

STEM EDUCATION: PHYSICS BA PATHWAY

Total Units Required: 190 units

Required Course Listings

This breakdown shows a STEM Education: Physics BA Pathway to be completed in 4 years at La Sierra University. All courses with a star (★) indicate a prerequisite or multiple prerequisites for the class. Courses with a dagger (†) are only offered in years ending with an odd number (e.g. 2022-2023 school year) and courses with a double dagger (‡) are only offered in years ending with an even number (e.g. 2023-2034 school year). By following the suggested/required sequencing all necessary prerequisite courses will be fulfilled. Please consult the Bulletin, Records, or your Guided Pathways Advisor for more information about prerequisites.

Major Requirements (120 units)		
Course	Course Title	Units
CPTG 121	Introduction to Computer Science I★	4
MATH 131	Calculus I★	4
MATH 132	Calculus II★	4
MATH 133	Calculus III★	4
PHYS 231B	University Physics I★	4
PHYS 231L	General Physics I Lab★	1
PHYS 232B	University Physics II★	4
PHYS 232L	General Physics II Lab★	1
PHYS 233B	University Physics III★	4
PHYS 233L	General Physics III Lab★	1
PHYS 304	Astronomy	4
PHYS 315	Modern Physics★†	4
PHYS 326	Human Body Mechanics★	4
PHYS 327	Advanced Mechanics★‡	4
PHYS 385	Physics Seminar I	1
PHYS 415	Advanced Physics Lab I★	2
PHYS 481	Electromagnetic Theory I★‡	4
EDCI 204	Introduction to Teaching (with Service Learning)	3
EDCI 410	Classroom Management★	3
EDCI 413	Digital Literacy★	3
EDCI 416A	Language & Literacy 9-12	3
EDCI 417C	Culture, Society, & Ethics K-12	2
EDCI 419	Reading In The Content Area★	5
EDCI 429	Middle School Theory★	4
EDCI 430	Secondary Theory & Practice★	4
EDCI 464	Special Ed In General Classroom★	3
EDCI 498	Introduction To Assessment★	3
EDFO 305	Psychological Theories of Instruction★	3
HLSC 214	Dimensions of Wellness★	4
HPSC 274	American Government	4
CHEM 105	Introductory Chemistry I★	4
CHEM 105L	Introductory Chemistry I Lab	1
CHEM 106	Introductory Chemistry II★	4
CHEM 106L	Introductory Chemistry II Lab★	1
HPSC 106	Race, Class & Gender in American History	4
MATH 231	Introduction to Linear Algebra★	4
MATH 232	Differential Equations★	4

General Education Requirements (66 units)		
Course	Course Title	Units
UNST 101	First Year Seminar	3
ENGL 111	College Writing I	3
ENGL 112	College Writing II★	3
ENGL 113	College Writing III★	3
WDLG 151	World Language I	4
WDLG 152	World Language II★	4
WDLG 153	World Language III★	4
HLSC 120	Lifetime Fitness	2
SSCI 20X-SL	SSCI Theme Course (with Service Learning)	4
HUMN 10X	HUMN Theme Course	4
THM2 X00	Theme II Elective	8
RLGN 304	Adventism in Global Perspective★	4
RELB X00	Theme IIIbiii - Scripture Elective	4
THM3 X00	Theme III Elective	8
NSCI 40X	NSCI Theme Course★	4
UNST 404Q-SL	Senior Seminar: Religion, Values & Social Responsibility in Education (with Service Learning)★	4

Sequencing

STEM Education: Physics BA Pathway in 4 years at La Sierra University.

Year 1			Year 1			Year 1		
Fall Quarter (15 units)			Winter Quarter (17 units)			Spring Quarter (17 units)		
Course	Course Title	Units	Course	Course Title	Units	Course	Course Title	Units
EDCI 204	Introduction to Teaching (with Service Learning)	3	MATH 131	Calculus I*	4	MATH 132	Calculus II*	4
HPSC 274	American Government	4	HLSC 214	Dimensions of Wellness*	4	CHEM 106	Introductory Chemistry II*	4
MATH 122	Trigonometry & Analytical Geometry*	4	CHEM 105	Introductory Chemistry I*	4	CHEM 106L	Introductory Chemistry II Lab*	1
ENGL 111	College Writing I	3	CHEM 105L	Introductory Chemistry I Lab	1	HPSC 106	Race, Class & Gender in American History	4
UNST 101	First Year Seminar	1	ENGL 112	College Writing II*	3	ENGL 113	College Writing III*	3
			UNST 101	First Year Seminar	1	UNST 101	First Year Seminar	1
Year 2			Year 2			Year 2		
Fall Quarter (16 units)			Winter Quarter (16 units)			Spring Quarter (16 units)		
Course	Course Title	Units	Course	Course Title	Units	Course	Course Title	Units
CPTG 121	Introduction to Computer Science I*	4	PHYS 232B	University Physics II*	4	PHYS 233B	University Physics III*	4
MATH 133	Calculus III*	4	PHYS 232L	General Physics II Lab*	1	PHYS 233L	General Physics III Lab*	1
PHYS 231B	University Physics I*	4	EDFO 305	Psychological Theories of Instruction*	3	EDCI 416A	Language & Literacy 9-12	3
PHYS 231L	General Physics I Lab*	1	MATH 231	Introduction to Linear Algebra*	4	MATH 232	Differential Equations*	4
EDCI 413	Digital Literacy*	3	HUMN 10X	HUMN Theme Course	4	THM3 X00	Theme III Elective	4
Year 3			Year 3			Year 3		
Fall Quarter (15 units)			Winter Quarter (14 units)			Spring Quarter (18 units)		
Course	Course Title	Units	Course	Course Title	Units	Course	Course Title	Units
PHYS 326	Human Body Mechanics*	4	PHYS 327	Advanced Mechanics*‡	4	PHYS 304	Astronomy	4
EDCI 464	Special Ed In General Classroom*	3	PHYS 385	Physics Seminar I	1	EDCI 429	Middle School Theory*	4
SSCI 20X-SL	SSCI Theme Course (with Service Learning)	4	PHYS 481	Electromagnetic Theory I*‡	4	HLSC 120	Lifetime Fitness	2
THM2 X00	Theme II Elective	4	EDCI 417C	Culture, Society, & Ethics K-12	2	RLGN 304	Adventism in Global Perspective*	4
			EDCI 498	Introduction To Assessment*	3	THM3 X00	Theme III Elective	4
Year 4			Year 4			Year 4		
Fall Quarter (16 units)			Winter Quarter (14 units)			Spring Quarter (16 units)		
Course	Course Title	Units	Course	Course Title	Units	Course	Course Title	Units
PHYS 315	Modern Physics*†	4	PHYS 415	Advanced Physics Lab I*	2	WDLG 153	World Language III*	4
EDCI 410	Classroom Management*	3	EDCI 430	Secondary Theory & Practice*	4	NSCI 40X	NSCI Theme Course*	4
EDCI 419	Reading In The Content Area*	5	WDLG 152	World Language II*	4	RELB X00	Theme IIIBiii - Scripture Elective	4
WDLG 151	World Language I	4	UNST 404Q-SL	Senior Seminar: Religion, Values & Social Responsibility in Education (with Service Learning)*	4	THM2 X00	Theme II Elective	4

Additional Supporting Summaries

Summary of Units in Guided Pathway	
Total Units in Pathway (not counting 00X)	190
Total Major Units	54
Total Cognate Units	22
Total Major + Cognate Units	76
Total Upper Division Units	68
Total Upper Division Theme Units	16
Count of Service Learning Courses	3
Major Units also as U Studies	4
Cognate Units also as U Studies	8
Credits Below Undergraduate Level	0
Credential Course Units	44

<u>U.Studies Notes</u>	<u>La Sierra Course</u>	<u>La Sierra Title</u>	<u>sum La Sierra Units</u>	<u>Upper Div.</u>	<u>Requirement</u>
Foundational I - First Year Seminar	UNST 101	First Year Seminar	3	FALSE	4 (foundational studies)
Foundational IIA - Rhetoric College Writing	ENGL 111	College Writing I	3	FALSE	4 (foundational studies)
Foundational IIA - Rhetoric College Writing	ENGL 112	College Writing II	3	FALSE	4 (foundational studies)
Foundational IIA - Rhetoric College Writing	ENGL 113	College Writing III	3	FALSE	4 (foundational studies)
Foundational IIB - Upper-division Rhetoric	PHYS 326	Human Body Mechanics	4	TRUE	1 (major)
Foundational IIB - Upper-division Rhetoric	PHYS 385	Physics Seminar I	1	TRUE	1 (major)
Foundational IIB - Upper-division Rhetoric	PHYS 415	Advanced Physics Lab I	2	TRUE	1 (major)
Foundational III - Mathematics	MATH 131	Calculus I	4	FALSE	1 (major)
Foundational IV - World Languages	WDLG 151	World Language I	4	FALSE	4 (foundational studies)
Foundational IV - World Languages	WDLG 152	World Language II	4	FALSE	4 (foundational studies)
Foundational IV - World Languages	WDLG 153	World Language III	4	FALSE	4 (foundational studies)
Foundational V - Health and Fitness	HLSC 120	Lifetime Fitness	2	FALSE	4 (foundational studies)
Theme IA - SSCI Theme Course	SSCI 20X-SL	SSCI Theme Course (with Service Learning)	4	FALSE	5 (university studies)
Theme IB - Social Science Breadth Course(s)	HPSC 106	Race, Class & Gender in American History	4	FALSE	2 (cognate)
Theme IIA - HUMN Theme Course	HUMN 10X	HUMN Theme Course	4	FALSE	5 (university studies)
Theme IIB - Arts & Humanities Breadth Courses	THM2 X00	Theme II Elective	8	FALSE	5 (university studies)
Theme III - Religious Beliefs & Practice	RLGN 304	Adventism in Global Perspective	4	TRUE	5 (university studies)

Theme IIIBii - Scripture Course	RELB X00	Theme IIIBiii - Scripture Elective	4	FALSE	5 (university studies)
Theme IIIBiii - Religious Beliefs & Practice Breadth Course	THM3 X00	Theme III Elective	8	FALSE	5 (university studies)
Theme IVA - NSCI Theme Course	NSCI 40X	NSCI Theme Course	4	TRUE	5 (university studies)
Theme IVB - Life Science	CHEM 106	Introductory Chemistry II	4	FALSE	2 (cognate)
Theme IVCL - Physical Science with lab	PHYS 304	Astronomy	4	TRUE	1 (major)
Theme VI - Senior Seminar	UNST 404Q-SL	Senior Seminar: Religion, Values & Social Responsibility in Education (with Service Learning)	4	TRUE	5 (university studies)
Theme V: Service Learning Courses	(3)	EDCI 204, SSCI 20X-SL, UNST 404Q-SL			