

## AY2025-2026 CURRICULUM FOR COMPUTER ENGINEERING

**With a Second Major in Business  
International Trading Programme (ITP) Track**

**PI option : 20-WEEK Professional Internship**

### SUMMARY OF ACADEMIC UNIT REQUIREMENT

Year of Study	Major		ICC			2M - BUS (ITP) / BDE	Total AU
	Core	MPE	Common - Core	Professional Series	Care, Serve, Learn		
Y1	20	0	6	3	0	6	35
Y2	27	0	8	0	3	11	49
Y3	7	6	0	12	0	6	31
Y4	11	12	0	1	0	8	32
<b>Total</b>	<b>65</b>	<b>18</b>	<b>14</b>	<b>16</b>	<b>3</b>	<b>31</b>	<b>147</b>

### Recommended Course Schedule

YEAR 1 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1003	Introduction to Computational Thinking & Programming	P-Series	3	Nil
SC1013	Physics For Computing	Core	2	Nil
SC1004	Linear Algebra for Computing	Core	4	SC1003 (co-req)
EG1001	Engineers in Society	Core	2	Nil
CC0003	Ethics & Civics in a Multicultural World	C-Core	2	Nil
CC0015	Health & Wellbeing	C-Core	2	Nil
AB1201	Financial Management	2M-BUS (BDE)	3	Nil
HW0001	Introduction to Academic Communication	-	-	For student failed QET
HW0002	Calculus	-	-	For student not done Calculus
<b>TOTAL</b>			<b>18</b>	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1005	Digital Logic	Core	3	Nil
SC1007	Data Structures & Algorithms	Core	3	SC1003
SC1008	C and C++ Programming	Core	3	SC1003
MH1812	Discrete Mathematics	Core	3	Nil
CC0001	Inquiry & Communication in an Interdisciplinary World	C-Core	2	Nil
AB1501	Marketing	2M-BUS (BDE)	3	Nil
<b>TOTAL</b>			<b>17</b>	
			<b>Year 1 Total AU</b>	<b>35</b>

YEAR 2 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1006	Computer Organisation & Architecture	Core	3	SC1005 (co-req)
SC2000	Probability & Statistics for Computing	Core	3	Nil
SC2001	Algorithm Design & Analysis	Core	3	SC1007 & MH1812
SC2002	Object Oriented Design & Programming	Core	3	SC1003 OR SC1007
SC2103	Digital Systems Design	Core	3	SC1005
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	C-Core	2	Nil
CC0007	Science & Technology for Humanity	C-Core	3	Nil
AD1102	Financial Accounting	2M-BUS (BDE)	3	Nil
<b>TOTAL</b>			<b>23</b>	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2005	Operating Systems	Core	3	SC1006 & SC1007
SC2006	Software Engineering	Core	3	SC2002 (co-req)
SC2008	Computer Network	Core	3	SC2000 & SC1004
SC2104	Sensors, Interfacing & Digital Control	Core	3	SC1006
CC0006	Sustainability: Society, Economy & Environment	C-Core	3	Nil
CSL	CSL (service learning course) - Part 1	CSL	3	(Continue in Y3S1)
BF2227	Commodities Market	2M-BUS-ITP (BDE)	3	Nil
BF3214	Commodities Trading	2M-BUS-ITP (BDE)	2	Nil
<b>TOTAL</b>			<b>23</b>	
			<b>Year 2 Total AU</b>	<b>46</b>

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2107	Microprocessor System Design and Development	Core	3	SC1006
SC2079	Multidisciplinary Design Project	Core	4	Year 3 Standing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE-1	3	Refer to MPE listing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE-2	3	Refer to MPE listing
HW0288	Engineering Communication	P-Series	2	CC0001 & Year 3 standing
AD2102	Management Accounting	2M-BUS (BDE)	3	Nil
BF2226	Trade Incoterms & Ship Chartering	2M-BUS-ITP (BDE)	3	Nil
CSL	CSL (service learning course) - Part 2	CSL	-	(Continue from Y2S2)
<b>TOTAL</b>			<b>21</b>	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC3920	Professional Internship (Graded)	P-Series	10	Year 3 Standing
<b>TOTAL</b>			<b>10</b>	
<b>Year 3 Total AU</b>			<b>31</b>	

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC4079	Final Year Project (Part 1)	Core	4	Year 4 Standing
SC3102	Signals, Systems and Transforms	Core	3	SC1004
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE	3	Refer to MPE listing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE	3	Refer to MPE listing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE	3	Refer to MPE listing
ML0015	Profession Preparation	P-Series	1	Nil
BF2302	International Tax & Trading Law	2M-BUS-ITP (BDE)	2	Nil
<b>TOTAL</b>			<b>19</b>	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC4079	Final Year Project (Part 2)	Core	4	Year 4 Standing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE	3	Year 3 Standing
BF3212	Trade, Structured & Supply Chain Finance	2M-BUS-ITP (BDE)	2	BF2226
BF3213	Enterprise Risk Management in Commodity Markets	2M-BUS-ITP (BDE)	2	Nil
BF3226	Strategic Management in Commodity Markets	2M-BUS-ITP (BDE)	2	Nil
BE1402	Business Operations & Process	2M-BUS (BDE)	3	Nil
<b>TOTAL</b>			<b>16</b>	
<b>Year 4 Total AU</b>			<b>35</b>	
<b>Grand Total (Year 1 to 4)</b>			<b>147</b>	

**Important Note:**

- Students are required to complete 6 Major Prescribed Electives (MPE) courses, of which at least 4 must be at the SC4xxx level.
- In order to graduate with **Highest Distinction**, students must achieve minimum CGPA of 4.5 and at least a 'B+' grade for the Final Year Project.

MPE Structure of Computer Engineering (U24 and after)			
Course Code	Type	AU	Remarks
SC3xxx/SC4xxx	MPE-1	3	Any MPE
SC3xxx/SC4xxx	MPE-2	3	Any MPE
SC4xxx	MPE-3	3	Choose within SC4xxx
SC4xxx	MPE-4	3	Choose within SC4xxx
SC4xxx	MPE-5	3	Choose within SC4xxx
SC4xxx	MPE-6	3	Choose within SC4xxx
	<b>Total</b>	<b>18</b>	

Please refer to the CE MPE Courses and Elective Focus Areas on CCDS website.

**AY2025-2026**  
**CURRICULUM FOR COMPUTER ENGINEERING**

**With a Second Major in Business**  
**International Trading Programme (ITP) Track**

**PA option : 10-WEEK Professional Attachment**

**SUMMARY OF ACADEMIC UNIT REQUIREMENT**

Year of Study	Major		ICC			2M - BUS (ITP) / BDE	Total AU
	Core	MPE	Common-Core	Professional Series	Care, Serve, Learn		
Y1	20	0	6	3	0	6	35
Y2	24	0	8	0	3	11	44
Y3	13	15	0	7	0	3	40
Y4	8	3	0	1	0	4	28
<b>Total</b>	<b>65</b>	<b>18</b>	<b>14</b>	<b>11</b>	<b>3</b>	<b>24</b>	<b>135</b>

**Recommended Course Schedule**

YEAR 1 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1004	Linear Algebra for Computing	Core	4	SC1003 (co-req)
SC1013	Physics For Computing	Core	2	Nil
EG1001	Engineers in Society	Core	2	Nil
CC0003	Ethics & Civics in a Multicultural World	C-Core	2	Nil
CC0015	Health & Wellbeing	C-Core	2	Nil
SC1003	Introduction to Computational Thinking & Programming	P-Series	3	Nil
AB1201	Financial Management	2M-BUS (BDE)	3	Nil
HW0001	Introduction to Academic Communication	-	-	For student failed QET
HW0002	Calculus	-	-	For student not done Calculus
<b>TOTAL</b>			<b>18</b>	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1005	Digital Logic	Core	3	Nil
SC1007	Data Structures & Algorithms	Core	3	SC1003
SC1008	C and C++ Programming	Core	3	SC1003
MH1812	Discrete Mathematics	Core	3	Nil
CC0001	Inquiry & Communication in an Interdisciplinary World	C-Core	2	Nil
AB1501	Marketing	2M-BUS (BDE)	3	Nil
<b>TOTAL</b>			<b>17</b>	
			<b>Year 1 Total AU</b>	<b>35</b>

YEAR 2 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1006	Computer Organisation & Architecture	Core	3	SC1005 (co-req)
SC2000	Probability & Statistics for Computing	Core	3	Nil
SC2001	Algorithm Design & Analysis	Core	3	SC1007 & MH1812
SC2002	Object Oriented Design & Programming	Core	3	SC1003 OR SC1007
SC2103	Digital Systems Design	Core	3	SC1005
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	C-Core	2	Nil
CC0007	Science & Technology for Humanity	C-Core	3	Nil
AD1102	Financial Accounting	2M-BUS (BDE)	3	Nil
<b>TOTAL</b>			<b>23</b>	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2005	Operating Systems	Core	3	SC1006 & SC1007
SC2006	Software Engineering	Core	3	SC2002 (co-req)
SC2008	Computer Network	Core	3	SC2000 & SC1004
CC0006	Sustainability: Society, Economy & Environment	C-Core	3	Nil
CSL	CSL (service learning course) - Part 1	CSL	3	(Continue in Y3S1)
BE1402	Business Operations & Process	2M-BUS (BDE)	3	Nil
BF2227	Commodities Market	2M-BUS-ITP (BDE)	3	Nil
<b>TOTAL</b>			<b>21</b>	
			<b>Year 2 Total AU</b>	<b>44</b>

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2107	Microprocessor System Design and Development	Core	3	SC1006
SC2079	Multidisciplinary Design Project	Core	4	Year 3 Standing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE-1	3	Refer to MPE listing
HW0288	Engineering Communication	P-Series	2	CC0001 & Year 3 standing
AD2102	Management Accounting	2M-BUS (BDE)	3	Nil
BF2226	Trade Incoterms & Ship Chartering	2M-BUS-ITP (BDE)	3	Nil
CSL	CSL (service learning course) - Part 2	CSL	-	(Continue from Y2S2)
<b>TOTAL</b>			<b>18</b>	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2104	Sensors, Interfacing & Digital Control	Core	3	SC1006
SC3102	Signals, Systems and Transforms	Core	3	SC1004
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE-2	3	Refer to MPE listing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-3	3	Refer to MPE listing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-4	3	Refer to MPE listing
BF3214	Commodities Trading	2M-BUS-ITP (BDE)	2	Nil
<b>TOTAL</b>			<b>17</b>	

YEAR 3 SPECIAL SEMESTER				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC3910	Professional Attachment (Graded)	P-Series	5	Year 3 Standing
<b>TOTAL</b>			<b>5</b>	
<b>Year 3 Total AU</b>			<b>40</b>	

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC4079	Final Year Project (Part 1)	Core	4	Year 4 Standing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-5	3	Refer to MPE listing
ML0015	Profession Preparation	P-Series	1	Nil
BF2302	International Tax & Trading Law	2M-BUS-ITP (BDE)	2	Nil
BF3226	Strategic Management in Commodity Markets	2M-BUS-ITP (BDE)	2	Nil
	Broadening and Deepening Elective	BDE	3	Refer to Class Schedule
<b>TOTAL</b>			<b>15</b>	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC4079	Final Year Project (Part 2)	Core	4	Year 4 Standing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-6	3	Refer to MPE listing
BF3212	Trade, Structured & Supply Chain Finance	2M-BUS-ITP (BDE)	2	BF2226
BF3213	Enterprise Risk Management in Commodity Markets	2M-BUS-ITP (BDE)	2	Nil
	Broadening and Deepening Elective	BDE	2	Refer to Class Schedule
<b>TOTAL</b>			<b>13</b>	
<b>Year 4 Total AU</b>			<b>28</b>	
<b>Grand Total (Year 1 to 4)</b>			<b>147</b>	

**Important Note:**

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- In order to graduate with **Highest Distinction**, students must achieve **minimum CGPA of 4.5** and at least a 'B+' grade for the **Final Year Project**.

MPE Structure of Computer Engineering (U24 and after)			
Course Code	Type	AU	Remarks
SC3xxx/SC4xxx	MPE-1	3	Any MPE
SC3xxx/SC4xxx	MPE-2	3	Any MPE
SC4xxx	MPE-3	3	Choose within SC4xxx
SC4xxx	MPE-4	3	Choose within SC4xxx
SC4xxx	MPE-5	3	Choose within SC4xxx
SC4xxx	MPE-6	3	Choose within SC4xxx
	<b>Total</b>	<b>18</b>	

[Please refer to the CE MPE Courses and Elective Focus Areas on CCDS website.](#)

Business Course Listing				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
AB1201	Financial Management	2M-BUS (BDE)	3	Nil
AB1501	Marketing	2M-BUS (BDE)	3	Nil
AD1102	Financial Accounting	2M-BUS (BDE)	3	Nil
AD2102	Management Accounting	2M-BUS (BDE)	3	Nil
BE1402	Business Operations & Process	2M-BUS (BDE)	3	AD1102
<b>TOTAL</b>			<b>15</b>	Nil

Business Course Listing (ITP)				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
BF2226	Trade Incoterms & Ship Chartering	2M-BUS-ITP (BDE)	3	Nil
BF2227	Commodity Markets	2M-BUS-ITP (BDE)	3	Nil
BF3214	Commodities Trading	2M-BUS-ITP (BDE)	2	Nil
BF2302	International Tax & Trading Law	2M-BUS-ITP (BDE)	2	Nil
BF3226	Strategic Management in Commodity Markets	2M-BUS-ITP (BDE)	2	Nil
BF3212	Trade, Structured & Supply Chain Finance	2M-BUS-ITP (BDE)	2	BF2226
BF3213	Enterprise Risk Management in Commodity Markets	2M-BUS-ITP (BDE)	2	Nil
<b>TOTAL</b>			<b>16</b>	