

## Draft Report of the Core Curriculum Committee

First Semester of the Year 2026-27

**1. Guidelines for Drawing Instructors and Tutors from Various Departments (As per the New Guidelines 2024 for preparation of CCC report).**

**Table 1: List of Core Courses and respective Departments handling them as per Committee and/or agreements between/among departments when Instructors are drawn from multiple Departments.**

| Course No. and Title        | Departments |         |         |         |         |         |
|-----------------------------|-------------|---------|---------|---------|---------|---------|
|                             | 2024-25     | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
| TA111(Engineering Graphics) | AE          | AE      | CE      | CE      | ME      | ME      |
| ESO201(Thermodynamics)      | CHE         | CHE     | AE      | CHE     | CHE     | ME      |
| ESO202(Solid Mechanics)     | CE          | CE      | ME      | ME      | AE      | AE      |
| ESO204(Fluid Mechanics)     | ME          | CHE     | CHE     | AE      | CHE     | CHE     |

**Table 2: List of Core Courses and respective Departments handling them as per Committee when Instructors are drawn from a fixed Department**

| Department | Course(s)                                      |
|------------|--|
| BSBE       | LIF111, ESO206                                 |
| CE         | ESO208, CE212                                  |
| CHM        | CHM111, CHM112M, CHM113M,                      |
| CSE        | ESC111M, ESC112M, ESO207                       |
| DMS        | DMS201   |
| EE         | ESC201   |
| ES         | ESO213, ES208                                  |
| ECO        | HSO201, ECO111                                 |
| HSS        | HSS-1, HSS-2                                   |
| ME         | TA212  |
| MSE        | TA211, ESO225                                  |
| MTH        | MTH111M, MTH112M, MSO202M, MSO203M, MSO205     |
| PHY        | PHY111, PHY112, PHY113, PHY114, PHY115, PSO201 |

**Table 3: List of Core Courses and Respective Departments that will provide Theory and Lab Tutors / Instructors**

| <b>Course no.</b> | <b>Course Name</b>  | <b>Departments That Provide Tutors / Lab Instructors</b> |
|-------------------|---|--|
| CHM111            | Chemistry Lab   | CHM  |
| CHM112M           | General Chemistry: Physical Chemistry                               | CHM  |
| CHM113M           | General Chemistry: Inorganic & Organic Chemistry                    | CHM  |
| ESC111M           | Fundamentals Of Computing - I                                       | CSE  |
| ESC112M           | Fundamentals Of Computing - II                                      | CSE  |
| ESC201            | Introduction to Electronics   | EE   |
| ESO201            | Thermodynamics  | CHE, ES, ME  |
| ESO202            | Mechanics of Solids   | AE, CE, MSE  |
| ESO204            | Fluid Mechanics and Rate Processes                                  | AE, CHE, ES  |
| ESO206            | Principles of Biotechnology   | BSBE   |
| ESO207            | Data Structures and Algorithms                                      | CSE  |
| ESO208            | Computational Methods in Engg.                                      | CE   |
| ESO213            | Fundamentals of Earth Sciences                                      | ES   |
| ESO225            | Nature and Properties of Materials                                  | MSE  |
| ETH111            | Practical Ethics  | <b>Optional</b>  |
| HSO201            | Applied Probability And Statistics                                  | CE, ECO  |
| HSS-I             | Humanities-I  | HSS  |
| HSS-II            | Humanities-II   | HSS  |
| LIF111            | Introduction To Biology   | BSBE   |
| MSO202M           | Complex Variables   | AE, EE, ME, MTH, PHY                                     |
| MSO203M           | Partial Differential Equations                                      | AE, CE, EE, ME, MSE, MTH, PHY                            |
| MSO205            | Introduction To Probability Theory                                  | MTH  |
| MTH111M           | Single Variable Calculus  | MTH  |
| MTH112M           | Application Of Single Variable Calculus & Several Variable Calculus | MTH  |
| PHY111            | Physics Laboratory  | PHY  |
| PHY112            | Classical Dynamics  | PHY  |
| PHY113            | Classical Electrodynamics   | PHY  |
| PHY114            | Quantum Physics   | PHY  |
| PHY115            | Oscillations And Waves  | PHY  |
| PSO201            | Quantum Physics   | PHY  |
| EME-CE212         | Environment And Sustainability                                      | CE   |
| EME-DMS201        | Introduction To Management  | DMS  |
| EME-ES208         | Earth and Environment   | ES   |
| EME-ECO111        | Economy, Society & Public Policy                                    | ECO  |
| TA111             | Engineering Graphics  | AE, CE, ME, MSE  |
| TA211             | Manufacturing Processes I   | MSE  |
| TA212             | Manufacturing Processes II  | ME   |

## 2. Estimate of Number of Students in Core Courses in First (I) Semester during the Year 2026-27

**Table 4: List of core courses and estimate of number of students**

| Course Group                                      | Course No.                        | Course Title   | L | T | P | Credit | Inst. Unit/<br>90 Students | Tutorial<br>Unit per<br>Section | Estimated number<br>of New Students | No. of<br>students<br>having<br>fail<br>backlogs | No. of<br>students<br>registered in<br>2025-26-I | Final<br>estimate for<br>2026-27-I |
|---|-----------------------------------|--|---|---|---|--------|----------------------------|---------------------------------|-------------------------------------|--|--|------------------------------------|
| <b>1<sup>st</sup><br/>Semester IC<br/>Courses</b> | CHM111                            | Chemistry Lab  | 0 | 0 | 3 | 3      | 1.5                        | 1.5                             | 600                                 | 4  | 614  | 604                                |
|   | CHM112M                           | General Chemistry:<br>Physical Chemistry                                     | 2 | 1 | 0 | 4      | 1.25                       | 0.25                            | 600                                 | 64   | 609  | 664                                |
|   | CHM113M                           | General Chemistry:<br>Inorganic & Organic<br>Chemistry                       | 2 | 1 | 0 | 4      | 1.25                       | 0.25                            | 600                                 | 29   | 605  | 629                                |
|   | MTH111M                           | Single Variable Calculus   | 3 | 1 | 0 | 6      | 1.75                       | 0.25                            | 1220                                | 222  | 1289   | 1442                               |
|   | MTH112M                           | Application Of Single<br>Variable Calculus &<br>Several Variable<br>Calculus | 3 | 1 | 0 | 6      | 1.75                       | 0.25                            | 1220                                | 152  | 1341   | 1372                               |
|   | PHY111                            | Physics Laboratory   | 0 | 0 | 3 | 3      | 1.5                        | 1.5                             | 620                                 | 19   | 597  | 639                                |
|   | PHY112                            | Classical Dynamics   | 3 | 1 | 0 | 11     | 3.5                        | 0.5                             | 368                                 | 70   | 368  | 438                                |
|   | PHY113                            | Classical<br>Electrodynamics   | 3 | 1 | 0 | 11     | 3.5                        | 0.5                             | 382                                 | 44   | 400  | 426                                |
|   | PHY114                            | Quantum Physics  | 3 | 1 | 0 | 11     | 3.5                        | 0.5                             | 221                                 | 39   | 233  | 260                                |
|   | PHY115                            | Oscillations And Waves   | 3 | 1 | 0 | 11     | 3.5                        | 0.5                             | 249                                 | 53   | 265  | 302                                |
|   | ESC111M                           | Fundamentals Of<br>Computing - I   | 3 | 1 | 3 | 7      | 2.5                        | 1                               | 600                                 | 14   | 617  | 614                                |
| ESC112M   | Fundamentals Of<br>Computing - II | 3  | 1 | 3 | 7 | 2.5    | 1                          | 600                             | 14                                  | 614  | 614  |                                    |

| Course Group                               | Course No.                    | Course Title                          | L | T | P | Credit | Inst. Unit/<br>90 Students | Tutorial<br>Unit per<br>Section | Estimated number<br>of New Students | No. of<br>students<br>having fail<br>backlogs | No. of<br>students<br>registered in<br>2025-26-I | Final<br>estimate<br>for 2026-<br>27-I |
|--|-------------------------------|---------------------------------------|---|---|---|--------|----------------------------|---------------------------------|-------------------------------------|---|--|--|
|  | LIF111                        | Introduction To<br>Biology            | 2 | 0 | 0 | 6      | 2                          |                                 | 600                                 | 46  | 616  | 646                                    |
|  | TA111                         | Engineering Graphics                  | 2 | 0 | 3 | 9      | 3.5                        | 1.5                             | 620                                 | 45  | 614  | 665                                    |
|  | ETH111                        | Practical Ethics*                     | 1 | 0 | 0 | 3      | 1                          |                                 | 600                                 | 37  | 626  | 32                                     |
|  | ELC111/112/113                | English Language &<br>Communication   |   |   |   |        |                            |                                 | 620                                 | 4   | 596  | 624                                    |
|  | PE111                         | Morning Exercise                      |   |   |   |        |                            |                                 | 1220                                | 58  | 1237   | 1278                                   |
| <b>Engineering<br/>Science<br/>Options</b> | ESO201                        | Thermodynamics                        | 3 | 1 | 0 | 11     | 3.5                        | 0.5                             | 300                                 | 64  | 326  | 364                                    |
|  | ESO202                        | Solid Mechanics                       | 3 | 1 | 0 | 11     | 3.5                        | 0.5                             | 302                                 | 76  | 312  | 378                                    |
|  | ESO204                        | Fluid Mechanics                       | 3 | 1 | 0 | 11     | 3.5                        | 0.5                             | 216                                 | 35  | 243  | 251                                    |
|  | ESO206                        | Principles of<br>Biotechnology        | 3 | 0 | 0 | 9      | 3                          |                                 | 53                                  | 12  | 132  | 65                                     |
|  | ESO207                        | Data Structures and<br>Algorithms     | 3 | 0 | 3 | 12     | 4.5                        |                                 | 450                                 | 24  | 323  | 474                                    |
|  | ESO208                        | Computational<br>Methods in Engg.     | 3 | 1 | 0 | 11     | 3.5                        | 0.5                             | 148                                 | 5   | 219  | 153                                    |
|  | ESO213                        | Fundamentals of Earth<br>Sciences     | 3 | 0 | 0 | 9      | 3                          |                                 | 43                                  | 14  | 76   | 57                                     |
|  | ESO225                        | Nature and Properties<br>of Materials | 2 | 1 | 0 | 8      | 2.5                        | 0.5                             | 85                                  | 10  | 100  | 95                                     |
|  | TA211                         | Manufacturing<br>Processes I          | 0 | 0 | 3 | 3      | 1.5                        | 1.5                             | 305                                 | 4   | 309  | 309                                    |
| TA212                                      | Manufacturing<br>Processes II | 0                                     | 0 | 3 | 3 | 1.5    | 1.5                        | 280                             | 7                                   | 285   | 287  |  |

| Course Group                              | Course No. | Course Title                          | L | T | P | Credit | Inst. Unit/<br>90 Students | Tutorial<br>Unit per<br>Section | Estimated<br>number of New<br>Students | No. of<br>students<br>having fail<br>backlogs | No. of<br>students<br>registered in<br>2025-26-I | Final<br>estimate<br>for 2026-<br>27-I |
|---|------------|---------------------------------------|---|---|---|--------|----------------------------|---------------------------------|--|---|--|--|
| Science<br>Options                        | HSO201     | Applied Probability<br>and Statistics | 3 | 1 | 0 | 11     | 3.5                        | 0.5                             | 250                                    | 20  | 495  | 270                                    |
|   | MSO202M    | Complex Variables                     | 3 | 1 | 0 | 6      | 1.75                       | 0.25                            | 483                                    | 132   | 501  | 615                                    |
|   | MSO203M    | Partial Differential<br>Equations     | 3 | 1 | 0 | 6      | 1.75                       | 0.25                            | 603                                    | 88  | 645  | 691                                    |
|   | MSO205     | Introduction To<br>Probability Theory | 3 | 1 | 0 | 11     | 3.5                        | 0.5                             | 100                                    | 16  | 174  | 116                                    |
| Third<br>Semester<br>IC/SCHEME<br>Courses | CE212      | Environment and<br>Sustainability     | 3 | 0 | 0 | 9      | 3                          |                                 | 200                                    | 23  | 170  | 223                                    |
|   | ES208      | Earth and Environment                 | 3 | 0 | 0 | 9      | 3                          |                                 | 150                                    | 2   | 77   | 152                                    |
|   | ECO111     | Economy, Society and<br>Public Policy | 3 | 1 | 0 | 11     | 3.5                        | 0.5                             | 150                                    | 21  | 192  | 171                                    |
|   | DMS201     | Introduction to<br>Management         | 3 | 0 | 0 | 9      | 3                          |                                 | 150                                    | 12  | 166  | 162                                    |
|   | ESC201     | Introduction to<br>Electronics        | 3 | 1 | 3 | 14     | 5                          | 2                               | 602                                    | 30  | 599  | 632                                    |
|   | HSS-I      | Humanities-I                          | 3 | 1 | 0 | 11     | 3.5                        | 0.5                             | 600                                    | 50  | 613  | 650                                    |
| SCHEME<br>Course                          | HSS-II     | Humanities-II                         | 3 | 0 | 0 | 9      | 3                          |                                 | 1800                                   | 100   | 1804   | 1900                                   |
| Backlog<br>Courses                        | MTH113M    | Linear Algebra                        | 3 | 1 | 0 | 6      | 1.75                       | 0.25                            |  | 87  | 89   | 87                                     |
|   | MTH114M    | Ordinary Differential<br>Equations    | 3 | 1 | 0 | 6      | 1.75                       | 0.25                            |  | 137   | 102  | 137                                    |

### 3. Department/IDP-wise Breakup of Instruction Unit and Tutorial Unit for Core Courses in First (I) Semester during the Year 2026-27

Instruction Unit (IU) for a course with less than or equal to 90 students is defined as follows<sup>1</sup>:

$$IU = 1L + 0.5T + 0.5P$$

where L is the number of 50 minutes lecture, T is the number of 50 minutes tutorial, and P is the number of 50 minutes practical. The number 90 is based on the IPSA

model. For a course with students' strength more than 90, I U is defined as follows:

$$IU = \left\lceil \frac{N}{90} \right\rceil \times (1L + 0.5T + 0.5P)$$

where  $\left\lceil \frac{N}{90} \right\rceil$  is the smallest integer greater than or equal to  $N/90$ . For each section of theory tutorial or laboratory instruction is defined as follows:

$$TU = 0.5T + 0.5P$$

Where T and P are as defined earlier. For modular courses, the IU and TU calculated above will be multiplied by 0.5.

**Table 5: Department/IDP-wise Breakup of Instruction Unit**

| Course No. | Course Title   | Total IU | AE | BSBE | CE | CHE | CHM  | CGS | CSE | DMS | DP | ECO | EE | ES | HSS | ME | MSE | MTH   | PHY  | SEE | SSA |  |
|------------|--|----------|----|------|----|-----|------|-----|-----|-----|----|-----|----|----|-----|----|-----|-------|------|-----|-----|--|
| CHM111     | Chemistry Lab  | 10.5     |    |      |    |     | 10.5 |     |     |     |    |     |    |    |     |    |     |       |      |     |     |  |
| CHM112M    | General Chemistry: Physical Chemistry                      | 10       |    |      |    |     | 10   |     |     |     |    |     |    |    |     |    |     |       |      |     |     |  |
| CHM113M    | General Chemistry: Inorganic & Organic Chemistry           | 8.75     |    |      |    |     | 8.75 |     |     |     |    |     |    |    |     |    |     |       |      |     |     |  |
| MTH111M    | Single Variable Calculus                                   | 29.75    |    |      |    |     |      |     |     |     |    |     |    |    |     |    |     | 29.75 |      |     |     |  |
| MTH112M    | Application of Single Variable Calculus & Several Variable | 28       |    |      |    |     |      |     |     |     |    |     |    |    |     |    |     | 28    |      |     |     |  |
| PHY111     | Physics Laboratory   | 12       |    |      |    |     |      |     |     |     |    |     |    |    |     |    |     |       | 12   |     |     |  |
| PHY112     | Classical Dynamics   | 17.5     |    |      |    |     |      |     |     |     |    |     |    |    |     |    |     |       | 17.5 |     |     |  |
| PHY113     | Classical Electrodynamics                                  | 17.5     |    |      |    |     |      |     |     |     |    |     |    |    |     |    |     |       | 17.5 |     |     |  |

<sup>1</sup>The factor 0.5 for in the equation assumes equal effort from the instructor and tutor to conduct one tutorial.

| Course No.         | Course Title                       | Total IU  | AE                                  | BSBE | CE | CHE  | CHM | CGS | CSE  | DMS | DP | ECO | EE | ES | HSS | ME   | MSE | MTH | PHY  | SEE | SSA |
|--------------------|------------------------------------|---|-------------------------------------|------|----|------|-----|-----|------|-----|----|-----|----|----|-----|------|-----|-----|------|-----|-----|
| PHY114             | Quantum Physics                    | 10.5  |                                     |      |    |      |     |     |      |     |    |     |    |    |     |      |     |     | 10.5 |     |     |
| PHY115             | Oscillations and Waves             | 14  |                                     |      |    |      |     |     |      |     |    |     |    |    |     |      |     |     | 14   |     |     |
| ESC111M            | Fundamentals of Computing – I      | 17.5  |                                     |      |    |      |     |     | 17.5 |     |    |     |    |    |     |      |     |     |      |     |     |
| ESC112M            | Fundamentals of Computing - II     | 17.5  |                                     |      |    |      |     |     | 17.5 |     |    |     |    |    |     |      |     |     |      |     |     |
| LIF111             | Introduction to Biology            | 14  |                                     | 14   |    |      |     |     |      |     |    |     |    |    |     |      |     |     |      |     |     |
| TA111 <sup>2</sup> | Engineering Graphics               | 28  |                                     |      | 28 |      |     |     |      |     |    |     |    |    |     |      |     |     |      |     |     |
| ETH111             | Practical Ethics                   | 20  | <b>Optional for All Departments</b> |      |    |      |     |     |      |     |    |     |    |    |     |      |     |     |      |     |     |
| ELC111/112 /113    | English Language & Communication   | <b>Instructor for ELC111/112/113 will be provided by the DOAA office. However, all the departments need to provide TAs to manage this course.</b> |                                     |      |    |      |     |     |      |     |    |     |    |    |     |      |     |     |      |     |     |
| PE111              | Morning Exercise                   | 0   |                                     |      |    |      |     |     |      |     |    |     |    |    |     |      |     |     |      |     |     |
| ESO201             | Thermodynamics                     | 17.5  | 17.5                                |      |    |      |     |     |      |     |    |     |    |    |     |      |     |     |      |     |     |
| ESO202             | Mechanics of Solids                | 17.5  |                                     |      |    |      |     |     |      |     |    |     |    |    |     | 17.5 |     |     |      |     |     |
| ESO204             | Fluid Mechanics                    | 10.5  |                                     |      |    | 10.5 |     |     |      |     |    |     |    |    |     |      |     |     |      |     |     |
| ESO206             | Principles of Biotechnology        | 3   |                                     | 3    |    |      |     |     |      |     |    |     |    |    |     |      |     |     |      |     |     |
| ESO207             | Data Structures and Algorithms     | 22.5  |                                     |      |    |      |     |     | 22.5 |     |    |     |    |    |     |      |     |     |      |     |     |
| ESO208             | Computational Methods in Engg.     | 7   |                                     |      | 7  |      |     |     |      |     |    |     |    |    |     |      |     |     |      |     |     |
| ESO213             | Fundamentals of Earth Sciences     | 3   |                                     |      |    |      |     |     |      |     |    |     |    | 3  |     |      |     |     |      |     |     |
| ESO225             | Nature and Properties of Materials | 5   |                                     |      |    |      |     |     |      |     |    |     |    |    |     |      | 5   |     |      |     |     |

<sup>2</sup>Requires two instructors per semester

| Course No.                                | Course Title                       | Total IU | AE          | BSBE        | CE          | CHE         | CHM         | CGS         | CSE         | DMS         | DP          | ECO         | EE          | ES          | HSS         | ME          | MSE         | MTH         | PHY         | SEE         | SSA         |
|---|------------------------------------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| TA211                                     | Manufacturing Processes I          | 6        |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 6           |             |             |             |             |
| TA212                                     | Manufacturing Processes II         | 6        |             |             |             |             |             |             |             |             |             |             |             |             |             | 6           |             |             |             |             |             |
| HSO201                                    | Applied Probability and Statistics | 10.5     |             |             |             |             |             |             |             |             |             | 10.5        |             |             |             |             |             |             |             |             |             |
| MSO202M                                   | Complex Variables                  | 12.25    |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 12.25       |             |             |             |
| MSO203M                                   | Partial Differential Equations     | 14       |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 14          |             |             |             |
| MSO205                                    | Introduction To Probability Theory | 7        |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 7           |             |             |             |
| CE212                                     | Environment and Sustainability     | 9        |             |             | 9           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| ES208                                     | Earth and Environment              | 6        |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| ECO111                                    | Economy, Society and Public Policy | 7        |             |             |             |             |             |             |             |             |             | 7           |             |             |             |             |             |             |             |             |             |
| DMS201                                    | Introduction to Management         | 6        |             |             |             |             |             |             |             | 6           |             |             |             |             |             |             |             |             |             |             |             |
| ESC201                                    | Introduction to Electronics        | 40       |             |             |             |             |             |             |             |             |             |             | 40          |             |             |             |             |             |             |             |             |
| HSS-I                                     | Humanities-I                       | 28       |             |             |             |             |             |             |             |             |             |             |             |             | 28          |             |             |             |             |             |             |
| HSS-II                                    | Humanities-II                      | 66       |             |             |             |             |             |             |             |             |             |             |             |             | 66          |             |             |             |             |             |             |
| MTH113M                                   | Linear Algebra                     | 1.75     |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 1.75        |             |             |             |
| MTH114M                                   | Ordinary Differential Equations    | 3.5      |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 3.5         |             |             |             |
| Total Instruction Unit                    |                                    |          | 17.5        | 19          | 44          | 10.5        | 29.25       | 0           | 57.5        | 6           | 0           | 17.5        | 40          | 3           | 94          | 23.5        | 11          | 96.25       | 71.5        | 0           | 0           |
| Approximate Faculty Strength              |                                    |          | 32          | 25          | 45          | 28          | 39          | 5           | 33          | 26          | 8           | 24          | 53          | 16          | 29          | 44          | 28          | 54          | 50          | 9           | 4           |
| <b>Total Instruction Unit per Faculty</b> |                                    |          | <b>0.55</b> | <b>0.76</b> | <b>0.98</b> | <b>0.38</b> | <b>0.75</b> | <b>0.00</b> | <b>1.74</b> | <b>0.23</b> | <b>0.00</b> | <b>0.73</b> | <b>0.75</b> | <b>0.19</b> | <b>3.24</b> | <b>0.53</b> | <b>0.39</b> | <b>1.78</b> | <b>1.43</b> | <b>0.00</b> | <b>0.00</b> |



| Course No.     | Course Title                       | Total Sections | AE | BSBE | CE | CHE | CHM | CGS | CSE | DMS | DP | ECO | EE | ES | HSS | ME | MSE | MTH | PHY | SEE | SSA |
|----------------|------------------------------------|----------------|----|------|----|-----|-----|-----|-----|-----|----|-----|----|----|-----|----|-----|-----|-----|-----|-----|
| TA111          | Engineering Graphics               | 20             | 5  |      | 5  |     |     |     |     |     |    |     |    |    |     | 5  | 5   |     |     |     |     |
| ETH111         | Practical Ethics                   |                |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     |     |     |     |     |
| ELC111/112/113 | English Language & Communication   |                |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     |     |     |     |     |
| PE111          | Morning Exercise                   |                |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     |     |     |     |     |
| ESO201         | Thermodynamics                     | 10             |    |      |    | 4   |     |     |     |     |    |     |    | 1  |     | 5  |     |     |     |     |     |
| ESO202         | Mechanics of Solid                 | 10             | 3  |      | 4  |     |     |     |     |     |    |     |    |    |     |    | 3   |     |     |     |     |
| ESO204         | Fluid Mechanics                    | 7              | 3  |      |    | 3   |     |     |     |     |    |     |    | 1  |     |    |     |     |     |     |     |
| ESO206         | Principles of Biotechnology        |                |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     |     |     |     |     |
| ESO207         | Data Structures and Algorithms     |                |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     |     |     |     |     |
| ESO208         | Computational Methods in Engg.     | 5              |    |      | 5  |     |     |     |     |     |    |     |    |    |     |    |     |     |     |     |     |
| ESO213         | Fundamentals of Earth Sciences     |                |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     |     |     |     |     |
| ESO225         | Nature and Properties of Materials | 3              |    |      |    |     |     |     |     |     |    |     |    |    |     |    | 3   |     |     |     |     |

| Course No. | Course Title                       | Total Sections | AE | BSBE | CE | CHE | CHM | CGS | CSE | DMS | DP | ECO | EE | ES | HSS | ME | MSE | MTH | PHY | SEE | SSA |
|------------|------------------------------------|----------------|----|------|----|-----|-----|-----|-----|-----|----|-----|----|----|-----|----|-----|-----|-----|-----|-----|
| TA211      | Manufacturing Processes I          | 4              |    |      |    |     |     |     |     |     |    |     |    |    |     |    | 4   |     |     |     |     |
| TA212      | Manufacturing Processes II         | 3              |    |      |    |     |     |     |     |     |    |     |    |    |     | 3  |     |     |     |     |     |
| HSO201     | Applied Probability and Statistics | 3              |    |      | 2  |     |     |     |     |     |    | 1   |    |    |     |    |     |     |     |     |     |
| MSO202M    | Complex Variables                  | 6              | 1  |      |    |     |     |     |     |     |    |     | 2  |    |     | 2  |     |     | 1   |     |     |
| MSO203M    | Partial Differential Equations     | 8              | 1  |      | 2  |     |     |     |     |     |    |     | 2  |    |     | 2  |     |     | 1   |     |     |
| MSO205     | Introduction To Probability Theory | 2              |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     | 2   |     |     |     |
| CE212      | Environment and Sustainability     |                |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     |     |     |     |     |
| ES208      | Earth and Environment              |                |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     |     |     |     |     |
| ECO111     | Economy, Society and Public Policy | 2              |    |      |    |     |     |     |     |     |    | 2   |    |    |     |    |     |     |     |     |     |
| DMS201     | Introduction to Management         |                |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     |     |     |     |     |
| ESC201     | Introduction to Electronics        | 21             |    |      |    |     |     |     |     |     |    |     | 21 |    |     |    |     |     |     |     |     |
| HSS-I      | Humanities-I                       | 19             |    |      |    |     |     |     |     |     |    |     |    |    | 19  |    |     |     |     |     |     |
| HSS-II     | Humanities-II                      |                |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     |     |     |     |     |
| MTH113M    | Linear Algebra                     | 1              |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     | 1   |     |     |     |
| MTH114M    | Ordinary Differential Equations    | 2              |    |      |    |     |     |     |     |     |    |     |    |    |     |    |     | 2   |     |     |     |





| Course No.                             | Course Title                       | Total TU | AE   | BSBE | CE   | CHE  | CHM  | CGS  | CSE  | DMS  | DP   | ECO  | EE   | ES   | HSS  | ME   | MSE  | MTH  | PHY  | SEE  | SSA  |
|--|------------------------------------|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MSO202M                                | Complex Variables                  | 1.5      | 0.25 |      |      |      |      |      |      |      |      |      | 0.5  |      |      | 0.5  |      |      | 0.25 |      |      |
| MSO203M                                | Partial Differential Equations     | 2        | 0.25 |      | 0.5  |      |      |      |      |      |      |      | 0.5  |      |      | 0.5  |      |      | 0.25 |      |      |
| MSO205                                 | Introduction To Probability Theory | 1        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 1    |      |      |      |
| CE212                                  | Environment and Sustainability     |          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ES208                                  | Earth and Environment              |          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ECO111                                 | Economy, Society and Public Policy | 1        |      |      |      |      |      |      |      |      |      | 1    |      |      |      |      |      |      |      |      |      |
| DMS201                                 | Introduction to Management         |          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ESC201                                 | Introduction to Electronics        | 42       |      |      |      |      |      |      |      |      |      |      | 42   |      |      |      |      |      |      |      |      |
| HSS-I                                  | Humanities-I                       | 9.5      |      |      |      |      |      |      |      |      |      |      |      |      | 9.5  |      |      |      |      |      |      |
| HSS-II                                 | Humanities-II                      |          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| MTH113M                                | Linear Algebra                     | 0.25     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 0.25 |      |      |
| MTH114M                                | Ordinary Differential Equations    | 0.5      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 0.5  |      |      |
| <b>Total Tutorial Unit</b>             |                                    |          | 11   | 0    | 13.5 | 3.5  | 34   | 0    | 40   | 0    | 0    | 1.5  | 43   | 1    | 9.5  | 15.5 | 16.5 | 8.75 | 39   | 0    | 0    |
| <b>Approximate Faculty Strength</b>    |                                    |          | 32   | 25   | 45   | 28   | 39   | 5    | 33   | 26   | 8    | 24   | 53   | 16   | 29   | 44   | 28   | 54   | 50   | 9    | 4    |
| <b>Total Tutorial Unit per Faculty</b> |                                    |          | 0.34 | 0.00 | 0.30 | 0.13 | 0.87 | 0.00 | 1.21 | 0.00 | 0.00 | 0.06 | 0.81 | 0.06 | 0.33 | 0.35 | 0.59 | 0.16 | 0.78 | 0.00 | 0.00 |

## Appendix

### Important Information Regarding Individual Section Sizes for Various Courses and Work Load

1. Tutorial section sizes have been fixed based on last year's CCC data/report and with inputs from respective HODs.
2. One tutor will be assigned per section (normally 30 students) for PHY111 and CHM111 laboratory sessions.
3. One tutor will be assigned per day (i.e., per four sections, i.e., ~ 120 students) for TA211 and TA212 labs.
4. Tutors assigned for ESC111M, ESC112M and ESC201 tutorials will also take care of the laboratory sessions of the same sections.
5. Increasing the number of sections in any course is undesirable.
6. The student number in each section may be increased slightly, i.e., up to 40 in sections normally having 35 students and up to 110 in sections normally having 100 students to prevent an increase in the number of sections.
7. The total registration in some courses has to be restricted considering seating capacity of the lecture hall assigned for the course.
8. The number of sections in some ESO/SO courses may be reduced in certain cases after registration, in case the number of students registered is less than expected.
9. **ELC111/ELC112/ELC113 will be managed by DOAA but TAs will be provided by all the departments.**
10. **Each department must provide one instructor for the ETH111 course. EE, ME have provided two instructors in the past two semesters based on their TU/faculty load. It is**

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### Core Curriculum Committee Members

Dr. Arun Kumar Perumal (AE)

Dr. Himanshu Sharma (CHE)

Dr. D.L.V.K. Prasad (CHM)

Dr. Raghunath Tewari (CSE)

Dr. Somnath Jha (MTH)

(Convener)