

DEGREE PROGRAMS – OVERALL COMPARISON

	CORE	MATHEMATICS	PHYSICS	ELECTIVES	TOTAL
Howard U	63	16	37	12	128
Tuskegee U	41	12	35	37	125
UT San Antonio	44	12	57	9	122
PVAMU	45	11	42	27	125
TAMU-CS	50	24	51	3	128
UH	42	21	56	3	122
RPI	40	16	40	28	124

PRAIRIE VIEW A&M UNIVERSITY – PHYSICS (125 TOTAL HRS)

CORE	MATH	PHYSICS	MINOR/ELECTIVES
Computer Science 3	Calculus II 4	Physics as a Profession 1	Minor Elective 3
Calculus I 4	Calculus III 4	University Physics I 3	Minor Elective 3
Freshman Composition I 3	Differential Equations I 3	University Physics I Lab 1	Minor Elective 3
American Government I 3		University Physics II 3	Minor Elective 3
American Government II 3		University Physics II Lab 1	Minor Elective 3
Speech Communication 3		Modern Physics I 3	General (Unrestricted)
Freshman Composition II 3		Mathematical Physics I 3	General Elective 3
U.S. to 1876 3		Mechanics I 3	General Elective 3
The U.S.-1876 to Present 3		Electricity & Magnetism I 3	General Elective 3
Chemistry I 3		Physics Elective 3	
Chemistry Lab I 1		Physics Elective 3	
Chemistry II 3		Physics Elective 3	
Chemistry Lab II 1		Physics Elective 3	
Spanish I or French I 3		Quantum Mechanics I 3	
Visual & Performing Arts 3		Advanced Physics Lab 3	
Social or Beh Science 3		Senior Research Project 3	
45	11	42	30

HOWARD UNIVERSITY – PHYSICS (128 TOTAL HRS)

CORE	MATH	PHYSICS	ELECTIVES
1 Freshman Orientation 6 Freshman English 4 General Chemistry 4 General Chemistry 1 Phys. Ed. (Swimming) 1 Phys. Ed. (Health) 4 Foreign Language 4 Foreign Language 3 Foreign Language 3 Foreign Language 3 Philosophy 3 Core Requirement 1 Phys. Ed. (Activity) 1 Phys. Ed. (Activity) 3 Core Requirement 3 Speech 3 Core Requirement 3 Core Requirement 3 Core Requirement 3 Core Requirement 3 Core Requirement 3 Core Requirement 4 Calculus I	4 Calculus II 4 Calculus III 4 Differential Equations	3 Physics for S&E I 3 Physics for S&E II 1 Physics S&E Lab I 1 Physics S&E Lab II 3 Intro Modern Physics 1 Physics S&E Lab III 3 Physical Mechanics I 3 Physical Mechanics II 3 Exp. Phys. I WRTG #(or Exp. Phys. I # 021-194) 3 Thermodynamics 3 Quantum Physics I 3 Quantum Physics II 3 Elect. & Magnet. I 3 Elect. & Magnet. II 0 Comprehensive Examination 1 Senior Thesis	3 Elective 3 Elective 3 Elective (or Exp. Phys. II 021-195) 3 Elective (or Optics 021-176)
67	12	37	12

TEXAS A&M UNIVERSITY – PHYSICS (128 TOTAL HRS)

CORE	MATH	PHYSICS	ELECTIVES
ENGL Comp 3 CHEM Gen. Chem 4 HIST U.S History I 3 HIST U.S. History II 3 KINE Physical Activity 1 KINE Fitness Activity 1 POLS Govt. I 3 POLS Govt. II 3 Humanities elective 3 English lit elective 3 Commun elective 3 So and beh sci elective 3 Electives 5 Vis and perf arts electi 3 Elective 3 Electives 6 Calculus I 4	Calculus II 4 Several Variable Cal 4 Applied Math I 3 Differential Equations 3 Partial Diff. Eqs. 3 Complex Variables 3	Topics in Cont. Physics 1 PHYS I 4 PHYS II 4 Electronic Circuits 4 PHYS III 3 Modern Physics 3 Adv. Mechanics 4 Adv. Elec. and Magn. I 3 Adv. Elec. and Magn. II 3 Exptl. Physics 3 Quantum Mechanics I 3 Computational Physics 3 Physics Lab 2 Therm. and Stat. Mech 4 Problems 2 Quantum Mechanics II 3 Physics Lab 2	Physics Elective 3
54	20	51	3

PHYS III - Optics and Thermal Physics

TUSKEGEE UNIVERSITY – PHYSICS (125 TOTAL HRS)

CORE	MATH	PHYSICS	ELECTIVES
Freshman Orientation 1 Reading 1 Physical Education 1 Physical Education 1 English 3 English 3 H/SS Elec. (e.g. HIST 104) 3 H/SS Elec. (e.g. HIST 103) 3 Gen. Chem II 4 Gen Chem. I & Lab 233 5 Calculus I 4 Hum/SS Elective 3 Hum/SS Elective 3 English Proficiency Exam 0 Hum/SS Elective 3 Hum/SS Elective 3	Calculus II 4 Calculus III 4 Differential Equations 4	Gen. Physics I 3 Gen. Physics II 3 Gen. Physics Lab I 1 Gen. Physics Lab II 1 Mechanics (or ME 212) 3 Electronics (EE 380/380L) 4 Modern Physics Lab. I 1 Modern Physics I 3 Wave Phenomenon 3 Thermodynamics 3 Solid State 3 E & M Theory (or EE 333) 3 Seminar (or Phys 0552) 1 Modern Physics II 3	Technical Elective 3 Tech. Elec 3 Tech. Elec 3 Tech Elec 3 Tech Elec 3 Tech Elec (e.g ME 237) 3 Tech Elec 3 Tech Elec (e.g ME 211) 3 Tech Elec (e.g Math 461) 4 Tech Elec (e.g Math 407) 3 Tech Elec 3 Tech Elec 3
41	12	35	37

RENNSAELER POLYTECHNIC INSTITUTE – PHYSICS (124 TOTAL HRS)

CORE	MATH	PHYSICS	ELECTIVES
Calculus I 4 Chemistry I [1] 4 Biology 4 Hum. or Soc. Sci. Elective [2] 4 Hum. or Soc. Sci. Elective [2] 4 Computer Science I 4 Hum. or Soc. Sci. Elective [2] 4 Hum. or Soc. Sci. Elective [2] 4 Hum. or Soc. Sci. Elective [2] 4 Hum. or Soc. Sci. Elective [2] 4	Calculus II 4 Multivariable Calculus & Matrix Algebra 4 Differential Equations 4 Advanced Calculus 4	Physics I 4 Physics II 4 Theor. Physics 4 Exper. Physics 4 Mechanics 4 EM Theory 4 Quantum Physics 4 Quantum Mech 4 Thermo and Stat 4 Research Participation 4	Elective 4 Elective 4 Elective 4 Elective 4 Elective 4 Elective 4 Elective 4
40	16	40	28

UNIVERSITY OF HOUSTON – PHYSICS (122 TOTAL HRS)

CORE	MATH	PHYSICS	ELECTIVES
Calculus I 4 Freshman Comp I 3 Chemistry and Laboratory I 4 Social Sciences 3 Freshman Composition II 3 Chemistry and Laboratory II 4 History I 3 History II 3 Social Sciences 3 Pol Sci I 3 Visual/Performing Arts 3 Pol Sci II 3 Humanities 3	Calculus II 4 Linear Algebra 4 Calculus III 4 Differential Equations 3 Vector Analysis 3 Partial Differential Equations 3	Physics Seminar 1 Physics I 3 Physics Laboratory I 1 Physics II 3 Laboratory II 1 Modern Physics I 3 Natural Science Approved Course 3 Advanced Laboratory Analysis 1 Advanced Laboratory 1 Modern Physics II 3 Mechanics 3 Advanced Laboratory 1 Thermal Physics 3 Electromagnetic Theory 3 Optics and Laboratory or Electronics Devices 4 Capstone Course or Minor or Free Electives 6 Natural Science Approved Course 3 Electromagnetic Theory 3 Physics Elective 3 Capstone Course or Minor or Free Elective 7	Free Elective, Minor Course 3
42	21	56	3

UNIVERSITY OF TEXAS AT SAN ANTONIO – PHYSICS (122 TOTAL HRS)

CORE	MATH	PHYSICS	ELECTIVES
Freshman Comp I 3 Freshman Comp II 3 Calculus I 4 Chemistry I 3 Lab I 1 Chemistry II 3 Lab II 1 United States History and Diversity 6 Political Science 6 Social and Behavioral Sciences 3 Economics 3 Literature 3 The Arts 3 World Society and Issues 3 Computer Programming for Scientific Applications 3	Calculus II 3 Calculus III 3 Linear Algebra 3 Differential Equations I 3	Physics I 3 Laboratory I 1 Physics II 3 Laboratory II 1 Physics III 3 Laboratory III 1 Modern Physics 3 Mechanics I 3 Thermal Physics 3 Advanced Physics Laboratory 3 Electricity and Magnetism 3 Modern Optics 3 Electrodynamics 3 Math Physics I 3 Quantum Mech I 3 Quantum Mech II 3 Math Physics II 3 12 From Introduction to Astrophysics Computer Visualization of Physics Solid State Physics Lasers: Theory and Applications Relativity: Special and General Cosmology Numerical Methods for Physicists Classical Mechanics II Biophotonics Molecular Biophysics Independent Study Special Studies in Physics Honors Research	Additional approved semester credit hours in the College of Sciences 9
44	12	57	9