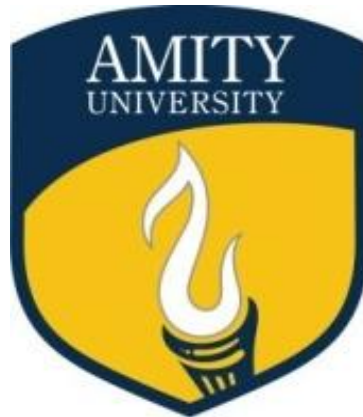


**Bachelor of Science  
Programme Code: B.Sc.(IT)**

**Duration – 3 Years Full Time**



**Programme Structure,  
Curriculum & Scheme of Examination**

**Batch: 2018-21**

**AMITY UNIVERSITY  
MADHYA PRADESH**


  
Registrar  
Amity University Madhya Pradesh  
Gwalior

**PROGRAMME STRUCTURE**

| <b>FIRST SEMESTER</b>                    |   |                                   |                                    |                                     |                      |              |
|--|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                       | <b>Course Title</b>                         | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| BCA 101                                  | Computer Fundamentals and Office Automation | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 104                                  | Programming for Problem Solving             | 3                                 | -                                  | -                                   | 3                    | 30           |
| MAT 102                                  | Mathematics – I                             | 3                                 | 1                                  | -                                   | 4                    | 40           |
| ECE 306                                  | Digital Electronics and Logic Design        | 2                                 | 1                                  | -                                   | 3                    | 30           |
| BCH 110                                  | Principles of Management                    | 2                                 | 1                                  | -                                   | 3                    | 30           |
| BCA 121                                  | Office Automation Lab                       | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 124                                  | Programming for Problem Solving Lab         | -                                 | -                                  | 4                                   | 2                    | 40           |
| ECE 326                                  | Digital Electronics and Logic Design Lab    | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 141                                  | Communication Skills – I                    | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS 142                                  | Environmental Studies – I                   | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 143                                  | Behavioural Science – I                     | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 144                                  | French – I                                  | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                              |   | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b>    |   |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hrs Including CBCS per week</b> |   |                                   |                                    |                                     | <b>33</b>            |              |
| <b>Total Hrs in the Semester</b>         |   |                                   |                                    |                                     | <b>330</b>           |              |

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| <b>SECOND SEMESTER</b>                |   |                                   |                                    |                                     |                      |              |
|---------------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>                       | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 202                               | Mathematics – II                          | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 204                               | Object Oriented Programming Using C++     | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 402                               | Computer Organization and Architecture    | 2                                 | 1                                  | -                                   | 3                    | 30           |
| BME 103                               | Production & Operations Management        | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 505                               | Introduction to Web Technologies          | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 224                               | Object Oriented Programming Using C++ Lab | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 525                               | Web Technologies Lab                      | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 241                               | Communication Skills – II                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS 242                               | Environmental Studies – II                | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 243                               | Behavioural Science – II                  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 244                               | French – II                               | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                           |   | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |   |                                   |                                    |                                     | <b>27</b>            |              |
| <b>Total Hrs Including CBCS</b>       |   |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hrs in the Semester</b>      |   |                                   |                                    |                                     | <b>290</b>           |              |
| SUMMER PROJECT – I                    |   |                                   |                                    |                                     |                      |              |

  
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| <b>THIRD SEMESTER</b>                 |  |                                   |                                    |                                     |                      |              |
|---------------------------------------|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>                                  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 302                               | Computer Oriented Statistical & Optimization Methods | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 401                               | Discrete Mathematics                                 | 4                                 | -                                  | -                                   | 4                    | 40           |
| CSE 202                               | Data Structures through C++                          | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 304                               | Database Management Systems                          | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 404                               | Operating Systems                                    | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 222                               | Data Structures through C++ Lab                      | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 324                               | Database Management Systems Lab                      | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 424                               | Operating Systems Lab                                | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 341                               | Communication Skills –III                            | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU343                                | Behavioural Science – III                            | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 344                               | French – III   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 360                               | <b>Summer Project – I (Evaluation)</b>               | -                                 | -                                  | -                                   | 3                    | -            |
| <b>CBCS</b>                           |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |  |                                   |                                    |                                     | <b>30</b>            |              |
| <b>Total Hrs Including CBCS</b>       |  |                                   |                                    |                                     | <b>30</b>            |              |
| <b>Total Hrs in the Semester</b>      |  |                                   |                                    |                                     | <b>300</b>           |              |

  
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| <b>FOURTH SEMESTER</b>                |  |                                   |                                    |                                     |                      |              |
|---------------------------------------|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 401                               | Computer Oriented Numerical Methods      | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 601                               | Data Communication and Computer Networks | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 602                               | Quantitative Aptitude                    | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 604                               | Problem Solving Techniques – I           | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 403                               | Java Programming                         | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 624                               | Problem Solving Techniques Lab – I       | -                                 | -                                  | 4                                   | 2                    | 40           |
| CSE 423                               | Java Programming Lab                     | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 441                               | Communication Skills – IV                | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 443                               | Behavioural Science – IV                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 444                               | French – IV                              | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                           |  | 4                                 | -                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS)</b> |  |                                   |                                    |                                     | <b>28</b>            |              |
| <b>Total Hrs Including CBCS</b>       |  |                                   |                                    |                                     |                      | <b>32</b>    |
| <b>Total Hrs in the Semester</b>      |  |                                   |                                    |                                     |                      | <b>320</b>   |
| SUMMER PROJECT – II                   |  |                                   |                                    |                                     |                      |              |

  
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| <b>FIFTH SEMESTER</b>                 |   |                                   |                                    |                                     |                      |              |
|---------------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>                     | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| BSI 601                               | E-Commerce                              | 3                                 | -                                  | -                                   | 3                    | 30           |
| BSI 602                               | Management Information Systems          | 2                                 | -                                  | -                                   | 2                    | 20           |
| CSE 603                               | Internet of Things (IOT)                | 2                                 | -                                  | -                                   | 2                    | 20           |
| CSE 605                               | Software Engineering                    | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 623                               | Internet of Things (IOT) Lab            | -                                 | -                                  | 4                                   | 2                    | 40           |
| CSE 625                               | Software Engineering Lab                | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 541                               | Communication Skills – V                | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 543                               | Behavioural Science – V                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 544                               | French – V                              | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 560                               | <b>Summer Project – II (Evaluation)</b> | -                                 | -                                  | -                                   | 6                    | -            |
| <b>CBCS</b>                           |   | 3                                 | 1                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS)</b> |   |                                   |                                    |                                     | <b>27</b>            |              |
| <b>Total Hrs Including CBCS</b>       |   |                                   |                                    |                                     |                      | <b>24</b>    |
| <b>Total Hrs in the Semester</b>      |   |                                   |                                    |                                     |                      | <b>240</b>   |

  
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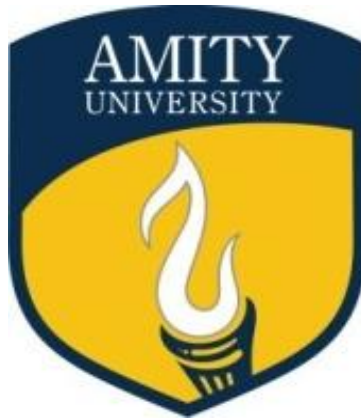
| <b>SIXTH SEMESTER</b>                 |                               |                                   |                                    |                                     |                      |              |
|---------------------------------------|-------------------------------|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>           | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| BCA 601                               | Multimedia & its Applications | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 302                               | Python Programming            | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 704                               | Data Analytics                | 3                                 | -                                  | -                                   | 3                    | 30           |
| BCA 621                               | Multimedia Lab                | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 322                               | Python Programming Lab        | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 724                               | Data Analytics Lab            | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 641                               | Communication Skills – VI     | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 643                               | Behavioural Science – VI      | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 644                               | French – VI                   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NMP 661                               | <b>Major Project</b>          | -                                 | -                                  | -                                   | 9                    | -            |
| <b>CBCS</b>                           |                               | -                                 | -                                  | -                                   | 1                    | -            |
| <b>TOTAL CREDITS (Including CBCS)</b> |                               |                                   |                                    |                                     | <b>26</b>            |              |
| <b>Total Hrs Including CBCS</b>       |                               |                                   |                                    |                                     | <b>19</b>            |              |
| <b>Total Hrs in the Semester</b>      |                               |                                   |                                    |                                     | <b>190</b>           |              |

  
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**Bachelor of Technology  
(Civil Engineering)**

**Programme Code: CIV**

**Duration – 4 Years Full Time**



**Programme Structure  
&  
Curriculum & Scheme of Examination**

**2018-22  
(Based on AICTE)**

**AMITY UNIVERSITY  
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Gwalior

| <b>FIRST SEMESTER</b>                      |  |                                   |                                    |                                     |                      |              |
|--|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                         | <b>Course Title</b>                                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 101                                    | Applied Mathematics – I<br>(Calculus and Linear Algebra) | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CHE 101                                    | Applied Chemistry  | 3                                 | 1                                  | -                                   | 4                    | 40           |
| ECE 101                                    | Basic Electrical Engineering                             | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 101                                    | Engineering Graphics & Design                            | 1                                 | -                                  | -                                   | 1                    | 10           |
| CHE 121                                    | Applied Chemistry Lab                                    | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 121                                    | Basic Electrical Engineering Lab                         | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 121                                    | Engineering Graphics & Design Lab                        | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 141                                    | Communication Skills – I                                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS 142                                    | Environmental Studies – I                                | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 143                                    | Behavioural Science – I                                  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 144                                    | French – I   | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                                |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b>      |  |                                   |                                    |                                     | <b>25</b>            |              |
| <b>Total Hours Including CBCS per week</b> |  |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hours in the Semester</b>         |  |                                   |                                    |                                     | <b>290</b>           |              |

  
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| <b>SECOND SEMESTER</b>                |   |                                   |                                    |                                     |                      |              |
|---------------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>   | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 201                               | Applied Mathematics – II<br>(Ordinary & Partial Differential Equations and Transform) | 3                                 | 1                                  | -                                   | 4                    | 40           |
| PHY 101                               | Applied Physics – I   | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 104                               | Programming for Problem Solving   | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 102                               | Workshop/ Manufacturing Practices   | 1                                 | -                                  | -                                   | 1                    | 10           |
| PHY 121                               | Applied Physics Lab – I   | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 124                               | Programming for Problem Solving Lab   | -                                 | -                                  | 4                                   | 2                    | 40           |
| BME 122                               | Workshop/ Manufacturing Practices Lab   | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 241                               | Communication Skills – II   | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS 242                               | Environmental Studies – II  | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 243                               | Behavioural Science – II  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 244                               | French – II   | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                           |   | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |   |                                   |                                    |                                     | <b>26</b>            |              |
| <b>Total Hours Including CBCS</b>     |   |                                   |                                    |                                     | <b>31</b>            |              |
| <b>Total Hours in the Semester</b>    |   |                                   |                                    |                                     | <b>310</b>           |              |
| TERM PAPER DURING SUMMER BREAK        |   |                                   |                                    |                                     |                      |              |

  
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| <b>THIRD SEMESTER</b>                 |  |                                   |                                    |                                     |                      |              |
|---------------------------------------|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 301                               | Applied Mathematics-III<br>(Probability, Statistics and Numerical Methods) | 3                                 | -                                  | -                                   | 3                    | 30           |
| CIV 302                               | Computer-Aided Civil Engineering Drawing                                   | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 303                               | Engineering Mechanics  | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CIV 304                               | Energy Science & Engineering   | 1                                 | 1                                  | -                                   | 2                    | 20           |
| CIV 305                               | Basic Civil Engineering  | 2                                 | -                                  | -                                   | 2                    | 20           |
| BME 104                               | Mechanical Engineering   | 2                                 | -                                  | -                                   | 2                    | 20           |
| ECE 307                               | Basic Electronics  | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 306                               | Biology for Engineers  | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 307                               | Life Science   | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 322                               | Computer-aided Civil Engineering Drawing Lab                               | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 327                               | Basic Electronics Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 341                               | Communication Skills – III   | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 343                               | Behavioural Science – III  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 344                               | French – III   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NTP 330                               | <b>Term paper (Evaluation)</b>   | -                                 | -                                  | -                                   | 2                    |              |
| <b>CBCS</b>                           |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |  |                                   |                                    |                                     | <b>32</b>            |              |
| <b>Total Hours. including CBCS</b>    |  |                                   |                                    |                                     | <b>32</b>            |              |
| <b>Total Hours in the Semester</b>    |  |                                   |                                    |                                     | <b>320</b>           |              |

  
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| <b>FOURTH SEMESTER</b>                                |  |                                   |                                    |                                     |                      |              |
|---|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                    | <b>Course Title</b>  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CIV 401   | Materials, Testing & Evaluation  | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 402   | Engineering Geology  | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 403   | Surveying  | 1                                 | 1                                  | -                                   | 2                    | 20           |
| CIV 404   | Fluid Mechanics  | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 405   | Solid Mechanics  | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 406   | Disaster Preparedness & Planning   | 1                                 | 1                                  | -                                   | 2                    | 20           |
| CIV 407   | Civil Engineering - Societal & Global Impact                                 | 1                                 | 1                                  | -                                   | 2                    | 20           |
| ECE 407   | Instrumentation & Sensor Technologies for Civil Engineering Applications     | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 421   | Materials Testing and Evaluation Lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| CIV 422   | Engineering Geology Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| CIV 423   | Surveying lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| CIV 424   | Fluid Mechanics Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 427   | Instrumentation & Sensor Technologies for Civil Engineering Applications Lab | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 441   | Communication Skills – IV  | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 443   | Behavioural Science – IV   | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 444   | French – IV  | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>   |  | 3                                 | 1                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS)</b>                 |  |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hours including CBCS</b>                     |  |                                   |                                    |                                     | <b>34</b>            |              |
| <b>Total Hours in the Semester</b>                    |  |                                   |                                    |                                     | <b>340</b>           |              |
| <b>INDUSTRIAL PRACTICAL TRAINING – I: 6 – 8 WEEKS</b> |  |                                   |                                    |                                     |                      |              |

  
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| <b>FIFTH SEMESTER</b>                |   |                                   |                                    |                                     |                      |              |
|--------------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                   | <b>Course Title</b>                                 | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CIV 501                              | Mechanics of Materials                              | 3                                 | -                                  | -                                   | 3                    | 30           |
| CIV 502                              | Hydraulic Engineering                               | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 503                              | Structural Engineering                              | 3                                 | -                                  | -                                   | 3                    | 30           |
| CIV 504                              | Geotechnical Engineering                            | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 505                              | Hydrology & Water Resources Engineering             | 3                                 | -                                  | -                                   | 3                    | 30           |
| CIV 506                              | Environmental Engineering – I                       | 3                                 | -                                  | -                                   | 3                    | 30           |
| CIV 507                              | Transportation Engineering                          | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 522                              | Hydraulic Engineering Lab                           | -                                 | -                                  | 2                                   | 1                    | 20           |
| CIV 524                              | Geotechnical Engineering Lab                        | -                                 | -                                  | 2                                   | 1                    | 20           |
| CIV 527                              | Transportation Engineering Lab                      | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 541                              | Communication Skills – V                            | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 543                              | Behavioural Science – V                             | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 544                              | French – V  | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 550                              | <b>Industrial Practical Training I (Evaluation)</b> | -                                 | -                                  | -                                   | 3                    | -            |
| <b>CBCS</b>                          |   | 3                                 | 1                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDIT (Including CBCS)</b> |   |                                   |                                    |                                     | <b>32</b>            |              |
| <b>Total Hours including CBCS</b>    |   |                                   |                                    |                                     | <b>32</b>            |              |
| <b>Total hours in semester</b>       |   |                                   |                                    |                                     | <b>320</b>           |              |

  
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| <b>SIXTH SEMESTER</b>                                    |  |                                   |                                    |                                     |                      |              |
|--|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                       | <b>Course Title</b>                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CIV 601  | Construction Engineering & Management    | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CIV 602  | Geometric Design of Highways             | 3                                 | -                                  | -                                   | 3                    | 30           |
| CIV 603  | Environmental Engineering – II           | 3                                 | -                                  | -                                   | 3                    | 30           |
| CIV 604  | Estimating and Costing                   | 2                                 | -                                  | -                                   | 2                    | 20           |
| CIV 622  | Geometric Design of Highways Lab         | -                                 | -                                  | 2                                   | 1                    | 20           |
| CIV 623  | Environmental Engineering – II Lab       | -                                 | -                                  | 2                                   | 1                    | 20           |
| CIV 624  | Estimating and Costing Lab               | -                                 | -                                  | 2                                   | 1                    | 20           |
| <b>ELECTIVES (Any one from following with Practical)</b> |  |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| CIV 605  | River Engineering                        | 3                                 | -                                  | -                                   | -                    | -            |
| CIV 606  | Open Channel Flow                        | 3                                 | -                                  | -                                   | -                    | -            |
| CIV 607  | Solid and Hazardous Waste Management     | 3                                 | -                                  | -                                   | -                    | -            |
| CIV 625  | River Engineering Lab                    | -                                 | -                                  | 2                                   | -                    | -            |
| CIV 626  | Open Channel Flow Lab                    | -                                 | -                                  | 2                                   | -                    | -            |
| CIV 627  | Solid and Hazardous Waste Management Lab | -                                 | -                                  | 2                                   | -                    | -            |
| BCH 620  | Engineering Economics                    | 2                                 | 1                                  |                                     | 3                    | 30           |
| BCU 641  | Communication Skills – VI                | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 643  | Behavioural Science – VI                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 644  | French – VI                              | 2                                 | -                                  | -                                   | 2                    | 20           |
| NMP 660  | <b>Minor Project</b>                     | -                                 | -                                  | -                                   | 2                    | -            |
| <b>CBCS</b>  |  | -                                 | -                                  | -                                   | 1                    | -            |
| <b>TOTAL CREDIT (Including CBCS)</b>                     |  |                                   |                                    |                                     | <b>28</b>            |              |
| <b>Total Hours per week</b>                              |  |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total hours in semester</b>                           |  |                                   |                                    |                                     | <b>290</b>           |              |
| <b>INDUSTRIAL PRACTICAL TRAINING II: 6-8 WEEKS</b>       |  |                                   |                                    |                                     |                      |              |

  
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| <b>SEVENTH SEMESTER</b>   |  |                                   |                                    |                                     |                      |              |
|---|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>  | <b>Course Title</b>                                  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CIV 701   | Design of Concrete Structures                        | 3                                 | 1                                  |                                     | 4                    | 40           |
| <b>ELECTIVES (Any one from each category)</b><br>A. (With Practical)    |  |                                   |                                    |                                     | 4                    | 50           |
| CIV 702   | Surface Hydrology                                    | 3                                 | -                                  | -                                   | -                    | -            |
| CIV 703   | Water Resources Field Methods                        | 3                                 | -                                  | -                                   | -                    | -            |
| CIV 704   | Environmental Fluid Mechanics                        | 3                                 | -                                  | -                                   | -                    | -            |
| CIV 722   | Surface Hydrology Lab                                | -                                 | -                                  | 2                                   | -                    | -            |
| CIV 723   | Water Resources Field Methods Lab                    | -                                 | -                                  | 2                                   | -                    | -            |
| CIV 724   | Environmental Fluid Mechanics Lab                    | -                                 | -                                  | 2                                   | -                    | -            |
| <b>ELECTIVES (Any one from each category)</b><br>B. (Without Practical) |  |                                   |                                    |                                     | 3                    | 30           |
| CIV 705   | Concrete Technology                                  | 3                                 | -                                  | -                                   | -                    | -            |
| CIV 706   | Pres-stressed Concrete                               | 3                                 | -                                  | -                                   | -                    | -            |
| CIV 707   | Masonry Structures                                   | 3                                 | -                                  | -                                   | -                    | -            |
| BCU 741   | Communication Skills – VII                           | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 743   | Behavioural Science – VII                            | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 744   | French – VII   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 750   | <b>Industrial Practical Training–II (Evaluation)</b> | -                                 | -                                  | -                                   | 5                    | -            |
| NMP 760   | <b>Major Project – I</b>                             | -                                 | -                                  | -                                   | 6                    | -            |
| <b>TOTAL CREDIT</b>   |  |                                   |                                    |                                     | <b>26</b>            |              |
| <b>Total hours per week</b>   |  |                                   |                                    |                                     | <b>16</b>            |              |
| <b>Total hours in semester</b>  |  |                                   |                                    |                                     | <b>160</b>           |              |

  
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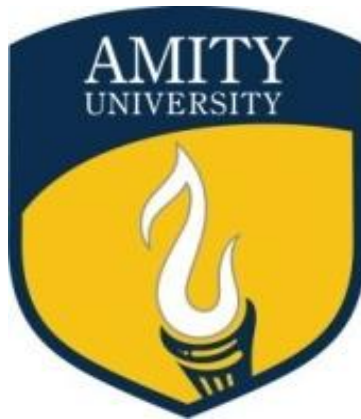
| <b>EIGHTH SEMESTER</b>                                   |                             |                                   |                                    |                                     |                      |              |
|--|-----------------------------|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                       | <b>Course Title</b>         | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CIV 801  | Design of Steel Structures  | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CIV 802  | Airport Planning and Design | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>ELECTIVES (Any one from following with Practical)</b> |                             |                                   |                                    |                                     | 4                    | 50           |
| CIV 803  | Foundation Engineering      | 3                                 | -                                  | -                                   | -                    | -            |
| CIV 804  | Structural Geology          | 3                                 | -                                  | -                                   | -                    | -            |
| CIV 805  | Rock Mechanics              | 3                                 | -                                  | -                                   | -                    | -            |
| CIV 823  | Foundation Engineering Lab  | -                                 | -                                  | 2                                   | -                    | -            |
| CIV 824  | Structural Geology Lab      | -                                 | -                                  | 2                                   | -                    | -            |
| CIV 825  | Rock Mechanics Lab          | -                                 | -                                  | 2                                   | -                    | -            |
| BCU 841  | Communication Skills – VIII | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 843  | Behavioral Science – VIII   | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 844  | French – VIII               | 2                                 | -                                  | -                                   | 2                    | 20           |
| NMP 860  | <b>Major Project – II</b>   | -                                 | -                                  | -                                   | 9                    | -            |
| <b>TOTAL CREDIT</b>                                      |                             |                                   |                                    |                                     | <b>24</b>            |              |
| <b>Total hours per week</b>                              |                             |                                   |                                    |                                     | <b>16</b>            |              |
| <b>Total hours in semester</b>                           |                             |                                   |                                    |                                     | <b>160</b>           |              |

  
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**Bachelor of Technology  
(Computer Science & Engineering)**

**Programme Code: CSE**

**Duration – 4 Years Full Time**



**Programme Structure  
&  
Curriculum & Scheme of Examination**

**2018-22  
(Based on AICTE)**

**AMITY UNIVERSITY  
MADHYA PRADESH**

  
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**PROGRAMMESTRUCTURE**

| <b>FIRST SEMESTER</b>                    |  |                                   |                                    |                                     |                      |              |
|--|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                       | <b>Course Title</b>                                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 101                                  | Applied Mathematics – I<br>(Calculus and Linear Algebra) | 3                                 | 1                                  | -                                   | 4                    | 40           |
| PHY 101                                  | Applied Physics – I                                      | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 104                                  | Programming for Problem Solving                          | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 102                                  | Workshop/ Manufacturing Practices                        | 1                                 | -                                  | -                                   | 1                    | 10           |
| PHY 121                                  | Applied Physics Lab – I                                  | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 124                                  | Programming for Problem Solving Lab                      | -                                 | -                                  | 4                                   | 2                    | 40           |
| BME 122                                  | Workshop/ Manufacturing Practices Lab                    | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 141                                  | Communication Skills –I                                  | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS 142                                  | Environmental Studies – I                                | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 143                                  | Behavioural Science – I                                  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 144                                  | French – I   | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                              |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b>    |  |                                   |                                    |                                     | <b>26</b>            |              |
| <b>Total Hrs Including CBCS per week</b> |  |                                   |                                    |                                     |                      | <b>31</b>    |
| <b>Total Hrs in the Semester</b>         |  |                                   |                                    |                                     |                      | <b>310</b>   |

  
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| <b>SECOND SEMESTER</b>                |   |                                   |                                    |                                     |                      |              |
|---------------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>   | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 201                               | Applied Mathematics – II<br>(Ordinary & Partial Differential Equations and Transform) | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CHE 101                               | Applied Chemistry   | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 202                               | Data Structures through C++   | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 101                               | Basic Electrical Engineering  | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 101                               | Engineering Graphics & Design   | 1                                 | -                                  | -                                   | 1                    | 10           |
| CHE 121                               | Applied Chemistry Lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 222                               | Data Structures through C++ Lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 121                               | Basic Electrical Engineering Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 121                               | Engineering Graphics & Design Lab   | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 241                               | Communication Skills – II   | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS 242                               | Environmental Studies – II  | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 243                               | Behavioural Science – II  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 244                               | French – II   | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                           |   | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |   |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hrs Including CBCS</b>       |   |                                   |                                    |                                     |                      | <b>34</b>    |
| <b>Total Hrs in the Semester</b>      |   |                                   |                                    |                                     |                      | <b>340</b>   |
| TERM PAPER DURING SUMMER BREAK        |   |                                   |                                    |                                     |                      |              |

  
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| <b>THIRD SEMESTER</b>                 |  |                                   |                                    |                                     |                      |              |
|---------------------------------------|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 301                               | Applied Mathematics – III<br>(Probability, Statistics and Numerical Methods) | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 302                               | Python Programming   | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 303                               | Design and Analysis of Algorithms  | 4                                 | -                                  | -                                   | 4                    | 40           |
| CSE 304                               | Database Management Systems  | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 306                               | Digital Electronics and Logic Design   | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 322                               | Python Programming Lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 323                               | Design and Analysis of Algorithms Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 324                               | Database Management Systems Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 326                               | Digital Electronics and Logic Design Lab                                     | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 341                               | Communication Skills – III   | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 343                               | Behavioural Science – III  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 344                               | French – III   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NTP 330                               | <b>Term Paper (Evaluation)</b>   | -                                 | -                                  | -                                   | 2                    | -            |
| <b>CBCS</b>                           |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |  |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hrs Including CBCS</b>       |  |                                   |                                    |                                     | <b>31</b>            |              |
| <b>Total Hrs in the Semester</b>      |  |                                   |                                    |                                     | <b>310</b>           |              |

  
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| <b>FOURTH SEMESTER</b>                                 |  |                                   |                                    |                                     |                      |              |
|--|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                     | <b>Course Title</b>                    | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CSE 401  | Discrete Mathematics                   | 4                                 | -                                  | -                                   | 4                    | 40           |
| CSE 402  | Computer Organization and Architecture | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 406  | Analog Electronic Circuits             | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 403  | Java Programming                       | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 404  | Operating Systems                      | 2                                 | 1                                  | -                                   | 3                    | 30           |
| ECE 426  | Analog Electronic Circuits Lab         | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 423  | Java Programming Lab                   | -                                 | -                                  | 4                                   | 2                    | 40           |
| CSE 424  | Operating Systems Lab                  | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 441  | Communication Skills – IV              | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 443  | Behavioral Science – IV                | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 444  | French – IV                            | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>  |  | 4                                 | -                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS)</b>                  |  |                                   |                                    |                                     | <b>28</b>            |              |
| <b>Total Hrs Including CBCS</b>                        |  |                                   |                                    |                                     | <b>32</b>            |              |
| <b>Total Hrs in the Semester</b>                       |  |                                   |                                    |                                     | <b>320</b>           |              |
| <b>INDUSTRIAL PRACTICAL TRAINING – I : 6 – 8 WEEKS</b> |  |                                   |                                    |                                     |                      |              |

  
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| <b>FIFTH SEMESTER</b>                 |   |                                   |                                    |                                     |                      |              |
|---------------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>                                   | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CSE 501                               | Theory of Computation                                 | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 502                               | Computer Graphics                                     | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 503                               | Introduction to Android Application Development       | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 504                               | Advanced Java Programming                             | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 505                               | Introduction to Web Technologies                      | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 522                               | Computer Graphics Lab                                 | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 523                               | Introduction to Android Application Development Lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 524                               | Advanced Java Programming Lab                         | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 525                               | Web Technologies Lab                                  | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 541                               | Communication Skills – V                              | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 543                               | Behavioural Science – V                               | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 544                               | French – V  | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 550                               | <b>Industrial Practical Training - I (Evaluation)</b> | -                                 | -                                  | -                                   | 3                    | -            |
| <b>CBCS</b>                           |   | 3                                 | 1                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS)</b> |   |                                   |                                    |                                     | <b>31</b>            |              |
| <b>Total Hrs Including CBCS</b>       |   |                                   |                                    |                                     |                      | <b>32</b>    |
| <b>Total Hrs in the Semester</b>      |   |                                   |                                    |                                     |                      | <b>320</b>   |

  
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| <b>SIXTH SEMESTER</b>                                    |  |                                   |                                    |                                     |                      |              |
|--|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                       | <b>Course Title</b>                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CSE 601  | Data Communication and Computer Networks | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 602  | Quantitative Aptitude                    | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 603  | Internet of Things (IOT)                 | 2                                 | -                                  | -                                   | 2                    | 20           |
| CSE 604  | Problem Solving Techniques – I           | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 623  | Internet of Things (IOT) Lab             | -                                 | -                                  | 4                                   | 2                    | 40           |
| CSE 624  | Problem Solving Techniques Lab – I       | -                                 | -                                  | 4                                   | 2                    | 40           |
| <b>ELECTIVES (Any one from following with Practical)</b> |  |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| CSE 605  | Software Engineering                     | 2                                 | 1                                  | -                                   | -                    | -            |
| CSE 606  | Object Oriented Analysis and Design      | 2                                 | 1                                  | -                                   | -                    | -            |
| CSE 607  | Soft Computing                           | 2                                 | 1                                  | -                                   | -                    | -            |
| CSE 625  | Software Engineering Lab                 | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 626  | Object Oriented Analysis and Design Lab  | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 627  | Soft Computing Lab                       | -                                 | -                                  | 2                                   | -                    | -            |
| BCU 641  | Communication Skills – VI                | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 643  | Behavioural Science – VI                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 644  | French– VI                               | 2                                 | -                                  | -                                   | 2                    | 20           |
| NMP 660  | <b>Minor Project</b>                     | -                                 | -                                  | -                                   | 2                    | -            |
| <b>CBCS</b>  |  |                                   |                                    |                                     | <b>1</b>             | <b>-</b>     |
| <b>TOTAL CREDITS (Including CBCS)</b>                    |  |                                   |                                    |                                     | <b>26</b>            |              |
| <b>Total Hrs per Week</b>                                |  |                                   |                                    |                                     |                      | <b>28</b>    |
| <b>Total Hrs in the Semester</b>                         |  |                                   |                                    |                                     |                      | <b>280</b>   |
| <b>INDUSTRIAL PRACTICAL TRAINING –II: 6 – 8 WEEKS</b>    |  |                                   |                                    |                                     |                      |              |

  
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| <b>SEVENTH SEMESTER</b>                       |  |                                   |                                    |                                     |                      |              |
|---|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                            | <b>Course Title</b>                                    | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CSE 701                                       | Cloud Computing  | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 702                                       | Artificial Intelligence                                | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 703                                       | Problem Solving Techniques – II                        | 2                                 | -                                  | -                                   | 2                    | 20           |
| CSE 721                                       | Cloud Computing Lab                                    | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 722                                       | Artificial Intelligence Lab                            | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 723                                       | Problem Solving Techniques Lab – II                    | -                                 | -                                  | 4                                   | 2                    | 40           |
| <b>ELECTIVES (Any one from each category)</b> |  |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| <b>A (With Practical)</b>                     |  |                                   |                                    |                                     |                      |              |
| CSE 704                                       | Data Analytics   | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 705                                       | Distributed Operating System                           | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 706                                       | Simulation and Modeling                                | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 724                                       | Data Analytics Lab                                     | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 725                                       | Distributed Operating System Lab                       | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 726                                       | Simulation and Modeling Lab                            | -                                 | -                                  | 2                                   | -                    | -            |
| <b>ELECTIVES (Any one from each category)</b> |  |                                   |                                    |                                     | <b>3</b>             | <b>30</b>    |
| <b>B (Without Practical)</b>                  |  |                                   |                                    |                                     |                      |              |
| CSE 707                                       | Mobile Computing                                       | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 708                                       | Compiler Construction                                  | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 709                                       | Grid Computing   | 3                                 | -                                  | -                                   | -                    | -            |
| BCU 741                                       | Communication Skills – VII                             | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 743                                       | Behavioural Science – VII                              | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 744                                       | French– VII  | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 750                                       | <b>Industrial Practical Training – II (Evaluation)</b> | -                                 | -                                  | -                                   | 5                    | -            |
| NMP 760                                       | <b>Major Project – I</b>                               | -                                 | -                                  | -                                   | 6                    | -            |
| <b>TOTAL CREDITS</b>                          |  |                                   |                                    |                                     | <b>34</b>            | <b>-</b>     |
| <b>Total Hrs per Week</b>                     |  |                                   |                                    |                                     | <b>28</b>            |              |
| <b>Total Hrs in the Semester</b>              |  |                                   |                                    |                                     | <b>280</b>           |              |

  
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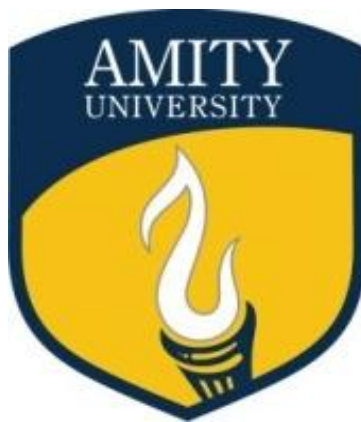
| <b>EIGHTH SEMESTER</b>                                   |  |                                   |                                    |                                     |                      |              |
|--|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                       | <b>Course Title</b>                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CSE 801  | Digital Image Processing                 | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 802  | Software Testing & Quality Assurance     | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 803  | Cryptography & Network Security          | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 821  | Digital Image Processing Lab             | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 822  | Software Testing & Quality Assurance Lab | -                                 | -                                  | 2                                   | 1                    | 20           |
| <b>ELECTIVES (Any one from following with Practical)</b> |  |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| CSE 804  | ASP.NET                                  | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 805  | Big Data and Business Analytics          | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 806  | Data Mining and Data Warehousing         | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 824  | ASP.NET Lab                              | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 825  | Big Data and Business Analytics Lab      | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 826  | Data Mining and Data Warehousing Lab     | -                                 | -                                  | 2                                   | -                    | -            |
| BCU 841  | Communication Skills – VIII              | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 843  | Behavioural Science – VIII               | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 844  | French– VIII                             | 2                                 | -                                  | -                                   | 2                    | 20           |
| NMP 860  | <b>Major Project – II</b>                | -                                 | -                                  | -                                   | 9                    |              |
| <b>TOTAL CREDITS</b>                                     |  |                                   |                                    |                                     | <b>28</b>            |              |
| <b>Total Hrs per Week</b>                                |  |                                   |                                    |                                     |                      | <b>22</b>    |
| <b>Total Hrs in the Semester</b>                         |  |                                   |                                    |                                     |                      | <b>220</b>   |

  
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**Gwalior**

**Bachelor of Technology  
(Electronics & Communication Engineering)**

**Programme Code: ECE**

**Duration – 4 Years Full Time**



**Programme Structure  
&  
Curriculum & Scheme of Examination**

**(2018-22)  
(Based on AICTE)**

**AMITY UNIVERSITY  
MADHYA PRADESH**

  
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**PROGRAMME STRUCTURE**

| <b>FIRST SEMESTER</b>                      |  |                                   |                                    |                                     |                      |              |
|--|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                         | <b>Course Title</b>                                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 101                                    | Applied Mathematics – I<br>(Calculus and Linear Algebra) | 3                                 | 1                                  | -                                   | 4                    | 40           |
| PHY 101                                    | Applied Physics – I                                      | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 104                                    | Programming for Problem Solving                          | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 102                                    | Workshop/ Manufacturing Practices                        | 1                                 | -                                  | -                                   | 1                    | 10           |
| PHY 121                                    | Applied Physics Lab – I                                  | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 124                                    | Programming for Problem Solving Lab                      | -                                 | -                                  | 4                                   | 2                    | 40           |
| BME 122                                    | Workshop/ Manufacturing Practices Lab                    | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 141                                    | Communication Skills – I                                 | 1                                 |                                    |                                     | 1                    | 10           |
| EVS 142                                    | Environmental Studies – I                                | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 143                                    | Behavioural Science – I                                  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 144                                    | French -I  | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                                |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b>      |  |                                   |                                    |                                     | <b>26</b>            |              |
| <b>Total Hours Including CBCS per week</b> |  |                                   |                                    |                                     |                      | <b>31</b>    |
| <b>Total Hours in the Semester</b>         |  |                                   |                                    |                                     |                      | <b>310</b>   |

  
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| <b>SECOND SEMESTER</b>                |   |                                   |                                    |                                     |                      |              |
|---------------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>   | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 201                               | Applied Mathematics–II<br>(Ordinary & Partial Differential Equations and Transform) | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CHE 101                               | Applied Chemistry   | 3                                 | 1                                  | -                                   | 4                    | 40           |
| ECE 101                               | Basic Electrical Engineering  | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 202                               | Data Structures through C++   | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 101                               | Engineering Graphics & Design   | 1                                 | -                                  | -                                   | 1                    | 10           |
| CHE 121                               | Applied Chemistry Lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 121                               | Basic Electrical Engineering Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 222                               | Data Structures through C++ Lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 121                               | Engineering Graphics & Design Lab   | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 241                               | Communication Skills – II   | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS 242                               | Environmental Studies – II  | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 243                               | Behavioural Science – II  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 244                               | French -II  | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                           |   | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |   |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hours Including CBCS</b>     |   |                                   |                                    |                                     |                      | <b>34</b>    |
| <b>Total Hours in the Semester</b>    |   |                                   |                                    |                                     |                      | <b>340</b>   |
| TERM PAPER DURING SUMMER BREAK        |   |                                   |                                    |                                     |                      |              |

  
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| <b>THIRD SEMESTER</b>                      |  |                                   |                                    |                                     |                      |              |
|--|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                         | <b>Course Title</b>  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 301                                    | Applied Mathematics- III (Probability, Statistics and Numerical Methods) | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 301                                    | Electronic Devices   | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 302                                    | Digital System Design  | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 303                                    | Network Theory   | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 304                                    | Signals and Systems  | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 321                                    | Electronics Devices Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 322                                    | Digital System Design Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 323                                    | Network Theory Lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 325                                    | MATLAB and SIMULINK Lab  | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 341                                    | Communication Skills – III   | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 343                                    | Behavioural Science – III  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 344                                    | French-III   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NTP 330                                    | <b>Term Paper (Evaluation)</b>   | -                                 | -                                  | -                                   | 2                    | -            |
| <b>CBCS</b>                                |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b>      |  |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hours Including CBCS per week</b> |  |                                   |                                    |                                     | <b>32</b>            |              |
| <b>Total Hours in the Semester</b>         |  |                                   |                                    |                                     | <b>320</b>           |              |

  
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| <b>FOURTH SEMESTER</b>                               |                                      |                                   |                                    |                                     |                      |              |
|--|--------------------------------------|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                   | <b>Course Title</b>                  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| ECE 401  | Analog and Digital Communication     | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 402  | Analog Circuits                      | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 403  | Microcontrollers                     | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 403  | Java Programming                     | 2                                 | 1                                  | -                                   | 3                    | 30           |
| ECE 421  | Analog and Digital Communication Lab | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 422  | Analog Circuits Lab                  | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 423  | Microcontrollers Lab                 | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 423  | Java Programming Lab                 | -                                 | -                                  | 4                                   | 2                    | 40           |
| ECE 425  | Electronics Workshop Lab             | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 441  | Communication Skills – IV            | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 443  | Behavioural Science – IV             | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 444  | French-IV                            | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>  |                                      | 3                                 | 1                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS)</b>                |                                      |                                   |                                    |                                     | <b>27</b>            |              |
| <b>Total Hours Including CBCS per week</b>           |                                      |                                   |                                    |                                     | <b>34</b>            |              |
| <b>Total Hours in the Semester</b>                   |                                      |                                   |                                    |                                     | <b>340</b>           |              |
| <b>INDUSTRIAL PRACTICAL TRAINING – I : 6-8 WEEKS</b> |                                      |                                   |                                    |                                     |                      |              |

  
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| <b>FIFTH SEMESTER</b>                      |   |                                   |                                    |                                     |                      |              |
|--|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                         | <b>Course Title</b>                                   | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| ECE 501                                    | Electromagnetic Waves                                 | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 502                                    | Digital Signal Processing                             | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 503                                    | Antennas and Propagation                              | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 504                                    | Control Systems                                       | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 302                                    | Python Programming                                    | 2                                 | 1                                  | -                                   | 3                    | 30           |
| ECE 521                                    | Electromagnetic Waves Lab                             | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 522                                    | Digital Signal Processing Lab                         | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 523                                    | Antennas and Propagation Lab                          | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 524                                    | Control Systems Lab                                   | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 322                                    | Python Programming Lab                                | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 541                                    | Communication Skills – V                              | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 543                                    | Behavioural Science – V                               | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 544                                    | French – V  | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 550                                    | <b>Industrial Practical Training - I (Evaluation)</b> | -                                 | -                                  | -                                   | 3                    | -            |
| <b>CBCS</b>                                |   | 3                                 | 1                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS)</b>      |   |                                   |                                    |                                     | <b>31</b>            |              |
| <b>Total Hours Including CBCS per week</b> |   |                                   |                                    |                                     | <b>33</b>            |              |
| <b>Total Hours in the Semester</b>         |   |                                   |                                    |                                     | <b>330</b>           |              |

  
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| <b>SIXTH SEMESTER</b>                                    |   |                                   |                                    |                                     |                      |              |
|--|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                       | <b>Course Title</b>                         | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| ECE 601  | Computer Architecture                       | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 602  | Probability Theory and Stochastic Processes | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 603  | Quantitative Aptitude and Reasoning         | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 603  | Internet of Things (IOT)                    | 2                                 | -                                  | -                                   | 2                    | 20           |
| CSE 604  | Problem Solving Techniques – I              | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 623  | Internet of Things (IOT) Lab                | -                                 | -                                  | 4                                   | 2                    | 40           |
| CSE 624  | Problem Solving Techniques – I Lab          | -                                 | -                                  | 4                                   | 2                    | 40           |
| <b>ELECTIVES (Any one from following with Practical)</b> |   |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| ECE 605  | Microwave Theory and Techniques             | 3                                 | -                                  | -                                   | -                    | -            |
| ECE 606  | Instrumentation                             | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 304  | Database Management Systems                 | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 504  | Advanced Java Programming                   | 3                                 | -                                  | -                                   | -                    | -            |
| ECE 625  | Microwave Theory and Techniques Lab         | -                                 | -                                  | 2                                   | -                    | -            |
| ECE 626  | Instrumentation Lab                         | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 324  | Database Management Systems Lab             | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 524  | Advanced Java Programming Lab               | -                                 | -                                  | 2                                   | -                    | -            |
| BCU 641  | Communication Skills – VI                   | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 643  | Behavioural Science – VI                    | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 644  | French-VI                                   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NMP 660  | <b>Minor Project</b>                        | -                                 | -                                  | -                                   | 2                    | -            |
| CBCS (Project)   |   | -                                 | -                                  | -                                   | 1                    | -            |
| <b>TOTAL CREDITS (Including CBCS)</b>                    |   |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hours per Week</b>                              |   |                                   |                                    |                                     | <b>31</b>            |              |
| <b>Total Hours in the Semester</b>                       |   |                                   |                                    |                                     | <b>310</b>           |              |
| <b>INDUSTRIAL PRACTICAL TRAINING – II : 6-8 WEEKS</b>    |   |                                   |                                    |                                     |                      |              |

| <b>SEVENTH SEMESTER</b>   |  |                                   |                                    |                                     |                      |              |
|---|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>  | <b>Course Title</b>                                    | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| ECE 701   | Fiber Optic Communication                              | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 702   | Computer Network                                       | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 721   | Fiber Optic Communication Lab                          | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 722   | Computer Network Lab                                   | -                                 | -                                  | 2                                   | 1                    | 20           |
| <b>ELECTIVES (Any one from each category) A (With Practical)</b>    |  |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| ECE 704   | CMOS Design  | 3                                 | -                                  | -                                   | -                    | -            |
| ECE 705   | Artificial Neural Networks                             | 3                                 | -                                  | -                                   | -                    | -            |
| ECE 706   | Analog CMOS IC Design                                  | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 605   | Software Engineering                                   | 3                                 | -                                  | -                                   | -                    | -            |
| ECE 724   | CMOS Design Lab  | -                                 | -                                  | 2                                   | -                    | -            |
| ECE 725   | Artificial Neural Networks Lab                         | -                                 | -                                  | 2                                   | -                    | -            |
| ECE 726   | Analog CMOS IC Design Lab                              | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 625   | Software Engineering Lab                               | -                                 | -                                  | 2                                   | -                    | -            |
| <b>ELECTIVES (Any one from each category) B (Without Practical)</b> |  |                                   |                                    |                                     | <b>3</b>             | <b>30</b>    |
| ECE 707   | Mobile Communications                                  | 3                                 | -                                  | -                                   | -                    | -            |
| ECE 708   | Power Electronics                                      | 3                                 | -                                  | -                                   | -                    | -            |
| ECE 709   | Bio-Medical Engineering                                | 3                                 | -                                  | -                                   | -                    | -            |
| ECE 710   | Wireless Sensor Networks                               | 3                                 | -                                  | -                                   | -                    | -            |
| BCU 741   | Communication Skills – VII                             | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 743   | Behavioural Science – VII                              | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 744   | French-VII   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 750   | <b>Industrial Practical Training – II (Evaluation)</b> | -                                 | -                                  | -                                   | 5                    | -            |
| NMP 760   | <b>Major Project – I</b>                               | -                                 | -                                  | -                                   | 6                    | -            |
| <b>TOTAL CREDITS</b>  |  |                                   |                                    |                                     | <b>30</b>            |              |
| <b>Total Hours per week</b>   |  |                                   |                                    |                                     | <b>22</b>            |              |
| <b>Total Hours in the Semester</b>                                  |  |                                   |                                    |                                     | <b>220</b>           |              |

| <b>EIGHT SEMESTER</b>                                    |                                      |                                   |                                    |                                     |                      |              |
|--|--------------------------------------|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                       | <b>Course Title</b>                  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| ECE 801  | Information Theory and Coding        | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 802  | Radar & Satellite Communications     | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 803  | Embedded Systems                     | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 821  | Information Theory and Coding Lab    | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 822  | Radar & Satellite Communications Lab | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 823  | Embedded Systems Lab                 | -                                 | -                                  | 2                                   | 1                    | 20           |
| <b>ELECTIVES (Any one from following with Practical)</b> |                                      |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| ECE 804  | VHDL Programming                     | 3                                 | -                                  | -                                   | -                    | -            |
| ECE 805  | Verilog Programming                  | 3                                 | -                                  | -                                   | -                    | -            |
| ECE 806  | Advanced Networking                  | 3                                 | -                                  | -                                   | -                    | -            |
| ECE 807  | Speech and Audio Processing          | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 801  | Digital Image Processing             | 3                                 | -                                  | -                                   | -                    | -            |
| ECE 824  | VHDL Programming Lab                 | -                                 | -                                  | 2                                   | -                    | -            |
| ECE 825  | Verilog Programming Lab              | -                                 | -                                  | 2                                   | -                    | -            |
| ECE 826  | Advanced Networking Lab              | -                                 | -                                  | 2                                   | -                    | -            |
| ECE 827  | Speech and Audio Processing Lab      | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 821  | Digital Image Processing Lab         | -                                 | -                                  | 2                                   | -                    | -            |
| BCU 841  | Communication Skills – VIII          | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 843  | Behavioural Science – VIII           | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 844  | French-VIII                          | 2                                 | -                                  | -                                   | 2                    | 20           |
| NMP 860  | <b>Major Project – II</b>            | -                                 | -                                  | -                                   | 9                    | -            |
| <b>TOTAL CREDITS</b>                                     |                                      |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hours per week</b>                              |                                      |                                   |                                    |                                     | <b>24</b>            |              |
| <b>Total Hours in the Semester</b>                       |                                      |                                   |                                    |                                     | <b>240</b>           |              |

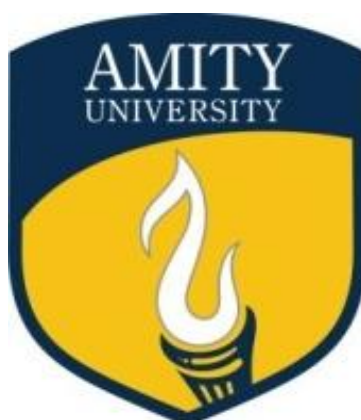


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Gwalior

**Bachelor of Technology  
(Information Technology)**

**Programme Code: IT**

**Duration – 4 Years Full Time**



**Programme Structure  
&  
Curriculum & Scheme of Examination**

**2018-22  
(Based on AICTE)**

**AMITY UNIVERSITY  
MADHYA PRADESH**

  
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Gwalior

**PROGRAMME STRUCTURE**

| <b>FIRST SEMESTER</b>                    |  |                                   |                                    |                                     |                      |              |
|--|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                       | <b>Course Title</b>                                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 101                                  | Applied Mathematics – I<br>(Calculus and Linear Algebra) | 3                                 | 1                                  | -                                   | 4                    | 40           |
| PHY 101                                  | Applied Physics – I                                      | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 104                                  | Programming for Problem Solving                          | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 102                                  | Workshop/ Manufacturing Practices                        | 1                                 | -                                  | -                                   | 1                    | 10           |
| PHY 121                                  | Applied Physics Lab – I                                  | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 124                                  | Programming for Problem Solving Lab                      | -                                 | -                                  | 4                                   | 2                    | 40           |
| BME 122                                  | Workshop/ Manufacturing Practices Lab                    | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 141                                  | Communication Skills – I                                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS 142                                  | Environmental Studies – I                                | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 143                                  | Behavioural Science – I                                  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 144                                  | French – I   | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                              |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b>    |  |                                   |                                    |                                     | <b>26</b>            |              |
| <b>Total Hrs Including CBCS per week</b> |  |                                   |                                    |                                     | <b>31</b>            |              |
| <b>Total Hrs in the Semester</b>         |  |                                   |                                    |                                     | <b>310</b>           |              |

  
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| <b>SECOND SEMESTER</b>                |  |                                   |                                    |                                     |                      |              |
|---------------------------------------|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 201                               | Applied Mathematics – II (Ordinary & Partial Differential Equations and Transform) | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CHE 101                               | Applied Chemistry  | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 202                               | Data Structures through C++  | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 101                               | Basic Electrical Engineering   | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 101                               | Engineering Graphics & Design  | 1                                 | -                                  | -                                   | 1                    | 10           |
| CHE 121                               | Applied Chemistry Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 222                               | Data Structures through C++ Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 121                               | Basic Electrical Engineering Lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 121                               | Engineering Graphics & Design Lab  | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 241                               | Communication Skills – II  | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS 242                               | Environmental Studies – II   | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 243                               | Behavioural Science – II   | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 244                               | French – II  | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                           |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |  |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hrs Including CBCS</b>       |  |                                   |                                    |                                     |                      | <b>34</b>    |
| <b>Total Hrs in the Semester</b>      |  |                                   |                                    |                                     |                      | <b>340</b>   |
| TERM PAPER DURING SUMMER BREAK        |  |                                   |                                    |                                     |                      |              |

  
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| <b>THIRD SEMESTER</b>                 |  |                                   |                                    |                                     |                      |              |
|---------------------------------------|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 301                               | Applied Mathematics-III<br>(Probability, Statistics and Numerical Methods) | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 302                               | Python Programming   | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 303                               | Design and Analysis of Algorithms  | 4                                 | -                                  | -                                   | 4                    | 40           |
| CSE 304                               | Database Management Systems  | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 306                               | Digital Electronics and Logic Design                                       | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 322                               | Python Programming Lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 323                               | Design and Analysis of Algorithms Lab                                      | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 324                               | Database Management Systems Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 326                               | Digital Electronics and Logic Design Lab                                   | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 341                               | Communication Skills – III   | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 343                               | Behavioural Science – III  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 344                               | French – III   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NTP 330                               | <b>Term Paper (Evaluation)</b>   | -                                 | -                                  | -                                   | 2                    | -            |
| <b>CBCS</b>                           |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |  |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hrs Including CBCS</b>       |  |                                   |                                    |                                     | <b>31</b>            |              |
| <b>Total Hrs in the Semester</b>      |  |                                   |                                    |                                     | <b>310</b>           |              |

  
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| <b>FOURTH SEMESTER</b>                                 |  |                                   |                                    |                                     |                      |              |
|--|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                     | <b>Course Title</b>                    | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CSE 401  | Discrete Mathematics                   | 4                                 | -                                  | -                                   | 4                    | 40           |
| CSE 402  | Computer Organization and Architecture | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 406  | Analog Electronic Circuits             | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 403  | Java Programming                       | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 404  | Operating Systems                      | 2                                 | 1                                  | -                                   | 3                    | 30           |
| ECE 426  | Analog Electronic Circuits Lab         | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 423  | Java Programming Lab                   | -                                 | -                                  | 4                                   | 2                    | 40           |
| CSE 424  | Operating Systems Lab                  | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 441  | Communication Skills – IV              | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 443  | Behavioral Science – IV                | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 444  | French – IV                            | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>  |  | 4                                 | -                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS)</b>                  |  |                                   |                                    |                                     | <b>28</b>            |              |
| <b>Total Hrs Including CBCS</b>                        |  |                                   |                                    |                                     | <b>32</b>            |              |
| <b>Total Hrs in the Semester</b>                       |  |                                   |                                    |                                     | <b>320</b>           |              |
| <b>INDUSTRIAL PRACTICAL TRAINING – I : 6 – 8 WEEKS</b> |  |                                   |                                    |                                     |                      |              |

  
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| <b>FIFTH SEMESTER</b>                 |   |                                   |                                    |                                     |                      |              |
|---------------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>                                   | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CSE 501                               | Theory of Computation                                 | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 502                               | Computer Graphics                                     | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 503                               | Introduction to Android Application Development       | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 504                               | Advanced Java Programming                             | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 505                               | Introduction to Web Technologies                      | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 522                               | Computer Graphics Lab                                 | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 523                               | Introduction to Android Application Development Lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 524                               | Advanced Java Programming Lab                         | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 525                               | Web Technologies Lab                                  | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 541                               | Communication Skills – V                              | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 543                               | Behavioural Science – V                               | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 544                               | French – V  | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 550                               | <b>Industrial Practical Training - I (Evaluation)</b> | -                                 | -                                  | -                                   | 3                    | -            |
| <b>CBCS</b>                           |   | 3                                 | 1                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS)</b> |   |                                   |                                    |                                     | <b>31</b>            |              |
| <b>Total Hrs Including CBCS</b>       |   |                                   |                                    |                                     |                      | <b>32</b>    |
| <b>Total Hrs in the Semester</b>      |   |                                   |                                    |                                     |                      | <b>320</b>   |

  
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**Gwalior**

| <b>SIXTH SEMESTER</b>                                   |  |                                   |                                    |                                     |                      |              |
|---|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                      | <b>Course Title</b>                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CSE 601   | Data Communication and Computer Networks | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 602   | Quantitative Aptitude                    | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 603   | Internet of Things (IOT)                 | 2                                 | -                                  | -                                   | 2                    | 20           |
| CSE 604   | Problem Solving Techniques – I           | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 623   | Internet of Things (IOT) Lab             | -                                 | -                                  | 4                                   | 2                    | 40           |
| CSE 624   | Problem Solving Techniques Lab – I       | -                                 | -                                  | 4                                   | 2                    | 40           |
| <b>ELECTIVES (Anyone from following with Practical)</b> |  |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| CSE 605   | Software Engineering                     | 2                                 | 1                                  | -                                   | -                    | -            |
| CSE 606   | Object Oriented Analysis and Design      | 2                                 | 1                                  | -                                   | -                    | -            |
| CSE 607   | Soft Computing                           | 2                                 | 1                                  | -                                   | -                    | -            |
| CSE 625   | Software Engineering Lab                 | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 626   | Object Oriented Analysis and Design Lab  | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 627   | Soft Computing Lab                       | -                                 | -                                  | 2                                   | -                    | -            |
| BCU 641   | Communication Skills – VI                | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 643   | Behavioural Science – VI                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 644   | French – VI                              | 2                                 | -                                  | -                                   | 2                    | 20           |
| NMP 660   | <b>Minor Project</b>                     | -                                 | -                                  | -                                   | 2                    | -            |
| <b>CBCS</b>   |  |                                   |                                    |                                     | -                    | -            |
| <b>TOTAL CREDITS (Including CBCS)</b>                   |  |                                   |                                    |                                     | <b>26</b>            |              |
| <b>Total Hrs per Week</b>                               |  |                                   |                                    |                                     |                      | <b>28</b>    |
| <b>Total Hrs in the Semester</b>                        |  |                                   |                                    |                                     |                      | <b>280</b>   |
| <b>INDUSTRIAL PRACTICAL TRAINING –II: 6 – 8 WEEKS</b>   |  |                                   |                                    |                                     |                      |              |

  
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**Gwalior**

| <b>SEVENTH SEMESTER</b>                       |  |                                   |                                    |                                     |                      |              |
|---|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                            | <b>Course Title</b>                                    | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| IT 701  | Information Storage and Retrieval                      | 3                                 | -                                  | -                                   | 3                    | 30           |
| IT 702  | Cloud Computing and Virtualization                     | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 703                                       | Problem Solving Techniques – II                        | 2                                 | -                                  | -                                   | 2                    | 20           |
| IT 722  | Cloud Computing and Virtualization Lab                 | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 723                                       | Problem Solving Techniques Lab – II                    | -                                 | -                                  | 4                                   | 2                    | 40           |
| <b>ELECTIVES (Anyone from each category)</b>  |  |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| <b>A (With Practical)</b>                     |  |                                   |                                    |                                     |                      |              |
| CSE 704                                       | Data Analytics   | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 706                                       | Simulation and Modeling                                | 3                                 | -                                  | -                                   | -                    | -            |
| IT 706  | Parallel Computing                                     | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 724                                       | Data Analytics Lab                                     | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 726                                       | Simulation and Modeling Lab                            | -                                 | -                                  | 2                                   | -                    | -            |
| IT 726  | Parallel Computing Lab                                 | -                                 | -                                  | 2                                   | -                    | -            |
| <b>ELECTIVES (Any one from each category)</b> |  |                                   |                                    |                                     | <b>3</b>             | <b>30</b>    |
| <b>B (Without Practical)</b>                  |  |                                   |                                    |                                     |                      |              |
| CSE 708                                       | Compiler Construction                                  | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 702                                       | Artificial Intelligence                                | 3                                 | -                                  | -                                   | -                    | -            |
| IT 707  | Semantic Web and Knowledge Management                  | 3                                 | -                                  | -                                   | -                    | -            |
|   |  |                                   |                                    |                                     |                      |              |
| BCU 741                                       | Communication Skills – VII                             | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 743                                       | Behavioural Science – VII                              | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 744                                       | French – VII   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 750                                       | <b>Industrial Practical Training – II (Evaluation)</b> | -                                 | -                                  | -                                   | 5                    | -            |
| NMP 760                                       | <b>Major Project – I</b>                               | -                                 | -                                  | -                                   | 6                    | -            |
| <b>TOTAL CREDITS</b>                          |  |                                   |                                    |                                     | <b>33</b>            | <b>-</b>     |
| <b>Total Hrs per Week</b>                     |  |                                   |                                    |                                     | <b>26</b>            |              |
| <b>Total Hrs in the Semester</b>              |  |                                   |                                    |                                     | <b>260</b>           |              |

  
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**Gwalior**

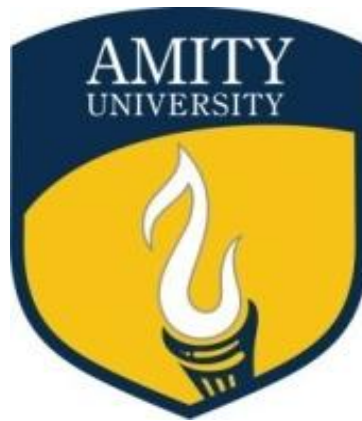
| <b>EIGHTH SEMESTER</b>                                  |  |                                   |                                    |                                     |                      |              |
|---|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                      | <b>Course Title</b>                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| IT 801  | Machine Learning Techniques              | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 802   | Software Testing & Quality Assurance     | 3                                 | -                                  | -                                   | 3                    | 30           |
| IT 803  | Cyber Security and Digital Forensics     | 3                                 | -                                  | -                                   | 3                    | 30           |
| IT 821  | Machine Learning Techniques Lab          | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 822   | Software Testing & Quality Assurance Lab | -                                 | -                                  | 2                                   | 1                    | 20           |
| <b>ELECTIVES (Anyone from following with Practical)</b> |  |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| IT 802  | Neural Networks and Fuzzy Logic          | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 805   | Big Data and Business Analytics          | 3                                 | -                                  | -                                   | -                    | -            |
| CSE 806   | Data Mining and Data Warehousing         | 3                                 | -                                  | -                                   | -                    | -            |
| IT 822  | Neural Networks and Fuzzy Logic Lab      | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 825   | Big Data and Business Analytics Lab      | -                                 | -                                  | 2                                   | -                    | -            |
| CSE 826   | Data Mining and Data Warehousing Lab     | -                                 | -                                  | 2                                   | -                    | -            |
| BCU 841   | Communication Skills – VIII              | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 843   | Behavioral Science – VIII                | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 844   | French – VIII                            | 2                                 | -                                  | -                                   | 2                    | 20           |
| NMP 860   | <b>Major Project – II</b>                | -                                 | -                                  | -                                   | 9                    | -            |
| <b>TOTAL CREDITS</b>                                    |  |                                   |                                    |                                     | <b>28</b>            |              |
| <b>Total Hrs per Week</b>                               |  |                                   |                                    |                                     |                      | <b>22</b>    |
| <b>Total Hrs in the Semester</b>                        |  |                                   |                                    |                                     |                      | <b>220</b>   |

  
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**Gwalior**

**Bachelor of Technology  
(Mechanical Engineering)**

**Programme Code: BME**

**Duration – 4 Years Full Time**



**Programme Structure  
&  
Curriculum & Scheme of Examination**

**2018-22  
(Based on AICTE)**

**AMITY UNIVERSITY  
MADHYA PRADESH**

  
Registrar  
Amity University Madhya Pradesh  
Gwalior

**PROGRAMME STRUCTURE**

| <b>FIRST SEMESTER</b>                    |  |                                   |                                    |                                     |                      |              |
|--|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                       | <b>Course Title</b>                                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 101                                  | Applied Mathematics – I<br>(Calculus and Linear Algebra) | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CHE 101                                  | Applied Chemistry  | 3                                 | 1                                  | -                                   | 4                    | 40           |
| ECE 101                                  | Basic Electrical Engineering                             | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 101                                  | Engineering Graphics & Design                            | 1                                 | -                                  | -                                   | 1                    | 10           |
| CHE 121                                  | Applied Chemistry Lab                                    | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 121                                  | Basic Electrical Engineering Lab                         | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 121                                  | Engineering Graphics & Design Lab                        | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 141                                  | Communication Skills – I                                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS 142                                  | Environmental Studies – I                                | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 143                                  | Behavioural Science – I                                  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 144                                  | French– I  | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                              |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b>    |  |                                   |                                    |                                     | <b>25</b>            |              |
| <b>Total Hrs Including CBCS per week</b> |  |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hrs in the Semester</b>         |  |                                   |                                    |                                     | <b>290</b>           |              |

  
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**Gwalior**

| <b>SECOND SEMESTER</b>                |   |                                   |                                    |                                     |                      |              |
|---------------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>   | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 201                               | Applied Mathematics-II<br>(Ordinary & Partial Differential Equations and Transform) | 3                                 | 1                                  | -                                   | 4                    | 40           |
| PHY 101                               | Applied Physics – I   | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 104                               | Programming for Problem Solving   | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 102                               | Workshop/ Manufacturing Practices   | 1                                 | -                                  | -                                   | 1                    | 10           |
| PHY 121                               | Applied Physics Lab – I   | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 124                               | Programming for Problem Solving Lab   | -                                 | -                                  | 4                                   | 2                    | 40           |
| BME 122                               | Workshop/ Manufacturing Practices Lab   | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 241                               | Communication Skills – II   | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS242                                | Environmental Studies – II  | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU243                                | Behavioural Science – II  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU244                                | French– II  | 2                                 | -                                  | -                                   | 2                    | 20           |
| CBCS                                  |   | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |   |                                   |                                    |                                     | <b>26</b>            |              |
| <b>Total Hrs Including CBCS</b>       |   |                                   |                                    |                                     | <b>31</b>            |              |
| <b>Total Hrs in the Semester</b>      |   |                                   |                                    |                                     | <b>310</b>           |              |
| TERM PAPER DURING SUMMER BREAK        |   |                                   |                                    |                                     |                      |              |

  
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| <b>THIRD SEMESTER</b>                 |  |                                   |                                    |                                     |                      |              |
|---------------------------------------|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 301                               | Applied Mathematics – III<br>(Probability, Statistics and Numerical Methods) | 3                                 | -                                  | -                                   | 3                    | 30           |
| PHY 303                               | Applied Physics – II   | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 301                               | Engineering Mechanics  | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 302                               | Material Science & Metallurgy  | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 303                               | Thermodynamics   | 3                                 | -                                  | -                                   | 3                    | 30           |
| ECE 307                               | Basic Electronics  | 2                                 | -                                  | -                                   | 2                    | 20           |
| PHY 323                               | Applied Physics Lab – II   | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 321                               | Engineering Mechanics Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 323                               | Thermodynamics lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| ECE 327                               | Basic Electronics lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 341                               | Communication Skills – III   | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 343                               | Behavioural Science – III  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 344                               | French– III  | 2                                 | -                                  | -                                   | 2                    | 20           |
| NTP 330                               | <b>Term paper (Evaluation)</b>   | -                                 | -                                  | -                                   | 2                    |              |
| <b>CBCS</b>                           |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |  |                                   |                                    |                                     | <b>30</b>            |              |
| <b>Total Hrs Including CBCS</b>       |  |                                   |                                    |                                     | <b>32</b>            |              |
| <b>Total Hrs in the Semester</b>      |  |                                   |                                    |                                     | <b>320</b>           |              |

  
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| <b>FOURTH SEMESTER</b>                                |  |                                   |                                    |                                     |                      |              |
|---|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                    | <b>Course Title</b>                        | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| BME 401   | Fluid Mechanics                            | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 402   | Heat and Mass Transfer                     | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 403   | Kinematic of Machine                       | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 404   | Manufacturing Machine                      | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 405   | Strength of Material                       | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 422   | Heat and Mass Transfer Lab                 | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 423   | Kinematic of Machine Lab                   | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 424   | Manufacturing Machine Lab                  | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 425   | Strength of Material & Fluid Mechanics Lab | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 441   | Communication Skills – IV                  | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 443   | Behavioural Science – IV                   | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 444   | French– IV                                 | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>   |  | 3                                 | 1                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS )</b>                |  |                                   |                                    |                                     | <b>27</b>            |              |
| <b>Total Hrs Including CBCS</b>                       |  |                                   |                                    |                                     | <b>31</b>            |              |
| <b>Total Hrs in the Semester</b>                      |  |                                   |                                    |                                     | <b>310</b>           |              |
| <b>INDUSTRIAL PRACTICAL TRAINING – I: 6 – 8 WEEKS</b> |  |                                   |                                    |                                     |                      |              |

  
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| <b>FIFTH SEMESTER</b>                  |   |                                   |                                    |                                     |                      |              |
|--|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                     | <b>Course Title</b>                                   | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| BME 501                                | Applied Thermodynamics                                | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 502                                | Dynamics of Machines                                  | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 503                                | Machine Design –I                                     | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 504                                | Measurement and Control                               | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 505                                | Metrology   | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 522                                | Dynamics of Machine Lab                               | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 524                                | Measurement and Control Lab                           | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 525                                | Metrology lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 541                                | Communication Skills –V                               | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 543                                | Behavioural Science – V                               | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 544                                | French– V   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 550                                | <b>Industrial Practical Training - I (Evaluation)</b> | -                                 | -                                  | -                                   | 3                    | -            |
| <b>CBCS</b>                            |   | 3                                 | 1                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS )</b> |   |                                   |                                    |                                     |                      | <b>29</b>    |
| <b>Total Hrs Including CBCS</b>        |   |                                   |                                    |                                     |                      | <b>29</b>    |
| <b>Total Hrs in the Semester</b>       |   |                                   |                                    |                                     |                      | <b>290</b>   |

  
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| <b>SIXTH SEMESTER</b>                                   |  |                                   |                                    |                                     |                      |              |
|---|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                      | <b>Course Title</b>                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| BME 601   | Fluid Power Systems                      | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 602   | IC Engine & Gas Turbine                  | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 603   | Machine Design – II                      | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 604   | Manufacturing Technology                 | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 621   | Fluid Power Systems Lab                  | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 622   | IC Engine & Gas Turbine Lab              | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 623   | Machine Design Lab – II                  | -                                 | -                                  | 2                                   | 1                    | 20           |
| <b>ELECTIVES (Anyone from following with Practical)</b> |  |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| BME 606   | Mechatronics                             | 3                                 | -                                  | -                                   |                      |              |
| BME 607   | Artificial Intelligence and Robotics     | 3                                 | -                                  | -                                   |                      |              |
| BME 626   | Mechatronics Lab                         | -                                 | -                                  | 2                                   |                      |              |
| BME 627   | Artificial Intelligence and Robotics lab | -                                 | -                                  | 2                                   |                      |              |
| BCU 641   | Communication Skills – VI                | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 643   | Behavioural Science – VI                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 644   | French– VI                               | 2                                 | -                                  | -                                   | 2                    | 20           |
| NMP 660   | <b>Minor Project</b>                     | -                                 | -                                  | -                                   | 2                    | -            |
| <b>CBCS</b>   |  | -                                 | -                                  | -                                   | 1                    | -            |
| <b>TOTAL CREDITS (Including CBCS )</b>                  |  |                                   |                                    |                                     | <b>26</b>            |              |
| <b>Total Hrs Per Week</b>                               |  |                                   |                                    |                                     | <b>27</b>            |              |
| <b>Total Hrs in the Semester</b>                        |  |                                   |                                    |                                     | <b>270</b>           |              |
| <b>INDUSTRIAL PRACTICAL TRAINING –II: 6 – 8 WEEKS</b>   |  |                                   |                                    |                                     |                      |              |

  
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| <b>SEVENTH SEMESTER</b>                       |  |                                   |                                    |                                     |                      |              |
|---|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                            | <b>Course Title</b>                                  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| BME 701                                       | Operations Research                                  | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 702                                       | Computer Aided Manufacturing                         | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 703                                       | Management of Manufacturing Systems                  | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 721                                       | Operations Research (Programming) Lab                | -                                 | -                                  | 2                                   | 1                    | 20           |
| BME 722                                       | Computer Aided Manufacturing Lab                     | -                                 | -                                  | 2                                   | 1                    | 20           |
| <b>ELECTIVES (Any one from each category)</b> |  |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| <b>A (With Practical)</b>                     |  |                                   |                                    |                                     |                      |              |
| BME 704                                       | Automotive Engineering                               | 3                                 | -                                  | -                                   |                      |              |
| BME 705                                       | Computer Aided Designing                             | 3                                 | -                                  | -                                   |                      |              |
| BME 724                                       | Automotive Engineering Lab                           | -                                 | -                                  | 2                                   |                      |              |
| BME 725                                       | Computer Aided Designing Lab                         | -                                 | -                                  | 2                                   |                      |              |
| <b>ELECTIVES (Any one from each category)</b> |  |                                   |                                    |                                     | <b>3</b>             | <b>30</b>    |
| <b>B (Without Practical)</b>                  |  |                                   |                                    |                                     |                      |              |
| BME 706                                       | Marketing Management                                 | 3                                 | -                                  | -                                   |                      |              |
| BME 707                                       | Solar Energy   | 3                                 | -                                  | -                                   |                      |              |
| BME 708                                       | Power Plant Practices                                | 3                                 | -                                  | -                                   |                      |              |
| BME 709                                       | Combustion Engine Emissions                          | 3                                 | -                                  | -                                   |                      |              |
| BCU 741                                       | Communication Skills – VII                           | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 743                                       | Behavioural Science – VII                            | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 744                                       | French– VII  | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 750                                       | <b>Industrial Practical Training– II(Evaluation)</b> | -                                 | -                                  | -                                   | 5                    |              |
| NMP 760                                       | <b>Major Project – I</b>                             | -                                 | -                                  | -                                   | 6                    |              |
| <b>TOTAL CREDITS</b>                          |  |                                   |                                    |                                     | <b>33</b>            |              |
| <b>Total Hrs Per Week</b>                     |  |                                   |                                    |                                     | <b>25</b>            |              |
| <b>Total Hrs in the Semester</b>              |  |                                   |                                    |                                     | <b>250</b>           |              |

  
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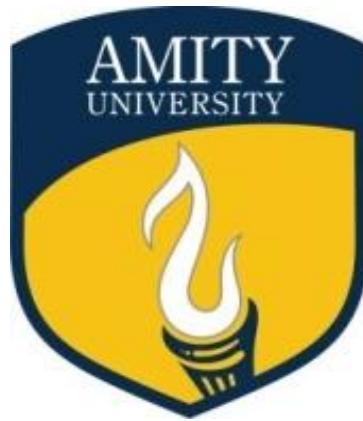
| <b>EIGHT SEMESTER</b>                                    |                                       |                                   |                                    |                                     |                      |              |
|--|---------------------------------------|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                                       | <b>Course Title</b>                   | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| BME 801  | Quality Control & Quality Assurance   | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 802  | Refrigeration & Air-conditioning      | 3                                 | -                                  | -                                   | 3                    | 30           |
| BME 822  | Refrigeration & Air-conditioning Lab  | -                                 | -                                  | 2                                   | 1                    | 20           |
| <b>ELECTIVES (Any one from following with Practical)</b> |                                       |                                   |                                    |                                     | <b>4</b>             | <b>50</b>    |
| BME 803  | Advanced Methods of Manufacturing     | 3                                 | -                                  | -                                   |                      |              |
| BME 804  | Gear Technology                       | 3                                 | -                                  | -                                   |                      |              |
| BME 823  | Advanced Methods of Manufacturing Lab | -                                 | -                                  | 2                                   |                      |              |
| BME 824  | Gear Technology Lab                   | -                                 | -                                  | 2                                   |                      |              |
| BCU 841  | Communication Skills – VIII           | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 843  | Behavioural Science – VIII            | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 844  | French– VIII                          | 2                                 | -                                  | -                                   | 2                    | 20           |
| NMP 860  | <b>Major Project – II</b>             | -                                 | -                                  | -                                   | 9                    |              |
| <b>TOTAL CREDITS</b>                                     |                                       |                                   |                                    |                                     | <b>24</b>            |              |
| <b>Total Hrs Per Week</b>                                |                                       |                                   |                                    |                                     | <b>17</b>            |              |
| <b>Total Hrs in the Semester</b>                         |                                       |                                   |                                    |                                     | <b>170</b>           |              |

  
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**Gwalior**

**Bachelor of Computer Application**

**Programme Code: BCA**

**Duration – 3 Years Full Time**



**Programme Structure,  
Curriculum & Scheme of Examination**

**2018-21**

**AMITY UNIVERSITY  
MADHYA PRADESH**

  
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Gwalior

**PROGRAMME STRUCTURE**

| <b>FIRST SEMESTER</b>                    |   |                                   |                                    |                                     |                      |              |
|--|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                       | <b>Course Title</b>                         | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| BCA 101                                  | Computer Fundamentals and Office Automation | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 104                                  | Programming for Problem Solving             | 3                                 | -                                  | -                                   | 3                    | 30           |
| MAT 102                                  | Mathematics – I                             | 3                                 | 1                                  | -                                   | 4                    | 40           |
| ECE 306                                  | Digital Electronics and Logic Design        | 2                                 | 1                                  | -                                   | 3                    | 30           |
| BCH 110                                  | Principles of Management                    | 2                                 | 1                                  | -                                   | 3                    | 30           |
| BCA 121                                  | Office Automation Lab                       | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 124                                  | Programming for Problem Solving Lab         | -                                 | -                                  | 4                                   | 2                    | 40           |
| ECE 326                                  | Digital Electronics and Logic Design Lab    | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 141                                  | Communication Skills – I                    | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS 142                                  | Environmental Studies – I                   | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 143                                  | Behavioural Science – I                     | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 144                                  | French – I                                  | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                              |   | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b>    |   |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hrs Including CBCS per week</b> |   |                                   |                                    |                                     | <b>33</b>            |              |
| <b>Total Hrs in the Semester</b>         |   |                                   |                                    |                                     | <b>330</b>           |              |

  
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| <b>SECOND SEMESTER</b>                |   |                                   |                                    |                                     |                      |              |
|---------------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>                       | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 202                               | Mathematics – II                          | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 204                               | Object Oriented Programming Using C++     | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 402                               | Computer Organization and Architecture    | 2                                 | 1                                  | -                                   | 3                    | 30           |
| BME 103                               | Production & Operations Management        | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 505                               | Introduction to Web Technologies          | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 224                               | Object Oriented Programming Using C++ Lab | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 525                               | Web Technologies Lab                      | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 241                               | Communication Skills – II                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| EVS 242                               | Environmental Studies – II                | 2                                 | -                                  | -                                   | 2                    | 20           |
| BSU 243                               | Behavioural Science – II                  | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 244                               | French – II                               | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                           |   | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |   |                                   |                                    |                                     | <b>27</b>            |              |
| <b>Total Hrs Including CBCS</b>       |   |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hrs in the Semester</b>      |   |                                   |                                    |                                     | <b>290</b>           |              |
| SUMMER PROJECT – I                    |   |                                   |                                    |                                     |                      |              |

  
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| <b>THIRD SEMESTER</b>                 |  |                                   |                                    |                                     |                      |              |
|---------------------------------------|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>                                  | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 302                               | Computer Oriented Statistical & Optimization Methods | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 401                               | Discrete Mathematics                                 | 4                                 | -                                  | -                                   | 4                    | 40           |
| CSE 202                               | Data Structures through C++                          | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 304                               | Database Management Systems                          | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 404                               | Operating Systems                                    | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 222                               | Data Structures through C++ Lab                      | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 324                               | Database Management Systems Lab                      | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 424                               | Operating Systems Lab                                | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 341                               | Communication Skills –III                            | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 343                               | Behavioural Science – III                            | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 344                               | French – III   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 360                               | <b>Summer Project – I (Evaluation)</b>               | -                                 | -                                  | -                                   | 3                    | -            |
| <b>CBCS</b>                           |  | 3                                 | -                                  | -                                   | 3                    | 30           |
| <b>TOTAL CREDITS (Including CBCS)</b> |  |                                   |                                    |                                     | <b>30</b>            |              |
| <b>Total Hrs Including CBCS</b>       |  |                                   |                                    |                                     | <b>30</b>            |              |
| <b>Total Hrs in the Semester</b>      |  |                                   |                                    |                                     | <b>300</b>           |              |

  
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**Gwalior**

| <b>FOURTH SEMESTER</b>                |  |                                   |                                    |                                     |                      |              |
|---------------------------------------|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>                      | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAT 401                               | Computer Oriented Numerical Methods      | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSE 601                               | Data Communication and Computer Networks | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 602                               | Quantitative Aptitude                    | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 604                               | Problem Solving Techniques – I           | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 403                               | Java Programming                         | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 624                               | Problem Solving Techniques Lab – I       | -                                 | -                                  | 4                                   | 2                    | 40           |
| CSE 423                               | Java Programming Lab                     | -                                 | -                                  | 4                                   | 2                    | 40           |
| BCU 441                               | Communication Skills – IV                | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 443                               | Behavioural Science – IV                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 444                               | French – IV                              | 2                                 | -                                  | -                                   | 2                    | 20           |
| <b>CBCS</b>                           |  | 4                                 | -                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS)</b> |  |                                   |                                    |                                     | <b>28</b>            |              |
| <b>Total Hrs Including CBCS</b>       |  |                                   |                                    |                                     | <b>32</b>            |              |
| <b>Total Hrs in the Semester</b>      |  |                                   |                                    |                                     | <b>320</b>           |              |
| SUMMER PROJECT – II                   |  |                                   |                                    |                                     |                      |              |

  
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 Amity University Madhya Pradesh  
 Gwalior

| <b>FIFTH SEMESTER</b>                 |   |                                   |                                    |                                     |                      |              |
|---------------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>                     | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| CSE 303                               | Design and Analysis of Algorithms       | 4                                 | -                                  | -                                   | 4                    | 40           |
| CSE 603                               | Internet of Things (IOT)                | 2                                 | -                                  | -                                   | 2                    | 20           |
| CSE 605                               | Software Engineering                    | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 323                               | Design and Analysis of Algorithms Lab   | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 623                               | Internet of Things (IOT) Lab            | -                                 | -                                  | 4                                   | 2                    | 40           |
| CSE 625                               | Software Engineering Lab                | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 541                               | Communication Skills – V                | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 543                               | Behavioural Science – V                 | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 544                               | French – V                              | 2                                 | -                                  | -                                   | 2                    | 20           |
| NPT 560                               | <b>Summer Project – II (Evaluation)</b> | -                                 | -                                  | -                                   | 6                    | -            |
| <b>CBCS</b>                           |   | 3                                 | 1                                  | -                                   | 4                    | 40           |
| <b>TOTAL CREDITS (Including CBCS)</b> |   |                                   |                                    |                                     | <b>27</b>            |              |
| <b>Total Hrs Including CBCS</b>       |   |                                   |                                    |                                     | <b>25</b>            |              |
| <b>Total Hrs in the Semester</b>      |   |                                   |                                    |                                     | <b>250</b>           |              |

*Eijah Sami*  
Registrar

| <b>SIXTH SEMESTER</b>                 |                               |                                   |                                    |                                     |                      |              |
|---------------------------------------|-------------------------------|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                    | <b>Course Title</b>           | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| BCA 601                               | Multimedia & its Applications | 3                                 | -                                  | -                                   | 3                    | 30           |
| CSE 302                               | Python Programming            | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSE 704                               | Data Analytics                | 3                                 | -                                  | -                                   | 3                    | 30           |
| BCA 621                               | Multimedia Lab                | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 322                               | Python Programming Lab        | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSE 724                               | Data Analytics Lab            | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCU 641                               | Communication Skills – VI     | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSU 643                               | Behavioural Science - VI      | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLU 644                               | French – VI                   | 2                                 | -                                  | -                                   | 2                    | 20           |
| NMP 661                               | <b>Major Project</b>          | -                                 | -                                  | -                                   | 9                    | -            |
| <b>CBCS</b>                           |                               | -                                 | -                                  | -                                   | 1                    | -            |
| <b>TOTAL CREDITS (Including CBCS)</b> |                               |                                   |                                    |                                     | <b>26</b>            |              |
| <b>Total Hrs Including CBCS</b>       |                               |                                   |                                    |                                     | <b>19</b>            |              |
| <b>Total Hrs in the Semester</b>      |                               |                                   |                                    |                                     | <b>190</b>           |              |

  
**Registrar**  
**Amity University Madhya Pradesh**  
**Gwalior**

**Master of Science  
(Applied Chemistry)**

**Programme Code: MAC**

**Duration – 2 Years Full Time**



**Programme Structure  
And  
Curriculum & Scheme of Examination**

**Batch: 2018-20**

**(Based on AICTE)**

**AMITY UNIVERSITY  
MADHYA PRADESH**

  
Registrar  
Amity University Madhya Pradesh  
Gwalior

## PROGRAMME STRUCTURE

| <b>FIRST SEMESTER</b> |                           |                             |                             |                              |               |          |
|-----------------------|---------------------------|-----------------------------|-----------------------------|------------------------------|---------------|----------|
| Course Code           | Course Title              | Lectures (L) Hours Per Week | Tutorial (T) Hours Per Week | Practical (P) Hours Per Week | Total Credits | Hours    |
| MAC 101               | Physical Chemistry        | 3                           | 1                           | -                            | 4             | 40       |
| MAC 102               | Inorganic Chemistry       | 3                           | 1                           | -                            | 4             | 40       |
| MAC 103               | Organic Chemistry         | 3                           | 1                           | -                            | 4             | 40       |
| MAC 121               | Physical Chemistry Lab    | -                           | -                           | 6                            | 3             | 60       |
| MAC 122               | Inorganic Chemistry Lab   | -                           | -                           | 6                            | 3             | 60       |
| MAC 123               | Organic Chemistry Lab     | -                           | -                           | 6                            | 3             | 60       |
|                       |                           |                             |                             |                              |               |          |
| BCP 141               | Advanced Communication– I | 1                           | -                           | -                            | 1             | 10       |
| BSP 143               | Behavioral Science – I    | 1                           | -                           | -                            | 1             | 10       |
| FLP 144               | French – I                | 2                           | -                           | -                            | 2             | 20       |
| MSM 140               | Seminar                   | -                           | -                           | -                            | 5             | -        |
| <b>TOTAL CREDIT</b>   |                           |                             |                             |                              | <b>30</b>     | <b>-</b> |
| <b>TOTAL HOURS</b>    |                           |                             |                             |                              | <b>340</b>    |          |

| <b>SECOND SEMESTER</b>   |                             |                             |                             |                              |               |          |
|--|-----------------------------|-----------------------------|-----------------------------|------------------------------|---------------|----------|
| Course Code  | Course Title                | Lectures (L) Hours Per Week | Tutorial (T) Hours Per Week | Practical (P) Hours Per Week | Total Credits | Hours    |
| MAC 201  | Surface Chemistry           | 2                           | 1                           | -                            | 3             | 30       |
| MAC 202  | Natural Products            | 3                           | 1                           | -                            | 4             | 40       |
| MAC 203  | Analytical Chemistry I      | 3                           | 1                           | -                            | 4             | 40       |
| MAC 204  | Analytical Chemistry II     | 3                           | 1                           | -                            | 4             | 40       |
| MAC 222  | Natural Products Lab        | -                           | -                           | 8                            | 4             | 80       |
| MAC 225  | Analytical Chemistry Lab    | -                           | -                           | 8                            | 4             | 80       |
|  |                             |                             |                             |                              |               |          |
| BCP 241  | Advanced Communication – II | 1                           | -                           | -                            | 1             | 10       |
| BSP 243  | Behavioral Science – II     | 1                           | -                           | -                            | 1             | 10       |
| FLP 244  | French – II                 | 2                           | -                           | -                            | 2             | 20       |
| MTP 130  | <b>Term Paper</b>           | -                           | -                           | -                            | 3             | -        |
| <b>TOTAL CREDIT</b>  |                             |                             |                             |                              | <b>30</b>     | <b>-</b> |
| <b>TOTAL HOURS</b>   |                             |                             |                             |                              | <b>350</b>    |          |
| <b>Summer Training will be held at the end of Second Semester, evaluation will be done in Third Semester and credits will be added in the Third Semester</b> |                             |                             |                             |                              |               |          |

| <b>THIRD SEMESTER</b>                     |   |                                    |                                    |                                     |                      |              |
|---|---|------------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                        | <b>Course Title</b>                     | <b>Lectures (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAC 301                                   | Chemistry of Drugs                      | 2                                  | 1                                  | -                                   | 3                    | 30           |
| MAC 302                                   | Computer Applications in Chemistry      | 1                                  | 1                                  | -                                   | 2                    | 20           |
| MAC 303                                   | Green Chemistry                         | 3                                  | 1                                  | -                                   | 4                    | 40           |
| MAC 321                                   | Chemistry of Drugs Lab                  | -                                  | -                                  | 6                                   | 3                    | 60           |
| MAC 322                                   | Computer Applications in Chemistry Lab  |                                    |                                    | 2                                   | 1                    | 20           |
| <b>ELECTIVES (Any one from following)</b> |   |                                    |                                    |                                     | <b>4</b>             | <b>40</b>    |
| MAC 304                                   | Chemistry of Polymers                   | 3                                  | 1                                  | -                                   | -                    | -            |
| MAC 305                                   | Non Conventional Energy Sources         | 3                                  | 1                                  | -                                   | -                    | -            |
| MAC 306                                   | Bioinorganic & Organometallic Chemistry | 3                                  | 1                                  | -                                   | -                    | -            |
| MAC 307                                   | Chemistry of Waste Management           | 3                                  | 1                                  | -                                   | -                    | -            |
|   |   |                                    |                                    |                                     |                      |              |
| BCP 341                                   | Advanced Communication– III             | 1                                  | -                                  | -                                   | 1                    | 10           |
| BSP 343                                   | Behavioral Science – III                | 1                                  | -                                  | -                                   | 1                    | 10           |
| FLP 344                                   | French – III                            | 2                                  | -                                  | -                                   | 2                    | 20           |
| MSP 360                                   | <b>Summer Training (Evaluation)</b>     | -                                  | -                                  | -                                   | 9                    | -            |
| <b>TOTAL CREDIT</b>                       |   |                                    |                                    |                                     | <b>30</b>            |              |
| <b>TOTAL HOURS</b>                        |   |                                    |                                    |                                     |                      | <b>250</b>   |

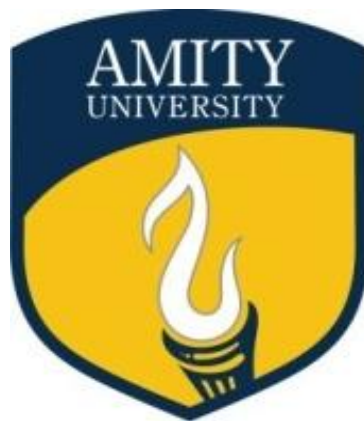
| <b>FOURTH SEMESTER</b> |                            |                                    |                                    |                                     |                      |
|------------------------|----------------------------|------------------------------------|------------------------------------|-------------------------------------|----------------------|
| <b>Course Code</b>     | <b>Course Title</b>        | <b>Lectures (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> |
| MMP 460                | DISSERTATION (20-22 WEEKS) | -                                  | -                                  | -                                   | 30                   |
| <b>TOTAL CREDIT</b>    |                            |                                    |                                    |                                     | <b>30</b>            |

  
 Registrar  
 Amity University Madhya Pradesh  
 Gwalior

**Master of Science  
(Applied Mathematics)**

**Programme Code: MAM**

**Duration – 2 Years Full Time**



**Programme Structure  
And  
Curriculum & Scheme of Examination**

**Batch: 2018-20**

**(Based on AICTE)**

**AMITY UNIVERSITY  
MADHYA PRADESH**

  
Registrar  
Amity University Madhya Pradesh  
Gwalior

## PROGRAMME STRUCTURE

| <b>FIRST SEMESTER</b>            |  |                             |                             |                              |               |            |
|----------------------------------|--|-----------------------------|-----------------------------|------------------------------|---------------|------------|
| Course Code                      | Course Title                                 | Lectures (L) Hours Per Week | Tutorial (T) Hours Per Week | Practical (P) Hours Per Week | Total Credits | Hours      |
| MAM 101                          | Advanced Complex Analysis                    | 3                           | 1                           | -                            | 4             | 40         |
| MAM 102                          | Field Theory                                 | 3                           | 1                           | -                            | 4             | 40         |
| MAM 103                          | Integral Equations and Calculus of Variation | 3                           | 1                           | -                            | 4             | 40         |
| MAM 104                          | Mathematical Analysis                        | 3                           | 1                           | -                            | 4             | 40         |
| MAM 105                          | Topology                                     | 3                           | 1                           | -                            | 4             | 40         |
| BCP 141                          | Advanced Communication – I                   | 1                           | -                           | -                            | 1             | 10         |
| BSP 143                          | Behavioural Science – I                      | 1                           | -                           | -                            | 1             | 10         |
| FLP 144                          | French – I                                   | 2                           | -                           | -                            | 2             | 20         |
| MSM 140                          | <b>Seminar</b>                               | -                           | -                           | -                            | 5             | -          |
| <b>TOTAL CREDITS</b>             |  |                             |                             |                              | <b>29</b>     |            |
| <b>Total Hrs per Week</b>        |  |                             |                             |                              |               | <b>24</b>  |
| <b>Total Hrs in the Semester</b> |  |                             |                             |                              |               | <b>240</b> |

| <b>SECOND SEMESTER</b>   |   |                             |                             |                              |               |            |
|--|---|-----------------------------|-----------------------------|------------------------------|---------------|------------|
| Course Code  | Course Title  | Lectures (L) Hours Per Week | Tutorial (T) Hours Per Week | Practical (P) Hours Per Week | Total Credits | Hours      |
| MAM 201  | Numerical Methods and Data Analysis                   | 3                           | 1                           | -                            | 4             | 40         |
| MAM 202  | Functional Analysis                                   | 3                           | 1                           | -                            | 4             | 40         |
| MAM 203  | Lebesgue Measure and Integration Theory               | 3                           | 1                           | -                            | 4             | 40         |
| MAM 204  | Ordinary Differential Equations                       | 3                           | 1                           | -                            | 4             | 40         |
| MAM 221  | Numerical Methods and Data Analysis Lab               | -                           | -                           | 6                            | 3             | 60         |
| <b>ELECTIVES (Any one from following)</b>  |   |                             |                             |                              | <b>4</b>      | <b>40</b>  |
| MAM 205  | Discrete Mathematical Structure                       | 3                           | 1                           | -                            | -             | -          |
| MAM 206  | Dynamical Systems                                     | 3                           | 1                           | -                            | -             | -          |
| MAM 207  | Industrial Mathematics                                | 3                           | 1                           | -                            | -             | -          |
| MAM 208  | Mathematical Modeling -An Inter Disciplinary Approach | 3                           | 1                           | -                            | -             | -          |
| BCP 241  | Advanced Communication – II                           | 1                           | -                           | -                            | 1             | 10         |
| BSP 243  | Behavioral Science – II                               | 1                           | -                           | -                            | 1             | 10         |
| FLP 244  | French – II   | 2                           | -                           | -                            | 2             | 20         |
| MTP 130  | <b>Term paper</b>                                     | -                           | -                           | -                            | 3             | -          |
| <b>TOTAL CREDITS</b>   |   |                             |                             |                              | <b>30</b>     |            |
| <b>Total Hrs per Week</b>  |   |                             |                             |                              |               | <b>30</b>  |
| <b>Total Hrs in the Semester</b>   |   |                             |                             |                              |               | <b>300</b> |
| <b>Summer Training will be held at the end of Second Semester, evaluation will be done in Third Semester and credits will be added in the Third Semester</b> |   |                             |                             |                              |               |            |

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Amity University Madhya Pradesh  
Gwalior

| <b>THIRD SEMESTER</b>                     |  |                                    |                                    |                                     |                      |              |
|---|--|------------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                        | <b>Course Title</b>  | <b>Lectures (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MAM 301                                   | Mathematical Statistics                                    | 3                                  | 1                                  | -                                   | 4                    | 40           |
| MAM 302                                   | Partial Differential Equations And Boundary Value Problems | 3                                  | 1                                  | -                                   | 4                    | 40           |
| MAM 321                                   | Statistical Lab  | -                                  | -                                  | 4                                   | 2                    | 40           |
| <b>ELECTIVES (Any two from following)</b> |  |                                    |                                    |                                     | <b>4+4</b>           | <b>40+40</b> |
| MAM 303                                   | Fuzzy Sets and their Applications                          | 3                                  | 1                                  | -                                   | -                    | -            |
| MAM 304                                   | Queuing and Reliability Theory                             | 3                                  | 1                                  | -                                   | -                    | -            |
| MAM 305                                   | Special Functions  | 3                                  | 1                                  | -                                   | -                    | -            |
| MAM 306                                   | Integral and Discrete Transforms                           | 3                                  | 1                                  | -                                   | -                    | -            |
| MAM 307                                   | Mechanics  | 3                                  | 1                                  | -                                   | -                    | -            |
| MAM 308                                   | Numerical Solution of Differential Equations               | 3                                  | 1                                  | -                                   | -                    | -            |
| BCP 341                                   | Advanced Communication – III                               | 1                                  | -                                  | -                                   | 1                    | 10           |
| BSP 343                                   | Behavioral Science – III                                   | 1                                  | -                                  | -                                   | 1                    | 10           |
| FLP 344                                   | French – III   | 2                                  | -                                  | -                                   | 2                    | 20           |
| MSP 360                                   | <b>Summer Training (Evaluation)</b>                        | -                                  | -                                  | -                                   | 9                    | -            |
| <b>TOTAL CREDITS</b>                      |  |                                    |                                    |                                     | <b>31</b>            |              |
| <b>Total Hrs per Week</b>                 |  |                                    |                                    |                                     |                      | <b>24</b>    |
| <b>Total Hrs in the Semester</b>          |  |                                    |                                    |                                     |                      | <b>240</b>   |

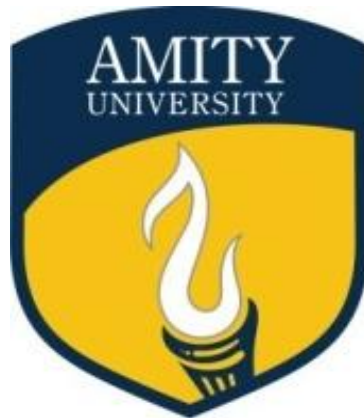
| <b>FOURTH SEMESTER</b>           |                                   |                                    |                                    |                                     |                      |              |
|----------------------------------|-----------------------------------|------------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>               | <b>Course Title</b>               | <b>Lectures (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MMP 460                          | <b>Dissertation (20-22 weeks)</b> | -                                  | -                                  | -                                   | 30                   | -            |
| <b>TOTAL CREDITS</b>             |                                   |                                    |                                    |                                     | <b>30</b>            | <b>-</b>     |
| <b>Total Hrs per Week</b>        |                                   |                                    |                                    |                                     |                      | <b>-</b>     |
| <b>Total Hrs in the Semester</b> |                                   |                                    |                                    |                                     |                      | <b>-</b>     |

  
**Registrar**  
**Amity University Madhya Pradesh**  
**Gwalior**

**Master of Science  
(Applied Physics)**

**Programme Code: MAP**

**Duration – 2 Years Full Time**



**Programme Structure  
And  
Curriculum & Scheme of Examination**

**Batch: 2018-20**

**(Based on AICTE)**

**AMITY UNIVERSITY  
MADHYA PRADESH**

  
Registrar  
Amity University Madhya Pradesh  
Gwalior

**PROGRAMME STRUCTURE**

| <b>FIRST SEMESTER</b>              |  |                                    |                                    |                                     |                      |                    |
|------------------------------------|--|------------------------------------|------------------------------------|-------------------------------------|----------------------|--------------------|
| <b>Course Code</b>                 | <b>Course Title</b>                        | <b>Lectures (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> | <b>Total Hours</b> |
| MAP 101                            | Mathematical Physics                       | 2                                  | 2                                  | -                                   | 4                    | 40                 |
| MAP 102                            | Classical Mechanics                        | 2                                  | 1                                  | -                                   | 3                    | 30                 |
| MAP 103                            | Digital Electronics and Microprocessor     | 2                                  | 1                                  | -                                   | 3                    | 30                 |
| MAP 104                            | Electromagnetic Theory                     | 2                                  | 1                                  | -                                   | 3                    | 30                 |
| MAP 105                            | Computer Programming                       | 2                                  | 1                                  | -                                   | 3                    | 30                 |
| MAP 123                            | Digital Electronics and Microprocessor Lab | -                                  | -                                  | 6                                   | 3                    | 60                 |
| MAP 125                            | Computer Programming Lab                   | -                                  | -                                  | 4                                   | 2                    | 40                 |
| BCP 141                            | Advanced Communication – I                 | 1                                  | -                                  | -                                   | 1                    | 10                 |
| BSP 143                            | Behavioural Science – I                    | 1                                  | -                                  | -                                   | 1                    | 10                 |
| FLP 144                            | French – I                                 | 2                                  | -                                  | -                                   | 2                    | 20                 |
| MSM 140                            | <b>Seminar</b>                             | -                                  | -                                  | -                                   | 5                    | -                  |
| <b>TOTAL CREDITS</b>               |  |                                    |                                    |                                     | <b>30</b>            |                    |
| <b>Total Hours per Week</b>        |  |                                    |                                    |                                     | <b>30</b>            |                    |
| <b>Total Hours in the Semester</b> |  |                                    |                                    |                                     | <b>300</b>           |                    |

| <b>SECOND SEMESTER</b>  |                             |                                    |                                    |                                     |                      |                    |
|---|-----------------------------|------------------------------------|------------------------------------|-------------------------------------|----------------------|--------------------|
| <b>Course Code</b>  | <b>Course Title</b>         | <b>Lectures (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> | <b>Total Hours</b> |
| MAP 201   | Experimental Techniques     | 3                                  | 1                                  | -                                   | 4                    | 40                 |
| MAP 202   | Solid State Physics         | 3                                  | 1                                  | -                                   | 4                    | 40                 |
| MAP 203   | Statistical Mechanics       | 3                                  | 1                                  | -                                   | 4                    | 40                 |
| MAP 204   | Quantum Mechanics           | 3                                  | 1                                  | -                                   | 4                    | 40                 |
| MAP 222   | Solid State Physics Lab     | -                                  | -                                  | 10                                  | 5                    | 100                |
| BCP 241   | Advanced Communication – II | 1                                  | -                                  | -                                   | 1                    | 10                 |
| BSP 243   | Behavioural Science – II    | 1                                  | -                                  | -                                   | 1                    | 10                 |
| FLP 244   | French – II                 | 2                                  | -                                  | -                                   | 2                    | 20                 |
| MTP 130   | <b>Term paper</b>           | -                                  | -                                  | -                                   | 3                    | -                  |
| <b>TOTAL CREDITS</b>  |                             |                                    |                                    |                                     | <b>28</b>            |                    |
| <b>Total Hours per Week</b>   |                             |                                    |                                    |                                     | <b>30</b>            |                    |
| <b>Total Hours in the Semester</b>  |                             |                                    |                                    |                                     | <b>300</b>           |                    |
| Summer Training will be held at the end of Second Semester, evaluation will be done in Third Semester and credits will be added in the Third Semester |                             |                                    |                                    |                                     |                      |                    |

  
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**Gwalior**

| <b>THIRD SEMESTER</b>                         |   |                                    |                                    |                                     |                      |                    |
|---|---|------------------------------------|------------------------------------|-------------------------------------|----------------------|--------------------|
| <b>Course Code</b>                            | <b>Course Title</b>   | <b>Lectures (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> | <b>Total Hours</b> |
| MAP 301                                       | Atomic & Molecular Physics                                  | 3                                  | 1                                  | -                                   | 4                    | 40                 |
| MAP 302                                       | Nuclear Physics   | 3                                  | 1                                  | -                                   | 4                    | 40                 |
| MAP 303                                       | Numerical Methods and Data Analysis                         | 2                                  | 1                                  | -                                   | 3                    | 30                 |
| MAP 322                                       | Nuclear Physics & Spectroscopy Lab                          | -                                  | -                                  | 8                                   | 4                    | 80                 |
| <b>ELECTIVES (Any one from each category)</b> |   |                                    |                                    |                                     | <b>4</b>             | <b>40</b>          |
| MAP 304                                       | Non Conventional Energy Sources                             | 3                                  | 1                                  | -                                   | -                    | -                  |
| MAP 305                                       | Nuclear & Reactor Physics                                   | 3                                  | 1                                  | -                                   | -                    | -                  |
| MAP 306                                       | Nano Electronics and Nanomagnetism                          | 3                                  | 1                                  | -                                   | -                    | -                  |
| MAP 307                                       | Experimental Techniques With Interdisciplinary Applications | 3                                  | 1                                  | -                                   | -                    | -                  |
| MAP 308                                       | Optical Fibers & Communication                              | 3                                  | 1                                  | -                                   | -                    | -                  |
|   |   |                                    |                                    |                                     |                      |                    |
| BCP 341                                       | Advanced Communication – III                                | 1                                  | -                                  | -                                   | 1                    | 10                 |
| BSP 343                                       | Behavioural Science – III                                   | 1                                  | -                                  | -                                   | 1                    | 10                 |
| FLP 344                                       | French – III  | 2                                  | -                                  | -                                   | 2                    | 20                 |
| MSP 360                                       | <b>Summer Training (Evaluation)</b>                         | -                                  | -                                  | -                                   | 9                    | -                  |
| <b>TOTAL CREDITS</b>                          |   |                                    |                                    |                                     | <b>32</b>            |                    |
| <b>Total Hours per Week</b>                   |   |                                    |                                    |                                     |                      | <b>27</b>          |
| <b>Total Hours in the Semester</b>            |   |                                    |                                    |                                     |                      | <b>270</b>         |

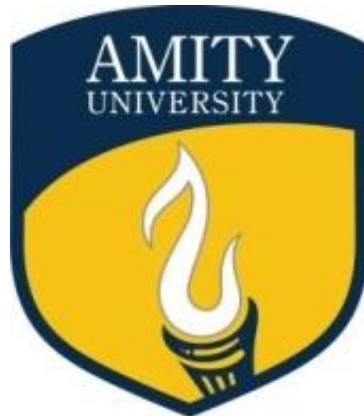
| <b>FOURTH SEMESTER</b>             |                                   |                                    |                                    |                                     |                      |                    |
|------------------------------------|-----------------------------------|------------------------------------|------------------------------------|-------------------------------------|----------------------|--------------------|
| <b>Course Code</b>                 | <b>Course Title</b>               | <b>Lectures (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> | <b>Total Hours</b> |
| MMP 460                            | <b>Dissertation (20-22 weeks)</b> | -                                  | -                                  | -                                   | 30                   | -                  |
| <b>TOTAL CREDITS</b>               |                                   |                                    |                                    |                                     | <b>30</b>            |                    |
| <b>Total Hours per Week</b>        |                                   |                                    |                                    |                                     |                      | -                  |
| <b>Total Hours in the Semester</b> |                                   |                                    |                                    |                                     |                      | -                  |

  
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**Gwalior**

**Master of Science  
(Applied Statistics)**

**Programme Code: MAS**

**Duration – 2 Years Full Time**



**Programme Structure  
And  
Curriculum & Scheme of Examination**

**Batch: 2018-20**

**(Based on AICTE)**

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MADHYA PRADESH**

  
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Gwalior

## PROGRAMME STRUCTURE

### M.Sc. (APPLIED STATISTICS) : 2019-21

| <b>FIRST SEMESTER</b>                     |                                       |                             |                             |                              |               |             |
|---|---------------------------------------|-----------------------------|-----------------------------|------------------------------|---------------|-------------|
| Course Code                               | Course Title                          | Lectures (L) Hours Per Week | Tutorial (T) Hours Per Week | Practical (P) Hours Per Week | Total Credits | Total Hours |
| MAS 101                                   | Statistical Methods                   | 3                           | 1                           | -                            | 4             | 40          |
| MAS 102                                   | Advance Statistical Inference-I       | 3                           | 1                           | -                            | 4             | 40          |
| MAS 103                                   | Probability Theory                    | 3                           | 1                           | -                            | 4             | 40          |
| MAS 104                                   | Linear Algebra and Applications       | 3                           | 1                           | -                            | 4             | 40          |
| <b>ELECTIVES (Any one from following)</b> |                                       |                             |                             |                              | <b>4</b>      | <b>40</b>   |
| MAS 105                                   | Distribution Theory                   | 3                           | 1                           | -                            | -             | -           |
| MAS 106                                   | Queuing Theory and Reliability Theory | 3                           | 1                           | -                            | -             | -           |
| BCP 141                                   | Advanced Communication – I            | 1                           | -                           | -                            | 1             | 10          |
| BSP 143                                   | Behavioural Science – I               | 1                           | -                           | -                            | 1             | 10          |
| FLP 144                                   | French – I                            | 2                           | -                           | -                            | 2             | 20          |
| MSM 140                                   | <b>Seminar</b>                        | -                           | -                           | -                            | 5             | -           |
| <b>TOTAL CREDITS</b>                      |                                       |                             |                             |                              | <b>29</b>     |             |
| <b>Total Hrs per Week</b>                 |                                       |                             |                             |                              | <b>24</b>     |             |
| <b>Total Hrs in the Semester</b>          |                                       |                             |                             |                              | <b>240</b>    |             |

| <b>SECOND SEMESTER</b>   |                                      |                             |                             |                              |               |             |
|--|--------------------------------------|-----------------------------|-----------------------------|------------------------------|---------------|-------------|
| Course Code  | Course Title                         | Lectures (L) Hours Per Week | Tutorial (T) Hours Per Week | Practical (P) Hours Per Week | Total Credits | Total Hours |
| MAS 201  | Advance Statistical Inference-II     | 3                           | 1                           | -                            | 4             | 40          |
| MAS 202  | Advanced Sampling Theory             | 3                           | 1                           | -                            | 4             | 40          |
| MAS 203  | Linear Model and Regression Analysis | 3                           | 1                           | -                            | 4             | 40          |
| MAS 204  | Advanced Real Analysis               | 3                           | 1                           | -                            | 4             | 40          |
| MAS 221  | Statistical Lab-I                    | -                           | -                           | 4                            | 2             | 40          |
| <b>ELECTIVES (Any one from following)</b>  |                                      |                             |                             |                              | <b>4</b>      | <b>40</b>   |
| MAS 205  | Statistical Quality Control          | 3                           | 1                           | -                            | -             | -           |
| MAS 206  | Mathematical Demography              | 3                           | 1                           | -                            | -             | -           |
| BCP 241  | Advanced Communication – II          | 1                           | -                           | -                            | 1             | 10          |
| BSP 243  | Behavioral Science – II              | 1                           | -                           | -                            | 1             | 10          |
| FLP 244  | French – II                          | 2                           | -                           | -                            | 2             | 20          |
| MTP 130  | <b>Term paper</b>                    | -                           | -                           | -                            | 3             | -           |
| <b>TOTAL CREDITS</b>   |                                      |                             |                             |                              | <b>29</b>     | <b>-</b>    |
| <b>Total Hrs per Week</b>  |                                      |                             |                             |                              | <b>28</b>     |             |
| <b>Total Hrs in the Semester</b>   |                                      |                             |                             |                              | <b>280</b>    |             |
| <b>Summer Training will be held at the end of Second Semester, evaluation will be done in Third Semester and credits will be added in the Third Semester</b> |                                      |                             |                             |                              |               |             |

  
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| <b>THIRD SEMESTER</b>                     |  |                                    |                                    |                                     |                      |                    |
|---|--|------------------------------------|------------------------------------|-------------------------------------|----------------------|--------------------|
| <b>Course Code</b>                        | <b>Course Title</b>                      | <b>Lectures (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> | <b>Total Hours</b> |
| MAS 301                                   | Statistical Simulation and Data Analysis | 3                                  | 1                                  | -                                   | 4                    | 40                 |
| MAS 302                                   | Stochastic Processes and Applications    | 3                                  | 1                                  | -                                   | 4                    | 40                 |
| MAS 303                                   | Multivariate Analysis                    | 3                                  | 1                                  | -                                   | 4                    | 40                 |
| MAS 321                                   | Statistical Lab-II                       | -                                  | -                                  | 6                                   | 3                    | 60                 |
| <b>ELECTIVES (Any one from following)</b> |  |                                    |                                    |                                     | <b>4</b>             | <b>40</b>          |
| MAS 304                                   | Modelling and Simulation                 | 3                                  | 1                                  | -                                   | -                    | -                  |
| MAS 305                                   | Survival Analysis                        | 3                                  | 1                                  | -                                   | -                    | -                  |
| BCP 341                                   | Advanced Communication – III             | 1                                  | -                                  | -                                   | 1                    | 10                 |
| BSP 343                                   | Behavioral Science – III                 | 1                                  | -                                  | -                                   | 1                    | 10                 |
| FLP 344                                   | French – III                             | 2                                  | -                                  | -                                   | 2                    | 20                 |
| MSP 360                                   | <b>Summer Training (Evaluation)</b>      | -                                  | -                                  | -                                   | 9                    | -                  |
| <b>TOTAL CREDITS</b>                      |  |                                    |                                    |                                     | <b>32</b>            |                    |
| <b>Total Hrs per Week</b>                 |  |                                    |                                    |                                     |                      | <b>26</b>          |
| <b>Total Hrs in the Semester</b>          |  |                                    |                                    |                                     |                      | <b>260</b>         |

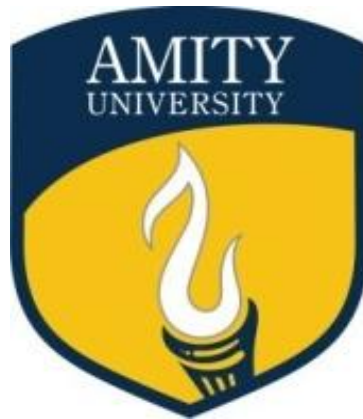
| <b>FOURTH SEMESTER</b>           |                                   |                                    |                                    |                                     |                      |          |
|----------------------------------|-----------------------------------|------------------------------------|------------------------------------|-------------------------------------|----------------------|----------|
| <b>Course Code</b>               | <b>Course Title</b>               | <b>Lectures (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> |          |
| MMP 460                          | <b>Dissertation (20-22 weeks)</b> | -                                  | -                                  | -                                   | 30                   |          |
| <b>TOTAL CREDITS</b>             |                                   |                                    |                                    |                                     | <b>30</b>            |          |
| <b>Total Hrs per Week</b>        |                                   |                                    |                                    |                                     |                      | <b>-</b> |
| <b>Total Hrs in the Semester</b> |                                   |                                    |                                    |                                     |                      | <b>-</b> |

  
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**Gwalior**

**Master of Science  
(Information Technology)**

**Programme Code: MSI**

**Duration – 2 Years Full Time**



**Programme Structure  
And  
Curriculum & Scheme of Examination**

**Batch: 2018-20**

**AMITY UNIVERSITY  
MADHYA PRADESH**

  
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Gwalior

## PROGRAMME STRUCTURE

| <b>FIRST SEMESTER</b>            |   |                                   |                                    |                                     |                      |              |
|----------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>               | <b>Course Title</b>                               | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MSI 101                          | Computer Oriented Numerical & Statistical Methods | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 101                          | Advanced Data Structures and Algorithm Design     | 3                                 | 1                                  | -                                   | 4                    | 40           |
| CSM 102                          | Distributed Operating System                      | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 103                          | Advanced Database Management System               | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 104                          | Data Compression                                  | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 105                          | Artificial Intelligence & Machine Learning        | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 121                          | Advanced Data Structures and Algorithm Design Lab | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSM 123                          | Advanced Database Management System Lab           | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSM 125                          | Artificial Intelligence & Machine Learning Lab    | -                                 | -                                  | 2                                   | 1                    | 20           |
| BSP 141                          | Advanced Communication – I                        | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSP 143                          | Behavioural Science – I                           | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLP 144                          | French -I   | 2                                 | -                                  | -                                   | 2                    | 20           |
| MSM 140                          | <b>Seminar</b>                                    | -                                 | -                                  | -                                   | 5                    | -            |
| <b>TOTAL CREDITS</b>             |   |                                   |                                    |                                     | <b>31</b>            |              |
| <b>Total Hrs per Week</b>        |   |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hrs in the Semester</b> |   |                                   |                                    |                                     | <b>290</b>           |              |

  
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| <b>SECOND SEMESTER</b>                         |  |                                   |                                    |                                     |                      |              |
|--|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                             | <b>Course Title</b>                          | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MSI 201  | Advanced Computer Networks                   | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 201  | Automata Theory and Compiler Design          | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 203  | Soft Computing Techniques                    | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 204  | Image Processing and Pattern Recognition     | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 205  | Software Project Management                  | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 206  | Introduction to Python Programming           | 2                                 | 1                                  | -                                   | 3                    | 30           |
| MSI 221  | Advanced Computer Networks Lab               | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSM 224  | Image Processing and Pattern Recognition Lab | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSM 225  | Software Project Management Lab              | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSM 226  | Introduction to Python Programming Lab       | -                                 | -                                  | 2                                   | 1                    | 20           |
| BCP 241  | Advanced Communication – II                  | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSP 243  | Behavioural Science – II                     | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLP 244  | French-II                                    | 2                                 | -                                  | -                                   | 2                    | 20           |
| MTP 130  | <b>Term Paper (Evaluation)</b>               | -                                 | -                                  | -                                   | 3                    | -            |
| <b>TOTAL CREDITS</b>                           |  |                                   |                                    |                                     | <b>29</b>            |              |
| <b>Total Hrs per Week</b>                      |  |                                   |                                    |                                     | <b>30</b>            |              |
| <b>Total Hrs in the Semester</b>               |  |                                   |                                    |                                     | <b>300</b>           |              |
| Summer Internship Programme (SIP): 6 – 8 WEEKS |  |                                   |                                    |                                     |                      |              |

  
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| <b>THIRD SEMESTER</b>              |   |                                   |                                    |                                     |                      |              |
|------------------------------------|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>                 | <b>Course Title</b>                                     | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MSI 301                            | Techniques of Operation Research                        | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 301                            | Cyber Security and Digital Forensics                    | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 302                            | Socket Programming and Network Security                 | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 303                            | Parallel Computing                                      | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 304                            | Data Mining and Data Analysis                           | 2                                 | 1                                  | -                                   | 3                    | 30           |
| CSM 322                            | Socket Programming and Network Security Lab             | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSM 323                            | Parallel Computing Lab                                  | -                                 | -                                  | 2                                   | 1                    | 20           |
| CSM 324                            | Data Mining and Data Analysis Lab                       | -                                 | -                                  | 2                                   | 1                    | 20           |
| ELECTIVES (Any one from following) |   |                                   |                                    |                                     | <b>3</b>             | <b>30</b>    |
| CSM 306                            | Semantic Web and Knowledge Management                   | 2                                 | 1                                  | -                                   | -                    |              |
| CSM 307                            | Research Methodology                                    | 2                                 | 1                                  | -                                   | -                    |              |
| CSM 308                            | Real-Time Systems                                       | 2                                 | 1                                  | -                                   | -                    |              |
| CSM 309                            | Mobile and Pervasive Computing                          | 2                                 | 1                                  | -                                   | -                    |              |
| CSM 310                            | Service Oriented Architecture                           | 2                                 | 1                                  | -                                   | -                    |              |
|                                    |   |                                   |                                    |                                     |                      |              |
| BSP 341                            | Advanced Communication – III                            | 1                                 | -                                  | -                                   | 1                    | 10           |
| BSP 343                            | Behavioural Science – III                               | 1                                 | -                                  | -                                   | 1                    | 10           |
| FLP 344                            | French-III  | 2                                 | -                                  | -                                   | 2                    | 20           |
| MSP 360                            | <b>Summer Internship Programme (SIP) – (Evaluation)</b> | -                                 | -                                  | -                                   | 9                    | -            |
| <b>TOTAL CREDITS</b>               |   |                                   |                                    |                                     | <b>34</b>            |              |
| <b>Total Hrs per Week</b>          |   |                                   |                                    |                                     | <b>28</b>            |              |
| <b>Total Hrs in the Semester</b>   |   |                                   |                                    |                                     | <b>280</b>           |              |

  
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**Gwalior**

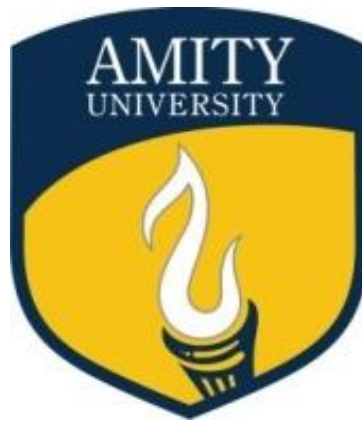
| <b>FOURTH SEMESTER</b> |                            |                                   |                                    |                                     |                      |              |
|------------------------|----------------------------|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------|
| <b>Course Code</b>     | <b>Course Title</b>        | <b>Lecture (L) Hours Per week</b> | <b>Tutorial (T) Hours Per week</b> | <b>Practical (P) Hours Per week</b> | <b>Total Credits</b> | <b>Hours</b> |
| MMP 460                | Dissertation (20-22 Weeks) | -                                 | -                                  | -                                   | 30                   | -            |
| <b>TOTAL CREDITS</b>   |                            |                                   |                                    |                                     | <b>30</b>            | <b>-</b>     |

  
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**Amity University Madhya Pradesh**  
**Gwalior**

**Master of Technology  
Civil Engineering  
(Specialization in Structural Engineering)**

**Programme Code: CEM**

**Duration – 2 Years Full Time**



**Programme Structure  
And  
Curriculum & Scheme of Examination**

**Batch: 2018-20**

**(Based on AICTE)**

**AMITY UNIVERSITY  
MADHYA PRADESH**

  
Registrar  
Amity University Madhya Pradesh  
Gwalior

**PROGRAMME STRUCTURE**  
**M.TECH. CIVIL ENGINEERING (Structural Engineering)**

| <b>FIRST SEMESTER</b>                         |   |                                   |                                    |                                     |                      |                    |
|---|---|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------------|
| <b>Course Code</b>                            | <b>Course Title</b>                                   | <b>Lecture (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> | <b>Total Hours</b> |
| CEM 101                                       | Numerical Analysis and Computer Programming           | 3                                 | 1                                  | -                                   | 4                    | 40                 |
| CEM 102                                       | Concrete Technology                                   | 3                                 | 1                                  | -                                   | 4                    | 40                 |
| CEM 103                                       | Advanced Structural Analysis                          | 3                                 | 1                                  | -                                   | 4                    | 40                 |
| CEM 121                                       | Numerical Analysis and Computer Programming Lab       | -                                 | -                                  | 4                                   | 2                    | 40                 |
| CEM 122                                       | Concrete Technology Lab                               | -                                 | -                                  | 4                                   | 2                    | 40                 |
| CEM 123                                       | Advanced Structural Analysis Lab                      | -                                 | -                                  | 4                                   | 2                    | 40                 |
| <b>ELECTIVES (Any one from each category)</b> |   |                                   |                                    |                                     | <b>4</b>             | <b>40</b>          |
| CEM 104                                       | Structural Dynamics And Earthquake Resistant Building | 3                                 | 1                                  | -                                   | -                    | -                  |
| CEM 105                                       | Bridge Engineering                                    | 3                                 | 1                                  | -                                   | -                    | -                  |
| CEM 106                                       | Advanced Elasticity And Plasticity                    | 3                                 | 1                                  | -                                   | -                    | -                  |
|   |   |                                   |                                    |                                     |                      |                    |
| BCP 141                                       | Advanced Communication – I                            | 1                                 | -                                  | -                                   | 1                    | 10                 |
| BSP 143                                       | Behavioral Science – I                                | 1                                 | -                                  | -                                   | 1                    | 10                 |
| FLP 144                                       | French – I  | 2                                 | -                                  | -                                   | 2                    | 20                 |
| MTP 130                                       | <b>Term Paper</b>                                     | -                                 | -                                  | -                                   | 3                    | -                  |
| <b>TOTAL CREDITS</b>                          |   |                                   |                                    |                                     | <b>29</b>            |                    |
| <b>Total Hrs per Week</b>                     |   |                                   |                                    |                                     | <b>32</b>            |                    |
| <b>Total Hrs in the Semester</b>              |   |                                   |                                    |                                     | <b>320</b>           |                    |

  
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| <b>SECOND SEMESTER</b>                         |                                     |                                   |                                    |                                     |                      |                    |
|--|-------------------------------------|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------------|
| <b>Course Code</b>                             | <b>Course Title</b>                 | <b>Lecture (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> | <b>Total Hours</b> |
| CEM 201  | Advanced Steel Structure            | 3                                 | 1                                  | -                                   | 4                    | 40                 |
| CEM 202  | Advanced Foundation Engineering     | 3                                 | 1                                  | -                                   | 4                    | 40                 |
| CEM 203  | Finite Element Method               | 3                                 | 1                                  | -                                   | 4                    | 40                 |
| CEM 222  | Advanced Foundation Engineering Lab | -                                 | -                                  | 4                                   | 2                    | 40                 |
| CEM 223  | Finite Element Method Lab           | -                                 | -                                  | 4                                   | 2                    | 40                 |
| CEM 224  | Structural Engineering Lab          | -                                 | -                                  | 4                                   | 2                    | 40                 |
| <b>ELECTIVES (Any one from each category)</b>  |                                     |                                   |                                    |                                     | <b>4</b>             | <b>40</b>          |
| CEM 205  | Optimization Techniques             | 3                                 | 1                                  | -                                   | -                    | -                  |
| CEM 206  | Design of Pre-Stressed Structures   | 3                                 | 1                                  | -                                   | -                    | -                  |
| CEM 207  | Experimental Stress Analysis        | 3                                 | 1                                  | -                                   | -                    | -                  |
|  |                                     |                                   |                                    |                                     |                      |                    |
| BCP 241  | Advanced Communication – II         | 1                                 | -                                  | -                                   | 1                    | 10                 |
| BSP 243  | Behavioral Science – II             | 1                                 | -                                  | -                                   | 1                    | 10                 |
| FLP 244  | <b>French-II</b>                    | 2                                 | -                                  | -                                   | 2                    | 20                 |
| MMP 260  | <b>Minor Project I</b>              | -                                 | -                                  | -                                   | <b>4</b>             | -                  |
| <b>TOTAL CREDITS</b>                           |                                     |                                   |                                    |                                     | <b>30</b>            |                    |
| <b>Total Hrs per Week</b>                      |                                     |                                   |                                    |                                     | <b>32</b>            |                    |
| <b>Total Hrs in the Semester</b>               |                                     |                                   |                                    |                                     | <b>320</b>           |                    |
| Summer Internship Programme (SIP): 6 – 8 WEEKS |                                     |                                   |                                    |                                     |                      |                    |

  
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**Gwalior**

| <b>THIRD SEMESTER</b>                         |  |                                   |                                    |                                     |                      |                    |
|---|--|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------------|
| <b>Course Code</b>                            | <b>Course Title</b>                        | <b>Lecture (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> | <b>Total Hours</b> |
| CEM 301                                       | Research Methodology                       | 3                                 | 1                                  | -                                   | 4                    | 40                 |
| CEM 302                                       | Advanced RCC Design                        | 3                                 | 1                                  | -                                   | 4                    | 40                 |
| CEM 303                                       | High Rise Buildings Analysis               | 3                                 | 1                                  | -                                   | 4                    | 40                 |
| CEM 322                                       | Advanced RCC Design Lab                    | -                                 | -                                  | 4                                   | 2                    | 40                 |
| CEM 324                                       | Building Design Project Lab Using Software | -                                 | -                                  | 4                                   | 2                    | 40                 |
| CEM 325                                       | Structural Material Testing Lab-II         | -                                 | -                                  | 4                                   | 2                    | 40                 |
| <b>ELECTIVES (Any one from each category)</b> |  |                                   |                                    |                                     | <b>4</b>             | <b>40</b>          |
| CEM 306                                       | Analysis of Plate and Shells               | 3                                 | 1                                  | -                                   | -                    | -                  |
| CEM 307                                       | Reliability Based Civil Engineering Design | 3                                 | 1                                  | -                                   | -                    | -                  |
| CEM 308                                       | Evaluation and Retrofitting of Building    | 3                                 | 1                                  | -                                   | -                    | -                  |
|   |  |                                   |                                    |                                     |                      |                    |
| BCP 341                                       | Advanced Communication – III               | 1                                 | -                                  | -                                   | 1                    | 10                 |
| BSP 343                                       | Behavioral Science – III                   | 1                                 | -                                  | -                                   | 1                    | 10                 |
| FLP 344                                       | French– III                                | 2                                 | -                                  | -                                   | 2                    | 20                 |
| MSP 350                                       | <b>Summer Internship Programme (SIP)</b>   | -                                 | -                                  | -                                   | 6                    | -                  |
| MMP 360                                       | <b>Minor Project II</b>                    | -                                 | -                                  | -                                   | <b>4</b>             | -                  |
| <b>TOTAL CREDITS</b>                          |  |                                   |                                    |                                     | <b>36</b>            |                    |
| <b>Total Hrs per Week</b>                     |  |                                   |                                    |                                     |                      | <b>32</b>          |
| <b>Total Hrs in the Semester</b>              |  |                                   |                                    |                                     |                      | <b>320</b>         |

| <b>FOURTH SEMESTER</b>           |                                   |                                   |                                    |                                     |                      |                    |
|----------------------------------|-----------------------------------|-----------------------------------|------------------------------------|-------------------------------------|----------------------|--------------------|
| <b>Course Code</b>               | <b>Course Title</b>               | <b>Lecture (L) Hours Per Week</b> | <b>Tutorial (T) Hours Per Week</b> | <b>Practical (P) Hours Per Week</b> | <b>Total Credits</b> | <b>Total Hours</b> |
| MMP 460                          | <b>Dissertation (20-22 weeks)</b> | -                                 | -                                  | -                                   | 30                   | -                  |
| <b>TOTAL CREDITS</b>             |                                   |                                   |                                    |                                     | <b>30</b>            | -                  |
| <b>Total Hrs per Week</b>        |                                   |                                   |                                    |                                     |                      | -                  |
| <b>Total Hrs in the Semester</b> |                                   |                                   |                                    |                                     |                      | -                  |