



Department of Applied Mathematics

Delhi Technological University,
(Formerly Delhi College of Engg.)
Bawana Road, Delhi – 42.

| B.Tech Mathematics and Computing | | | | | | | | | | | | | | |
|----------------------------------|--------------|---|--------------|--------|--------------------|---|-------|-------------------|-----------|----------------------|---------|---------|---------|--------|
| I Year: First Semester | | | | | | | | | | | | | | |
| Teaching Scheme | | | | | Contact Hours/Week | | | Exam Duration (h) | | Relative Weights (%) | | | | |
| S. No. | Subject Code | Course Title | Subject Area | Credit | L | T | P | Theory | Practical | CWS | PRS | MTE | ETE | PRE |
| 1 | AM101 | Mathematics-I | BSC | 4 | 3 | 1 | 0 | 3 | 0 | 25 | - | 25 | 50 | - |
| 2 | AP101 | Physics | BSC | 4 | 3 | 0 | 2 | 3 | 0 | 15 | 25 | 20 | 40 | - |
| 3 | EC101 | Basic Electronics & Communication Engineering | ESC | 4 | 3 | 0 | 2 | 3 | 0 | 15 | 25 | 20 | 40 | - |
| 4 | ME105 | Computer Aided Engineering Graphics-II | ESC | 4 | 3 | 0 | 2 | 3 | 0 | 15 | 25 | 20 | 40 | - |
| 5 | MC103 | Python Programming | SEC | 2 | 0 | 0 | 4 | 0 | 3 | - | 50 | - | - | 50 |
| 6 | AEC/VAC | AEC/VAC | AEC/VAC | 2 | 2/1/0 | 0 | 0/2/4 | 3/3/0 | 0/2/3 | 25/15/0 | 0/25/50 | 25/20/0 | 50/40/0 | 0/0/50 |
| Total | | | | 20 | | | | | | | | | | |
| I Year: Second Semester | | | | | | | | | | | | | | |
| 1 | AM102 | Mathematics-II | BSC | 4 | 3 | 1 | 0 | 3 | 0 | 25 | - | 25 | 50 | - |
| 2 | CO102 | Programming Fundamentals | ESC | 4 | 3 | 0 | 2 | 3 | 0 | 15 | 25 | 20 | 40 | - |
| 3 | MC102 | Discrete Mathematics | ESC | 4 | 3 | 1 | 0 | 3 | 0 | 25 | - | 25 | 50 | - |
| 4 | MC104 | Complex Analysis | DCC | 4 | 3 | 1 | 0 | 3 | 0 | 25 | - | 25 | 50 | - |
| 5 | MC106 | MATLAB Programming | SEC | 2 | 0 | 0 | 4 | 0 | 3 | 0 | 50 | - | - | 50 |
| 6 | AEC/VAC | AEC/VAC | AEC/VAC | 2 | 2/1/0 | 0 | 0/2/4 | 3/3/0 | 0/2/3 | 25/15/0 | 0/25/50 | 25/20/0 | 50/40/0 | 0/0/50 |
| Total | | | | 20 | | | | | | | | | | |

Additional 02 credits are to be earned from mandatory community engagement course in first year to fulfil the requirement of award of the four year B.Tech Degree.

[Signatures]

Bawana
17/2/25
1

**Department of Applied Mathematics**

Delhi Technological University,
(Formerly Delhi College of Engg.)
Bawana Road, Delhi – 42.

B.Tech Mathematics and Computing**II Year: Third Semester**

| Teaching Scheme | | | | | Contact Hours/Week | | | Exam Duration (h) | | Relative Weights (%) | | | | |
|-----------------|--------------|-----------------------------|--------------|-----------|--------------------|---|-------|-------------------|-----------|----------------------|---------|---------|---------|--------|
| S. No. | Subject Code | Course Title | Subject Area | Credit | L | T | P | Theory | Practical | CWS | PRS | MTE | ETE | PRE |
| 1 | MC201 | Data Structure | ESC | 4 | 3 | 0 | 2 | 3 | 0 | 15 | 25 | 20 | 40 | - |
| 2 | MC203 | Real Analysis | DCC | 4 | 3 | 1 | 0 | 3 | 0 | 25 | 0 | 25 | 50 | - |
| 3 | MC205 | Probability and Statistics | DCC | 4 | 3 | 0 | 2 | 3 | 0 | 15 | 25 | 20 | 40 | - |
| 4 | MC207 | Modern Algebra | DCC | 4 | 3 | 1 | 0 | 3 | 0 | 25 | 0 | 25 | 50 | - |
| 5 | MC209 | Database Management Systems | DCC | 4 | 3 | 0 | 2 | 3 | 0 | 15 | 25 | 20 | 40 | - |
| 6 | AEC/VAC | AEC/VAC | AEC/VAC | 2 | 2/1/0 | 0 | 0/2/4 | 3/3/0 | 0/2/3 | 25/15/0 | 0/25/50 | 25/20/0 | 50/40/0 | 0/0/50 |
| 7 | MS299 | Community Engagement Course | Mandatory | 2 | | | | | | | | | | |
| Total | | | | 24 | | | | | | | | | | |

II Year: Fourth Semester

| | | | | | | | | | | | | | | |
|--------------|---------|-----------------------------------|---------|-----------|-------|---|-------|-------|-------|---------|---------|---------|---------|--------|
| 1 | MC202 | Operating Systems | ESC | 4 | 3 | 0 | 2 | 3 | 0 | 15 | 25 | 20 | 40 | - |
| 2 | MC204 | Scientific Computing | DCC | 4 | 3 | 0 | 2 | 3 | 0 | 15 | 25 | 20 | 40 | - |
| 3 | MC206 | Analysis and Design of Algorithms | DCC | 4 | 3 | 1 | 0 | 3 | 0 | 25 | - | 25 | 50 | - |
| 4 | MC208 | Linear Algebra | DCC | 4 | 3 | 1 | 0 | 3 | 0 | 25 | - | 25 | 50 | - |
| 5 | MC210 | Differential Equations | DCC | 4 | 3 | 0 | 2 | 3 | 0 | 15 | 25 | 20 | 40 | - |
| 6 | AEC/VAC | AEC/VAC | AEC/VAC | 2 | 2/1/0 | 0 | 0/2/4 | 3/3/0 | 0/2/3 | 25/15/0 | 0/25/50 | 25/20/0 | 50/40/0 | 0/0/50 |
| Total | | | | 22 | | | | | | | | | | |

17/4/15

**Department of Applied Mathematics**

Delhi Technological University,
(Formerly Delhi College of Engg.)
Bawana Road, Delhi – 42.

B.Tech Mathematics and Computing**III Year: Fifth Semester**

| Teaching Scheme | | | | | Contact Hours/Week | | | Exam Duration (h) | | Relative Weights (%) | | | | |
|-----------------|--------------|---|--------------|-----------|--------------------|-----|-----|-------------------|-----------|----------------------|------|-------|-------|-----|
| S. No. | Subject Code | Course Title | Subject Area | Credit | L | T | P | Theory | Practical | CWS | PRS | MTE | ETE | PRE |
| 1 | MC301 | Theory of Computation | DCC | 4 | 3 | 1 | 0 | 3 | 0 | 25 | - | 25 | 50 | - |
| 2 | MC303 | Stochastic Processes | DCC | 4 | 3 | 1 | 0 | 3 | 0 | 25 | - | 25 | 50 | - |
| 3 | MC305 | Computer Networks | DCC | 4 | 3 | 1 | 0 | 3 | 0 | 25 | - | 25 | 50 | - |
| 4 | MGMT | Engineering Economics / Fundamentals of Management | SEC | 3 | 3 | 1 | 0 | 3 | 0 | 25 | - | 25 | 50 | - |
| 5 | MC3XX | Departmental Elective Course -1 | DEC | 4 | 3/3 | 0/1 | 2/0 | 3 | 0 | 15/25 | 25/0 | 20/25 | 40/50 | - |
| 6 | GEC | General Elective Course -1 | GEC | 4 | 3/3 | 0/1 | 2/0 | 3 | 0 | 15/25 | 25/0 | 20/25 | 40/50 | - |
| Total | | | | 23 | | | | | | | | | | |

III Year: Sixth Semester

| | | | | | | | | | | | | | | |
|--------------|-------|---|-----|-----------|-----|-----|-----|---|---|-------|------|-------|-------|---|
| 1 | MC302 | Mathematical Modelling and Simulation | DCC | 4 | 3 | 0 | 2 | 3 | 0 | 15 | 25 | 20 | 40 | - |
| 2 | MC304 | Financial Engineering | DCC | 4 | 3 | 1 | 0 | 3 | 0 | 25 | - | 25 | 50 | - |
| 3 | MGMT | Fundamentals of Management / Engineering Economics | SEC | 3 | 3 | 1 | 0 | 3 | 0 | 25 | - | 25 | 50 | - |
| 4 | MC3XX | Departmental Elective Course -2 | DEC | 4 | 3/3 | 0/1 | 2/0 | 3 | 0 | 15/25 | 25/0 | 20/25 | 40/50 | - |
| 5 | MC3XX | Departmental Elective Course -3 | DEC | 4 | 3/3 | 0/1 | 2/0 | 3 | 0 | 15/25 | 25/0 | 20/25 | 40/50 | - |
| 6 | GEC | General Elective Course -2 | GEC | 4 | 3/3 | 0/1 | 2/0 | 3 | 0 | 15/25 | 25/0 | 20/25 | 40/50 | - |
| Total | | | | 23 | | | | | | | | | | |

**Department of Applied Mathematics**

Delhi Technological University,
(Formerly Delhi College of Engg.)
Bawana Road, Delhi – 42.

B.Tech Mathematics and Computing**IV Year: Seventh Semester**

| Teaching Scheme | | | | | Contact Hours/Week | | | Exam Duration (h) | | Relative Weights (%) | | | | |
|-----------------|--------------|---------------------------------|--------------|------------|--------------------|-----|-----|-------------------|-----------|----------------------|------|-------|-------|-----|
| S. No. | Subject Code | Course Title | Subject Area | Credit | L | T | P | Theory | Practical | CWS | PRS | MTE | ETE | PRE |
| 1 | MC401 | B. Tech Project-I | DCC | 4 | - | - | - | - | - | - | 40 | - | - | 60 |
| 2 | MC403 | Internship | DCC | 2 | - | - | - | - | - | - | 40 | - | - | 60 |
| 3 | MC4XX | Departmental Elective Course -4 | DEC | 4 | 3/3 | 0/1 | 2/0 | 3 | 0 | 15/25 | 25/0 | 20/25 | 40/50 | - |
| 4 | MC4XX | Departmental Elective Course -5 | DEC | 4 | 3/3 | 0/1 | 2/0 | 3 | 0 | 15/25 | 25/0 | 20/25 | 40/50 | - |
| 5 | GEC | General Elective Course -3 | GEC | 4 | 3/3 | 0/1 | 2/0 | 3 | 0 | 15/25 | 25/0 | 20/25 | 40/50 | - |
| 6 | AEC/VAC | Indian Knowledge System | VAC | Non Credit | | | | | | | | | | |
| Total | | | | 18 | | | | | | | | | | |

IV Year: Eight Semester

| | | | | | | | | | | | | | | |
|--------------|-------|---------------------------------|-----|-----------|-----|-----|-----|---|---|-------|------|-------|-------|----|
| 1 | MC402 | B. Tech Project-II | DCC | 8 | - | - | - | - | - | - | 40 | - | - | 60 |
| 2 | MC4XX | Departmental Elective Course -6 | DEC | 4 | 3/3 | 0/1 | 2/0 | 3 | 0 | 15/25 | 25/0 | 20/25 | 40/50 | - |
| 3 | GEC | General Elective Course -4 | GEC | 4 | 3/3 | 0/1 | 2/0 | 3 | 0 | 15/25 | 25/0 | 20/25 | 40/50 | - |
| Total | | | | 16 | | | | | | | | | | |

| | | |
|-------------------------|------------|--|
| Cumulative Total | 166 | |
|-------------------------|------------|--|



Department of Applied Mathematics

Delhi Technological University,
(Formerly Delhi College of Engg.)
Bawana Road, Delhi - 42.

B. Tech. Mathematics and Computing

Departmental Elective Course

Departmental Elective Course -1 (Semester - 5)

| | |
|-------|--------------------------------|
| MC307 | Artificial Intelligence |
| MC309 | Number Theory |
| MC311 | Numerical Linear Algebra |
| MC313 | Operations Research |
| MC315 | Partial Differential Equations |

Departmental Elective Course -2 (Semester - 6)

| | |
|-------|-------------------------------|
| MC306 | Object Oriented Programming |
| MC308 | Computer Graphics |
| MC310 | Machine Learning |
| MC312 | Wireless and Mobile Computing |
| MC314 | Quantum Information Theory |
| | |

Departmental Elective Course -3 (Semester - 6)

| | |
|-------|--|
| MC316 | Computer Organization and Architecture |
| MC318 | Software Engineering |
| MC320 | Web Technology |
| MC322 | Graph Theory |
| MC324 | Fuzzy set and Fuzzy logic |
| | |

Departmental Elective Course -4 (Semester - 7)

| | |
|-------|---------------------------|
| MC405 | Optimization Techniques |
| MC407 | Numerical methods for ODE |
| MC409 | Tensor Calculus |
| MC411 | Statistical Inference |
| MC413 | Big Data Analytics |

Departmental Elective Course -5 (Semester - 7)

| | |
|-------|-----------------------------------|
| MC415 | Data Warehousing and Data Mining |
| MC417 | Cryptography and Network Security |
| MC419 | Differential Geometry |
| MC421 | Topology |
| MC423 | Functional Analysis |
| MC425 | Compiler Design |

Departmental Elective Course -6 (Semester - 8)

| | |
|-------|---|
| MC404 | Numerical Methods for PDE |
| MC406 | Finite Element Methods |
| MC408 | Statistical Quality Control and Decision Making |
| MC410 | Game Theory |
| MC412 | Information Theory and Coding |
| MC414 | Natural Language Processing |

Handwritten signature

Handwritten signature

Handwritten signature

Handwritten signature

Handwritten signature
17/2/25

**Department of Applied Mathematics**

Delhi Technological University,
(Formerly Delhi College of Engg.)
Bawana Road, Delhi – 42.

Offered by Department of Applied Mathematics

| Minor in Mathematics & Computing (For students of other Disciplines) | | | |
|---|--------------------|---|--------------------|
| S. No. | Course Code | Course Title | Course Type |
| 1 | MC208 | Linear Algebra | Compulsory |
| 2 | MC210 | Differential Equation | Compulsory |
| 3 | MC205 | Probability and Statistics | Compulsory |
| 4 | MC302 | Mathematical Modelling and Simulation | Elective |
| 5 | MC307 | Artificial Intelligence | Elective |
| 6 | MC311 | Numerical Linear Algebra | Elective |
| 7 | MC313 | Operations Research | Elective |
| 8 | MC322 | Graph Theory | Elective |
| 9 | MC417 | Cryptography and Network Security | Elective |
| 10 | MC324 | Fuzzy set and Fuzzy logic | Elective |
| Minor in Industrial Mathematics | | | |
| S. No. | Course Code | Course Title | Course Type |
| 1 | MC205 | Probability and Statistics | Compulsory |
| 2 | MC303 | Stochastic Processes | Compulsory |
| 3 | MC304 | Financial Engineering | Compulsory |
| 4 | MC302 | Mathematical Modelling and Simulation | Elective |
| 5 | MC313 | Operations Research | Elective |
| 6 | MC322 | Graph Theory | Elective |
| 7 | MC324 | Fuzzy set and Fuzzy logic | Elective |
| 8 | MC408 | Statistical Quality Control and Decision Making | Elective |
| 9 | MC410 | Game Theory | Elective |
| 10 | MC411 | Statistical Inference | Elective |
| 11 | MC405 | Optimization Techniques | Elective |
| 12 | MC310 | Machine Learning | Elective |
| Minor in Computational Intelligence | | | |
| S. No | Course Code | Course Title | Course Type |
| 1 | MC205 | Probability and Statistics | Compulsory |
| 2 | MC206 | Analysis and Design of Algorithms | Compulsory |
| 3 | MC303 | Stochastic Processes | Compulsory |
| 4 | MC302 | Mathematical Modelling and Simulation | Elective |
| 5 | MC307 | Artificial Intelligence | Elective |
| 6 | MC413 | Big Data Analytics | Elective |
| 7 | MC408 | Statistical Quality Control and Decision Making | Elective |
| 8 | MC415 | Data Warehousing and Data Mining | Elective |
| 9 | MC411 | Statistical Inference | Elective |
| 10 | MC310 | Machine Learning | Elective |
| 11 | MC406 | Finite Element Methods | Elective |

Handwritten signatures:
civ
hans

Handwritten signature:
[Signature]

Handwritten signature:
[Signature]

Handwritten signature:
[Signature]

Handwritten signature:
[Signature]

Handwritten signature and date:
Bawalvi
17/2/21