP
UNIVERSITY
UGC Recognised

Sandip University, Nashik (MS), India
At Post Mahiravani, Trimbak Road, Nashik-422213, Maharashtra
<https://www.sandipuniversity.edu.in>

School of Computer Sciences and Engineering
Department of Computer Science and Application

-NEP-2020 Course Structure-


Programme Name: - Master Computer Application (MCA)

Semester – I (Level 6.0)

Batch: AY 24-25 onwards

| Sr. No. | Core | Course Code | Course Name | Teaching Scheme (Hrs./Week) | | | | Examination Scheme | | | | Total Marks |
|---------|------|-------------|--|--------------------------------|---|---|----|-----------------------------|-----|-----------------------------|-----|-------------|
| | | | | L | T | P | C | Formative Assessment CIA | | Summative Assessment ESE | | |
| | | | | | | | | Course | Lab | Course | Lab | |
| 1 | UC | NRDP101 | Research Methodology | 4 | - | - | 4 | 50 | - | 100 | - | 100 |
| 2 | PC | NPMC101 | Advanced Database Management System | 3 | - | - | 3 | 50 | - | 100 | - | 100 |
| 3 | PC | NPMC102 | Web Technologies | 3 | - | - | 3 | 50 | - | 100 | - | 100 |
| 4 | PC | NPMC103 | Advanced Software Engineering | 3 | | | 3 | 50 | | 100 | | 100 |
| 5 | PC | NPMC111 | Lab course Based on ADBMS & WEB Technologies | - | - | 4 | 2 | - | 50 | - | 50 | 100 |
| 6 | PC | NPMC112 | Lab course Based on WEB Technologies | - | - | 4 | 2 | - | 50 | - | 50 | 100 |
| 7 | PE | NPMCE_ | Programme Elective-I | 4 | - | - | 4 | 50 | - | 100 | - | 100 |
| TOTAL | | | | 17 | - | 8 | 21 | 250 | 50 | 500 | 50 | 700 |

| | | Formative Assessment | | |
|--|--|----------------------|-------------|--|
| CIA: Continuous Internal Assessment L: Theory Lecture T: Tutorial P: Practical ESE: End Semester Exam | UC: University Core PC: Programme Core PE: Programme Elective FP: Field Project OJT: On-Job Training RP: Research Project | CIA | Weightage | Description |
| | | CIA 1 | 10% | Home Assignment |
| | | CIA 2 | 20% | Written Exam |
| | | CIA 3 | 10% | Activity/Project & research based learning along with seminar presentation |
| | | CIA 4 | 10% | Behavioral Attitude +General Discipline Theory +Practical attendance |
| | | TOTAL | 50% | |
| Written Examination – End Semester Exam (ESE) | | | 50% | |
| TOTAL | | | 100% | |



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Dean
SOCSA

Associate Dean
Academics

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| Document Reference | Revision No. / Date | Prepared By | Approved By |
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School of Computer Sciences and Engineering
Department of Computer Science and Application

-NEP-2020 Course Structure-

Programme Name: - Master of Computer Application (MCA)
Semester - II (Level 6.0)

Batch: AY 24-25 onwards

| Sr. No. | Core | Course Code | Course Name | Teaching Scheme (Hrs./Week) | | | | Examination Scheme | | | | Total Marks |
|---------|------|-------------|--|--------------------------------|---|----|----|----------------------|-----|----------------------|-----|-------------|
| | | | | L | T | P | C | Formative Assessment | | Summative Assessment | | |
| | | | | | | | | CIA | | ESE | | |
| | | | | | | | | Course | Lab | Course | Lab | |
| 1 | PC | NPMC201 | Advanced Java Programming | 3 | - | - | 3 | 50 | - | 100 | | 100 |
| 2 | PC | NPMC202 | Mobile Application Development | 3 | - | - | 3 | 50 | - | 100 | - | 100 |
| 3 | PC | NPMC203 | Software testing & Quality Assurance | 3 | - | - | 3 | 50 | - | 100 | - | 100 |
| 4 | PC | NPMC211 | Lab Course Based on Advanced Java | - | - | 4 | 2 | - | 50 | - | 50 | 100 |
| 5 | PC | NPMC212 | Lab Course Based on Mobile Application Development | - | - | 4 | 2 | - | 50 | - | 50 | 100 |
| 6 | PE | NPMCE _ | Programme Elective-II | 4 | - | - | 4 | 50 | - | 100 | - | 100 |
| 7 | PC | NPMC213 | On- Job Training/ Field Project | - | - | 8 | 4 | - | 100 | - | 100 | 200 |
| TOTAL | | | | 13 | - | 16 | 21 | 200 | 200 | 400 | 200 | 800 |

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| | | TOTAL | 50% | |
| | | Written Examination – End Semester Exam (ESE) | | 50% |
| TOTAL | | 100% | | |
| Exit option: PG Diploma (2 Sem) + BBA (3 Sem) + B.Com (3 Sem) + M.Com (2 Sem) + M.Phil (2 Sem) + Ph.D (3 Sem) + UGC NET/JRF | | | | |

Exit option: PG Diploma 42 Credits after Three Year UG Degree (with additional 4 credits of Internship)

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School of Computer Sciences and Engineering
Department of Computer Science and Application

-NEP-2020 Course Structure-

Programme Name: - Master of Computer Application (MCA)
Semester – III (Level 6,5)

Batch: AY 24-25 onwards

| Sr. No. | Core | Course Code | Course Name | Teaching Scheme (Hrs./Week) | | | | Examination Scheme | | | | Total Marks |
|---------|------|-------------|--|-----------------------------|---|----|----|--------------------------|-----|--------------------------|-----|-------------|
| | | | | L | T | P | C | Formative Assessment CIA | | Summative Assessment ESE | | |
| | | | | | | | | Course | Lab | Course | Lab | |
| | | | | | | | | | | | | |
| 1 | PC | NPMC301 | Advanced Python Programming | 4 | - | - | 4 | 50 | - | 100 | 0 | 100 |
| 2 | PC | NPMC302 | Artificial Intelligence and Machine Learning | 4 | - | - | 4 | 50 | - | 100 | 0 | 100 |
| 3 | PC | NPMC303 | Cloud Computing | 4 | - | - | 4 | 50 | - | 100 | 0 | 100 |
| 4 | PC | NPMC311 | Lab course based on Python programming | - | - | 4 | 2 | - | 50 | - | 50 | 100 |
| 5 | PC | NPMC312 | Lab course based on AIML | - | - | 4 | 2 | - | 50 | - | 50 | 100 |
| 6 | PE | NPMCE_ | Programme Elective-III | - | - | 8 | 4 | - | 50 | - | 50 | 100 |
| 7 | PC | NPMC313 | Research Project-I | - | - | 8 | 4 | - | 100 | - | 100 | 200 |
| TOTAL | | | | 12 | - | 24 | 24 | 150 | 250 | 300 | 250 | 800 |

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| | | TOTAL | 50% | |
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| TOTAL | | 100% | | |

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School of Computer Sciences and Engineering
Department of Computer Science and Application

-NEP-2020 Course Structure-

Programme Name: - Master of Science (Mathematics)
Semester – IV (Level 6.5)

Batch: AY 24-25 onwards

| Sr. No. | Core | Course Code | Course Name | Teaching Scheme (Hrs./Week) | | | | Examination Scheme | | | | Total Marks |
|---------|------|-------------|----------------------|--------------------------------|----|----|----|-----------------------------|-----|-----------------------------|-----|-------------|
| | | | | L | T | P | C | Formative Assessment CIA | | Summative Assessment ESE | | |
| | | | | | | | | Course | Lab | Course | Lab | |
| 1 | PC | NPMC411 | Research Project -II | 0 | 0 | 36 | 18 | - | 200 | - | 200 | 400 |
| TOTAL | | | | 00 | 00 | 36 | 18 | | 200 | | 200 | 400 |

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| | | CIA 4 | 10% | Behavioral Attitude +General Discipline Theory +Practical attendance |
| | | TOTAL | 50% | |
| Written Examination – End Semester Exam (ESE) | | | 50% | |
| TOTAL | | | 100% | |

Exit Option: Award of PG Degree with 84 Credits after Three Year UG Degree.

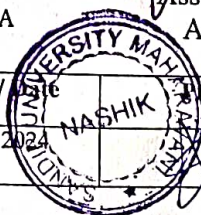
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Department of Computer Science and Application

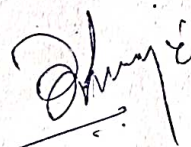
-NEP-2020 Course Structure-

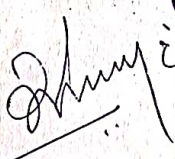
Programme Name: - Master Computer Application (MCA)

List of Program Elective

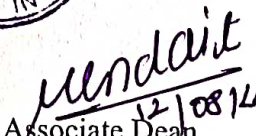
Batch: AY 24-25 onwards

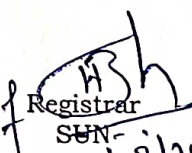
| Sr. No. | Course Code | Name of the course | Semester |
|---------|-------------|---|----------|
| 1 | NPMT104 | Mathematical logic combination and graph theory | I |
| 2 | NPMCE01 | Big Data Analytics | |
| 3 | NPMCE02 | Foundations of Data Science | II |
| 4 | NPMCE03 | Advanced Cyber Security and Digital Forensics | |
| 6 | NPMCE04 | Container Technologies: Docker and Kubernetes | III |
| 7 | NPMCE05 | Data Visualization and Analytics with TensorFlow and Power BI | |

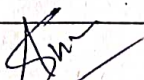
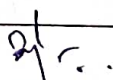

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