## B.S. in COMPUTER SCIENCE (Artifical Intelligence and Machine Learning Concentration) Suggested 4-Year Academic Flowchart

CAL POLY

Undated 5/10/2022

Fail Writer Softig Fail Writer Spring   Debodceton ID Composer Anderessate Spring Programming Spring Debodceton ID Composer Programming Spring Debodceton ID Composer Programming Spring Debodceton ID Composer Debodc	FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
Introduction by Cancellant / Cancellant	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Image: compare latery in the comparison of the compare latery in the compare la	Introduction to Computing CPE/CSC 123 (4) <sup>5</sup>	Fundamentals of Computer Science CSC/CPE 101 (4)	Data Structures CSC/CPE 202 (4)	Proj-Based Object- Oriented Programming & Design CSC/CPE 203 (4)	Proj-Based Object- Oriented Programming & Design CSC 248 (4) CSC/CPE 203 (4)		Intro to Database Systems CSC 365 (4) (CSC 248 or 348; or CPE/CSC 102 & 103 & MATH 268 or	Programmin CSC 4 (CSC	g Languages 30 (4) <sup>349)</sup>	Introduction to Operating Sys CSC/CPE 453 (4) (CSC/CPE 357; 225 or CPE/EE 229 e Theory of Computation		ms 233) <b>1e Series:</b>
Image: construction of comparison of CSC 225 (4)   Image: construction of construlation of construction of construction of construction of constru	(Basic computer literacy)	*	(CPE/CSC 101 w/min C- or Instr. Consent)	(CSC/CPE 202 w/min C- or Instr. Consent)	C- or Instr. Consent)	203; MATH 142; & CSC 248, 348, or MATH 248)	CPE/CSC 202 & 203 & MATH 248)			I	Senior Projec	tlah I & II
Introduction is Canquite dynamication SC2 (24) Procession Regionality (SC2 12) Procession Regionality (SC2 12) Procession Regionality (SC2 12) (SC2 12)							240)			CSC 445 (4)	CCC 401 (2)	CCC 402 (2)
Life Science Support Bettree   Additional Science Support Bettree   Additional Science Support Bettree   Additional Science Support Bettree   Additional Science Support Bettree   Introduction to Science Support Bettree   Introduction to Scie 497 (a)   Introduction to Scie 4				Intro	duction to Computer Organ CSC 225 (4) (CSC/CPE 202)	nization	Professional Responsibilit CSC 300 (4) (Area A3; CSC/CPE 357; Jr Standi	tie: CHOOSE ONE OR	Ethics, Science & Tech PHIL 323 (4) *	(CSC 248 or 348)	(CSC 307 or 309; Instr. Consent)	(CSC 491; Instr. Consent)
Life Solition a solition a solition and a solitic and a soliti				Additional Colores		Systems Programming			To be a dealer of the second	Character and	Research Senio	r Project I & II
(4) A <sup>1,4</sup> (4) A <sup>3,5</sup> (5) C 24 (2) A (2) A (2) C 24 (2) A (2) A (2) C 24 (2) A (2			Elective	Support Elective		CSC/CPE 357 (4)			Software Engineering	Choose one:	CCC 407 (2)	CDE 400 (2)
(4)^{A^*}   (4)^{A^*}   (4)^{A^*}   (4)^{A^*}   (4)^{A^*}   (52 48 p. 58 (CPC))   (55 497; Intr. Consent)     (B2)   (Area B Elective)   (Area B Elective)   (Concerner Math MATH 134 (4)   (Concerner Math MATH 134 (4))   (Concerner Math MATH 13				4.1.26	(C+ of better in CSC/CFE 102 8	203, 01 202 & 203, 01 Inst. Consen	, CSC 225 01 CPC/EC 229 01 255)		CSC 307 (4) <sup>3</sup>	CSC 321(4) CSC 323 (4)	CSC 497 (2)	CPE 496 (2)
Image: B2			(4)^-/-	(4)^-/-					(CSC 248 or 348; CPE/CSC	CSC 325 (4)	(CSC 307 or 309; Instr.	(CSC 497; Instr. Consent)
Calculus II   Calculus II   Choose one:   Linear Math     MATH 141 (4)   (A)   Choose one:   Philosophical Classics   Into to Networked, ES/WGQS 350 or 351 (4)   Into to Networked, Distributed, & Parallel Computing, CSC 364 (4)   Into to Networked, Distributed, & Parallel CSC 364			[B2]	[Area B Elective]					357)	*	consenc)	
Calculus II   Calculus II   Calculus II   Calculus II   Calculus II   Calculus II   MATH 142 (4)   Calculus II   MATH 143 (4)   MATH 266 (4)   MATH 244 (4)   MATH 2												
MATH 141 (4)   MATH 142 (4)   MATH 133 (5)   MATH 134 (7)   Math 134 (7) <td< td=""><td>Calculus I</td><td colspan="3">Calculus II Calculus III Linear Math</td><td></td><td colspan="3">Choose one: Ethnic Studies/Women, Gender &amp; Queer Studies ES/WGOS 350 or 351 (4)</td><td>Intro to Networked, Distributed, &amp; Parallel</td><td></td><td>AIML Concentration</td></td<>	Calculus I	Calculus II Calculus III Linear Math				Choose one: Ethnic Studies/Women, Gender & Queer Studies ES/WGOS 350 or 351 (4)			Intro to Networked, Distributed, & Parallel		AIML Concentration	
MATH 141 (a)   MATH 143 (c)   MATH 143 (c)   (MATH 143 (c) <td></td> <td></td> <td></td> <td>MATH 206 (4)</td> <td></td> <td></td> <td></td> <td>*</td> <td>,</td> <td>Computing</td> <td></td> <td>Elective</td>				MATH 206 (4)				*	,	Computing		Elective
Image: Construction of the L2 formation of GE A2 with a C- or better)   Image: Construction of GE A2 with a C- or bet	MATH 141 (4)	MATH 142 (4)	MATH 143 (4)	(MATH 143)		Choose one: Ph	ilosophical Classics			CSC 364 (4)		(4) <sup>4</sup>
[B4]   [Area B Elective]   (MTH 143)   (Completion of CE Area A w/min C-)     Oral Communication   Physical Science Support Electives (12 units)^A General Physics, 11, & III   Statistical Methods for Engineers   Applied Linear Models   Artificial Intelligence   Deep Learning   CSC 480 (4)   (CSC 480 (4)	*	Instr. Consent)	Instr. Consent)	MATH 244 (4)		PHIL 230 OR PH	IL 231 (4) [C2]			(CPE/CSC 203)		*
Oral Communication   Physical Science Support Electives (12 units)^6     General Physics J, II, & III   PHYS 142 (4)*   PHYS 143 (4)* <td< td=""><td>[B4]</td><td>[B4]</td><td>[Area B Elective]</td><td>(MATH 143)</td><td></td><td>(Completion of GE</td><td>Area A w/ min C-)</td><td></td><td></td><td></td><td></td><td></td></td<>	[B4]	[B4]	[Area B Elective]	(MATH 143)		(Completion of GE	Area A w/ min C-)					
Oral Communication COMS 101/102 (4)** [A1]   Communication Communication COMS 101/102 (4)**   Communication Communication Communication   Communication Communication   Communication (A1)   Communication (B1 & B3)   Applied Linear Models STAT 312 (4) **   Applied Linear Models STAT 312 (4) **   Applied Linear Models (CSC 480 (4))   Artificial Intelligence CSC 486 (4)   Artificial Intelligence CSC 480 (4)   Artificial Intelligence CSC 487 (4)   Artificial Intelligence CSC 487 (4)   Artificial Intelligence CSC 480 (4)   Artificial Intelligence CSC 487 (4)				Physical Sc	ience Support Electives	(12 unite)^6						
COMS 101/102 (4)**   PHYS 141 (4)*   PHYS 142 (4)*   PHYS 143 (4)*   Classes   STAT 332 (4)   CSC 466 (4)   CSC 480	Oral Communication			Physical Sc	General Physics I, II, & II.	I	Statistical Methods for	Applied Linear Models	Knowledge Discovery	Artificial Intelligence	Deep Learning	AIML Concentration
Image: Character of the second sec	COMS 101/102 (4)**			PHYS 141 (4)*	PHYS 142 (4)*	PHYS 143 (4)*	Engineers	STAT 224 (4)		CEC 480 (4)	CEC 487 (4)	Liective
Expository Writing ENGL 133/134 (4)**   Chemistry I, II, & III CHEM 124 (4)*   Chemistry I, II, & III CHEM 125 (4)*   CHEM 126 (4)*   (LSL 34) SIA 124, 302, 302, 302, 302, 302, 302, 302, 302					OR	[01-0 05]	siai 312 (4) *	(STAT 252, 302, 312, 313,		(CSC/CPE 102 & 103 w/ min C-	CSC 487 (4)	(4)^4
Image: Content 126 (4) Criteri 126 (4) Criteri 126 (4) Criteri 126 (4) Content 126 (4)   [A2] Reasoning, Argumentation, & Writing [A3] [B1 & B3] [GE (4)] [GE (4)] [GE (4)]   Completion of GE A2 with a C- or better) Completion of GE A2 with a C- or better) [Ge (4)] [Ge (4)] [Ge (4)]   GE (4) [Ge (4)] [Ge (4)] [Ge (4)] [Ge (4)] [Ge (4)]   *** [Ge (4)] [Ge (4)] [Ge (4)] [Ge (4)]   *** [Ge (4)] [Ge (4)] [Ge (4)] [Ge (4)]   *** [Ge (4)] [Ge (4)] [Ge (4)] [Ge (4)]   *** [Ge (4)] [Ge (4)] [Ge (4)] [Ge (4)]   *** [Ge (4)] [Ge (4)] [Ge (4)] [Ge (4)]   *** [Ge (4)] [Ge (4)] [Ge (4)] [Ge (4)]   *** [Ge (4)] [Ge (4)] [Ge (4)] [Ge (4)]   *** [Ge (4)] [Ge (4)] [Ge (4)] [Ge (4)]   *** [Ge (4)] [Ge (4)] [Ge (4)] [Ge (4)]	Expository Writing			CHEM 124 (4)*	Chemistry I, II, & III	CHEM 126 (4)*	[Upper Division B]	or IME 326; MATH 206 or 244)	(CSC 549; STAT 252, 302, 312, 321, or 350)	or Instr. Consent; or CSC/CPE 202 w/ min C- & Jr. standing)	Recom: CSC 466 or 480)	*
Reasoning, Argumentation, & Writing [A3]     COMS 126, 145, ENGL 145, 147, ES 145, PHIL 126, or WGQS 145 (4)**     (Completion of GE A2 with a C- or better)     Can be taken anytime between Winter of Freshman and Winter of Sophomore Years.     GE (4)     GE (4)     (Can be taken anytime between Winter of Freshman and Winter of Sophomore Years.     GE (4)     (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before sonitor year)		[A2]		CHEM 124 (4)*	CHEM 125 (4)*	[B1 & B3]	[Opper-Division B]					
Resoluting, argumentation,			Desessing Ar	tation 8 Maiting [62]								
Image: Completion of GE A2 with a C- or better) ** ** **   Image: Completion of GE A2 with a C- or better) Image: Completion of GE A2 with a C- or better) Image: Completion of GE A2 with a C- or better)   Image: Completion of GE (4) Image: Completion of GE (4) Image: Completion of GE (4)   ** ** **   Image: Completion of GE (4) **   ** **	COMS 126, 145, ENGL 145, 147, ES 145, PHIL 126			145, PHIL 126, or WGQ	S 145 (4)**		GE (4)	GE (4)	GE (4)			
GE (4) Complete the requirement before senior year) GE (4) GE (4) Complete the requirement before senior year) GE (4) Complete the requirement before senior year) Complete the requirement before senior year	(Completion of GE A			A2 with a C- or better)			**	**	**			
GE (4) ** GE (4) ** GE (4		Can be t	taken anytime between Winter of	Freshman and Winter of Sophor	nore Years.		Graduat	ion Writing Requirement	GWR*			
** ** ** ** ** **	GE (4)	GE (4)	)			(Students can attempt to fulfill the requirement after 90 earned units; students should				GE (4)	GE (4)	
	**	**					compl	complete the requirement before senior year)			**	**
								1				
16 16 16 16 12 16 16 12 16 16 12 16 17 16 16 12 16 16 16 14 14	16	16	16	16	12	16	16	12	16	16	14	14

## Notes:

## MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET

\* Refer to current catalog for prerequisites.

\*\* One course from each of the following GE areas must be completed: A1, A2, A3, C1, Lower-Division C Elective, Upper-Division C, D1, Area D Elective, Lower-Divison E, and Lower-Division F. Upper-Division C should be taken only after Junior standing is reached (90 units).

Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requirement (GWR).

USCP requirement can be satisfied by some (but not all) courses within GE categories: C1, Upper-Division C, D1, D2, Upper-Division D, or E.

\*\*\* Refer to current catalog for course selection.

^ Cannot double count units.

† Course can be taken previously or concurrently.

<sup>1</sup>Select 4 units from the following "Life Science" Support Electives: BIO 111, 161, 213 & BMED 213; BOT 121; MCRO 221.

<sup>2</sup> Select 4 units from the following "Additional Science" Support Electives: BIO 111, 161; BOT 121; CHEM 124; MCRO 221; PHYS 141.

<sup>3</sup> Students in the Artificial Intelligence and Machine Learning Concentration are advised to take CSC 307 instead of CSC 308 and 309.

<sup>4</sup> Select 8 units total from the following Artificial Intelligence and Machine Learning Concentration Electives: CPE/EE 428; CSC 481, 482, 566, 580, 581, 582, 587; DATA 301; EE 509; STAT 434.

<sup>5</sup> Although new students are strongly encouraged to take CSC/CPE 123, an additional 4 units of CPE/CSC Technical Electives within your selected concentration may substitute for CSC/CPE 123.

<sup>6</sup> No double-counting is allowed between Additional Science Support Elective and Life Science Support Elective.

<sup>7</sup> If a General Education (GE) course is used to satisfy a Major or Support requirement, additional units of Free Electives may be needed to complete the total units required for the degree.

## Legend: Course Title Course # (Units) (Prerequisite) Support (48)



Concentration (24)