

**AY2023-24 AND LATER COHORTS CURRICULUM  
FOR COMPUTER SCIENCE WITH USP**

| SUMMARY OF ACADEMIC UNIT REQUIREMENT |           |           |                 |           |                 |                   |                                    |            |
|--------------------------------------|-----------|-----------|-----------------|-----------|-----------------|-------------------|------------------------------------|------------|
| Year of Study                        | CSC Major |           | USP Requirement |           | ICC Requirement |                   | Broadening and Deepening Electives | Total AU   |
|                                      | Core      | MPE       | USP Core        | USP PE    | Common Core     | Foundational Core |                                    |            |
| 1                                    | 23        | 0         | 12              | 0         | 2               | 3                 | 0                                  | 40         |
| 2                                    | 23        | 0         | 0               | 6         | 5               | 0                 | 0                                  | 34         |
| 3                                    | 4         | 9         | 0               | 6         | 0               | 10                | 0                                  | 29         |
| 4                                    | 8         | 15        | 0               | 0         | 0               | 0                 | 9                                  | 32         |
| <b>Total</b>                         | <b>58</b> | <b>24</b> | <b>12</b>       | <b>12</b> | <b>7</b>        | <b>13</b>         | <b>9</b>                           | <b>135</b> |

**Suggested Study Plan**

| YEAR 1 SEMESTER 1 |  |          |           |               |
|-------------------|--|----------|-----------|---------------|
| Course Code       | Course Title   | Type     | AU        | Pre-Requisite |
| MH1810            | Mathematics I  | C        | 3         | Nil           |
| MH1812            | Discrete Mathematics                                 | C        | 3         | Nil           |
| SC1003            | Introduction to Computational Thinking & Programming | C        | 3         | Nil           |
| SC1005            | Digital Logic  | C        | 3         | Nil           |
| SC1013            | Physics for Computing                                | C        | 2         | Nil           |
| SP0001            | Writing and Reasoning                                | USP Core | 3         | Nil           |
| SP0008            | Living Well  | USP Core | 3         | Nil           |
|                   |  |          | <b>20</b> |               |

| YEAR 1 SEMESTER 2 |                                      |          |           |                |
|-------------------|--------------------------------------|----------|-----------|----------------|
| Course Code       | Course Title                         | Type     | AU        | Pre-Requisite  |
| SC1004            | Linear Algebra for Computing         | C        | 3         | MH1810, SC1003 |
| SC1006            | Computer Organisation & Architecture | C        | 3         | SC1005         |
| SC1007            | Data Structures & Algorithms         | C        | 3         | SC1003         |
| SC1015            | Introduction to Data Science & AI    | F-Core   | 3         | SC1003         |
| CC0002            | Navigating the Digital World         | C-Core   | 2         | Nil            |
| SP0002            | Ethics                               | USP Core | 3         | Nil            |
| SP0007            | Fieldwork and Documentation          | USP Core | 3         | Nil            |
|                   |                                      |          | <b>20</b> |                |

| YEAR 2 SEMESTER 1 |  |        |           |                |
|-------------------|--|--------|-----------|----------------|
| Course Code       | Course Title                             | Type   | AU        | Pre-Requisite  |
| SC2000            | Probability and Statistics for Computing | C      | 3         | MH1810         |
| SC2001            | Algorithm Design and Analysis            | C      | 3         | SC1007, MH1812 |
| SC2002            | Object Oriented Design and Programming   | C      | 3         | SC1003         |
| SC2005            | Operating Systems                        | C      | 3         | SC1006, SC1007 |
| CC0007            | Science & Technology for Humanity        | C-Core | 3         | Nil            |
|                   | USP Prescribed Elective 1 – AHC/STS      | USP PE | 3         | TBC            |
|                   |  |        | <b>18</b> |                |

| YEAR 2 SEMESTER 2 |   |        |           |                     |
|-------------------|---|--------|-----------|---------------------|
| Course Code       | Course Title  | Type   | AU        | Pre-Requisite       |
| SC2006            | Software Engineering                                      | C      | 3         | SC2002(Corequisite) |
| SC2207            | Introduction to Database                                  | C      | 3         | SC2001(Corequisite) |
| SC2008            | Computer Networks   | C      | 3         | SC1004, SC2000      |
| EG1001            | Engineers in Society                                      | C      | 2         | Nil                 |
| ML0004            | Career & Entrepreneurial Development for the Future World | C-Core | 2         | Nil                 |
|                   | USP Prescribed Elective 2 – AHC/STS                       | USP PE | 3         | TBC                 |
|                   |   |        | <b>16</b> |                     |

**YEAR 3 SEMESTER 1**

| Course Code | Course Title   | Type   | AU        | Pre-Requisite          |
|-------------|--|--------|-----------|------------------------|
| SC2079      | Multidisciplinary Design Project                               | C      | 4         | Year 3 standing        |
| SC3000      | Third Year Major Prescribed Elective - Artificial Intelligence | MPE-1  | 3         | SC1007, SC1015, SC2000 |
| SC3010      | Third Year Major Prescribed Elective - Computer Security       | MPE-1  | 3         | SC2005                 |
| SC30xx      | Third Year Major Prescribed Elective                           | MPE-1  | 3         | Year 3 standing        |
|             | USP Prescribed Elective 3 – AHC/STS                            | USP PE | 3         | TBC                    |
|             | USP Prescribed Elective 4 – AHC/STS                            | USP PE | 3         | TBC                    |
|             |  |        | <b>19</b> |                        |

**YEAR 3 SEMESTER 2**

| Course Code | Course Title            | Type   | AU        | Pre-Requisite   |
|-------------|-------------------------|--------|-----------|-----------------|
| SC3920      | Professional Internship | F-Core | 10        | Year 3 standing |
|             |                         |        | <b>10</b> |                 |

**YEAR 4 SEMESTER 1**

| Course Code | Course Title                                   | Type  | AU        | Pre-Requisite   |
|-------------|--|-------|-----------|-----------------|
| SC4079      | Final Year Project (Continue in next semester) | C     | 4         | Year 4 standing |
| SC30xx      | Third Year Major Prescribed Elective           | MPE-1 | 3         | Year 3 standing |
| SC40xx      | Final Year Major Prescribed Elective           | MPE-2 | 3         | Year 3 standing |
| SC40xx      | Final Year Major Prescribed Elective           | MPE-2 | 3         | Year 3 standing |
|             | Broadening and Deepening Electives             | BDE   | 3         |                 |
|             |  |       | <b>16</b> |                 |

**YEAR 4 SEMESTER 2**

| Course Code | Course Title   | Type  | AU        | Pre-Requisite   |
|-------------|--|-------|-----------|-----------------|
| SC4079      | Final Year Project (Continue from previous semester) | C     | 4         | Year 4 standing |
| SC40xx      | Final Year Major Prescribed Elective                 | MPE-2 | 3         | Year 3 standing |
| SC40xx      | Final Year Major Prescribed Elective                 | MPE-2 | 3         | Year 3 standing |
|             | Broadening and Deepening Electives                   | BDE   | 3         |                 |
|             | Broadening and Deepening Electives                   | BDE   | 3         |                 |
|             |  |       | <b>16</b> |                 |