

AY2025-2026
Curriculum for Bachelor of Computing in AI and Society WITH USP

| SUMMARY OF ACADEMIC UNIT REQUIREMENT | | | | | | | | | |
|--------------------------------------|-----------|-----------|------------------|-----------|-------------|---------------------|--------------------|----------|------------|
| Year of Study | Core | MPE | USP Requirements | | ICC | | | BDE | Total AU |
| | | | USP Core | USP PE | Common-Core | Professional Series | Care, Serve, Learn | | |
| 1 | 18 | 0 | 11 | 0 | 0 | 3 | 0 | 0 | 32 |
| 2 | 18 | 0 | 0 | 6 | 5 | 0 | 0 | 3 | 32 |
| 3 | 10 | 6 | 0 | 3 | 0 | 10 | 3 | 0 | 32 |
| 4 | 11 | 18 | 0 | 3 | 0 | 1 | 0 | 4 | 37 |
| Total | 57 | 24 | 11 | 12 | 5 | 14 | 3 | 7 | 133 |

Recommended Course Schedule

| YEAR 1 SEMESTER 1 | | | | |
|-------------------|--|----------|-----------|-------------------------------|
| Course Code | Course Title | Type | AU | Pre-requisite |
| SC1003 | Introduction to Computational Thinking & Programming | PS | 3 | Nil |
| SC2000 | Probability & Statistics for Computing | Core | 3 | Nil |
| MH2802 | Linear Algebra for Scientists | Core | 3 | Nil |
| | Broadening and Deepening Elective | BDE | | |
| HW0002 | Calculus | - | - | For student not done Calculus |
| SP0001 | Writing & Reasoning | USP Core | 3 | |
| SP0008 | Living Well | USP Core | 2 | |
| | | | 14 | |

| YEAR 1 SEMESTER 2 | | | | |
|-------------------|---|----------|-----------|---------------|
| Course Code | Course Title | Type | AU | Pre-requisite |
| SC1007 | Data Structures & Algorithms | Core | 3 | SC1003 |
| MH1812 | Discrete Mathematics | Core | 3 | Nil |
| SC2002 | Object Oriented Design & Programming | Core | 3 | SC1007 |
| SC1304 | AI For Social Good | Core | 3 | Nil |
| SP0002 | Ethics | USP Core | 3 | |
| SP0007 | Fieldwork & Documentation: Topics In Sustainability | USP Core | 3 | |
| | | | 18 | |

Year 1 Total AU

32

| YEAR 2 SEMESTER 1 | | | | |
|-------------------|--|--------|-----------|-----------------|
| Course Code | Course Title | Type | AU | Pre-requisite |
| SC2001 | Algorithm Design & Analysis | Core | 3 | SC1007 & MH1812 |
| SC3000 | Artificial Intelligence | Core | 3 | SC1007 & SC2000 |
| SC2304 | Ethical AI | Core | 3 | Nil |
| CC0006 | Data Structures & Algorithms | CC | | Read SP0007 |
| ML0004 | Career Design & Workplace Readiness in the V.U.C.A World | CC | 2 | Nil |
| | USP Prescribed Elective | USP PE | 3 | |
| | USP Prescribed Elective | USP PE | 3 | |
| | | | 17 | |

| YEAR 2 SEMESTER 2 | | | | |
|-------------------|---------------------------------------|------|-----------|--------------------------|
| Course Code | Course Title | Type | AU | Pre-requisite |
| SC4000 | Machine Learning | Core | 3 | SC1004 & SC1007 & SC2000 |
| SC4001 | Neural Networks and Deep Learning | Core | 3 | SC1004 & SC1007 & SC2000 |
| SCxxxx | AI For Society | Core | 3 | Nil |
| CC0007 | Science & Technology for Humanity | CC | 3 | Nil |
| | Broadening and Deepening Elective | BDE | 3 | Refer to Class Schedule |
| | CSL (service learning course)- Part 1 | CSL | - | (Continue in Semester 2) |
| | | | 15 | |

Year 2 Total AU

32

| YEAR 3 SEMESTER 1 | | | | |
|-------------------|--|--------|-----------|----------------------------|
| Course Code | Course Title | Type | AU | Pre-requisite |
| SC4002 | Natural Language Processing | Core | 3 | SC2001 |
| SC4061 | AI for Computer Vision | Core | 3 | SC4000 |
| SCxxxx | Design Project - AI in Society | Core | 4 | Year 3 Standing |
| SC3xxx/SC4xxx | Major Prescribe Elective (Choose within SC3xxx/SC4xxx) | MPE | 3 | Year 3 Standing |
| SC3xxx/SC4xxx | Major Prescribe Elective (Choose within SC3xxx/SC4xxx) | MPE | 3 | Year 3 Standing |
| | USP Prescribed Elective | USP PE | 3 | |
| | CSL (service learning course)- Part 2 | CSL | 3 | (Continue from Semester 1) |
| | | | 22 | |

| YEAR 3 SEMESTER 2 | | | | |
|-------------------|----------------------------------|------|-----------|-----------------|
| Course Code | Course Title | Type | AU | Pre-requisite |
| SC3920 | Professional Internship (Graded) | PS | 10 | Year 3 Standing |
| | | | 10 | |

Year 3 Total AU

32

| YEAR 4 SEMESTER 1 | | | | |
|-------------------|--|--------|-----------|-----------------|
| Course Code | Course Title | Type | AU | Pre-requisite |
| SCxxxx | RAI Capstone Project (Part 1) | Core | 4 | Year 4 Standing |
| SC4062 | Introduction to Generative AI | Core | 3 | SC4000 |
| SC3xxx/SC4xxx | Major Prescribe Elective (Choose within SC3xxx/SC4xxx) | MPE | 3 | Year 3 Standing |
| SC3xxx/SC4xxx | Major Prescribe Elective (Choose within SC3xxx/SC4xxx) | MPE | 3 | Year 3 Standing |
| SC3xxx/SC4xxx | Major Prescribe Elective (Choose within SC3xxx/SC4xxx) | MPE | 3 | Year 3 Standing |
| ML0015 | Profession Preparation | PS | 1 | Nil |
| | USP Prescribed Elective | USP PE | 3 | |
| | | | 20 | |

| YEAR 4 SEMESTER 2 | | | | |
|-------------------|--|------|-----------|-------------------------|
| Course Code | Course Title | Type | AU | Pre-requisite |
| SCxxxx | RAI Capstone Project (Part 2) | Core | 4 | Year 4 Standing |
| SC3xxx/SC4xxx | Major Prescribe Elective (Choose within SC3xxx/SC4xxx) | MPE | 3 | Year 3 Standing |
| SC3xxx/SC4xxx | Major Prescribe Elective (Choose within SC3xxx/SC4xxx) | MPE | 3 | Year 3 Standing |
| SC3xxx/SC4xxx | Major Prescribe Elective (Choose within SC3xxx/SC4xxx) | MPE | 3 | Year 3 Standing |
| | Broadening and Deepening Elective | BDE | 3 | Refer to Class Schedule |
| | | | 16 | |

Year 4 Total AU

36

| AISC MPE list (U24 and after) | | |
|--|-----|--|
| Choose 8 in total, and at least 2 from each group | | |
| Course Code | AU | Course Title |
| Technical Group: | | |
| TBA | TBA | Intelligent Agents |
| TBA | TBA | Blockchain Technology |
| TBA | TBA | Large Language Models |
| TBA | TBA | Generative Learning for Computer Vision |
| TBA | TBA | Deep Generative Models |
| Society Group: | | |
| TBA | TBA | Person and Society |
| TBA | TBA | Law of Intellectual Property and New Media |
| TBA | TBA | Social Entrepreneurship |
| TBA | TBA | Classical Social Theory |
| TBA | TBA | Principles of Economics |
| TBA | TBA | Fundamentals of Politics |
| Please refer the AISC MPE Courses on CCDS website. | | |