Physics BS Sample Plan (a possible four-year plan, beginning with Calc. I)

http://physics.truman.edu/programs.asp

Course #	Course Name	Credits
Fall #1		
PHYS 145	Physics Seminar	1
MATH 198	Calculus I	5
LSP courses		x
	TOTAL =	15-17
Fall #2		
PHYS 196	Physics II	5
MATH 264	Calculus III	3
STAT 290	Statistics	3
LSP courses		x
	TOTAL=	13-16
Fall #3		
PHYS 251	Modern Physics II	3
MATH 357	Linear Algebra	3
PHYS 320	Electronics	3
PHYS 382	Mathematical Physics	3
JINS		3
	TOTAL=	15
Fall #4		
PHYS 580	Quantum Mechanics	3
PHYS 518	Advanced Topics	3
PHYS 442	Physics Research II	1
LSP courses as needed		x
	TOTAL=	14

Course #	Course Name	Credits
Spring #1		
PHYS 195	Physics with Calculus II	5
MATH 263	Calculus II	5
LSP courses		x
	TOTAL=	15-17
Spring #2		
PHYS 250	Modern Physics I	3
PHYS 310	Intermediate Lab	2
MATH 365	Differential Equations	3
PHYS 375	Vibrations and Waves	3
LSP course		x
	TOTAL=	15-16
Spring #3		
PHYS 386	Classical Mechanics	3
PHYS 345	Junior Seminar	1
PHYS 446	Advance Laboratory	3
PHYS 441	Physics Research I	1
LSP courses		x
	TOTAL=	12-14
Spring #4		
PHYS 486	Thermo & Stat Mech	3
PHYS 482	Electricity and Magn.	3
PHYS 492	Capstone Seminar Rsrc	1
LSP courses as needed		x
	TOTAL=	13

For students *not* beginning with either Precalculus or Calculus I : The Physics programs require a high level of mathematics; students starting with Algebra should expect their degree program to require more than 8 regular semesters. Such students might consider gaining some mathematics credits in summer school and they may consider taking PHYS 100, "Concepts in Physics" (which can only be used as a general elective for Physics majors) to prepare better for future physics courses within the major.

If a student begins with Calculus II: If a student has credit for Calc. I and will be starting in Calc. II in the fall of the freshman year, he or she should take PHYS 195 in the fall but will need to wait until the following fall to take PHYS 196. The spring of his or her freshman year the student should take PHYS 275, Vibrations and Waves, and MATH 264, Calc. III. Each Math course can be taken a semester earlier than on this plan.

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Course #	Course Name	Credits
Fall #1		
PHYS 145	Physics Seminar	1
MATH 198	Calculus I	5
LSP courses		x
	TOTAL =	15-17
Fall #2		
PHYS 196	Physics with Calculus II	5
MATH 264	Calculus III	3
STAT 290	Statistics	3
LSP courses		x
	TOTAL=	13-16
Fall #3		
PHYS 251	Modern Physics II	3
PHYS 382	Mathematical Physics	3
PHYS elective		3
LSP courses		3-6
	TOTAL=	12-16
Fall #4		
Learning Plan (2)		3
Learning Plan (3)		3
Electives and LSP Courses		x
	TOTAL=	12-15
Spring #1		
PHYS 195	Physics with Calculus I	5
MATH 263	Calculus II	5
LSP courses		x
	TOTAL=	15-17
Spring #2		
PHYS 250	Modern Physics I	3
PHYS 310	Intermediate Lab	2
MATH 365	Differential Equations	3
PHYS 375	Vibrations and Waves	3
LSP courses		x
	TOTAL=	15-16
Spring #3		
PHYS Elective		3
PHYS Elective		3
PHYS 345	Junior Seminar	1
LSP courses		x
Learning Plan (1)		3
	TOTAL=	13
Spring #4		
PHYS 495	Physics Capstone	1
Learning Plan (4)		3
Learning Plan (5)		3
LSP courses		x
	TOTAL=	12-15

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Pre-Engineering course requirements:

Writing and Speech:

ENG 190 Writing as Critical Thinking	3 credits
COMM 170 Public Speaking	3 credits

Social Science/Humanities:

ECON 200 Macroeconomics OR	
ECON 201 Microeconomics	3 credits
HIST 104 U. S. History I OR	
HIST 105 U.S. History II	3 credits

Math and Computer Science:

MATH 198 Calculus I	5 credits
MATH 263 Calculus II	5 credits
MATH 264 Calculus III	3 credits
MATH 357 Linear Algebra	3 credits
MATH 365 Ordinary Differential Equ.	3 credits
STAT 290 Statistics	3 credits
CS 180 Foundations of Computer Sci. I	3 credits

Science:

CHEM 130 Chemical Principles I	4 credits
PHYS 145 Physics Seminar	1 credit
PHYS 195 Physics with Calculus I	5 credits
PHYS 196 Physics with Calculus II	5 credits
PHYS 387 Statics	3 credits

NOTE: Students in the pre-engineering program should be aware of special requirements of various programs at engineering schools and prepare accordingly in consultation with their Truman advisor.

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