

Cleveland State University
College of Arts and Sciences
Bachelor of Science in Physics - General Focus

First Year

Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
Inquiry Launch Elective	3		IL	Research & Professional Writing Elective	3		RPW
Finding Your Voice Elective	3		FYV	American Civic Literacy Elective	3		ACL
Society & Human Behavior Elective	3		SHB	MTH 182 Calculus II	4	X	QFR
Human Culture & Creativity Elective	3		HCC	PHY 241 University Physics I	5	X	SI
MTH 181 Calculus I	4	X	QFR				
Semester Total	16			Semester Total	15		

Second Year

Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
PHY 242 University Physics II	5	X	SI	PHY 325 Intro to Theoretical Physics	3	X	
MTH 200-level or ESC 250	3	X		Complexities of a Pluralistic Society	3		CPS
PHY 320 Computational Physics*	3	X		Global Human Perspectives Elective	3		GHP
General Elective	3			General Elective	3		
PHY 200 - Major's Guide to Physics	1	X		General Elective	3		
Semester Total	15			Semester Total	15		

Third Year

Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
PHY 330 Introduction to Modern Physics	3	X		PHY 482 Optical Materials (as PHY 300/400 Elective)^	3	X	WAC
PHY 340 - Mechanics & Vibrations I	3	X		PHY 335, PHY 461, or PHY 455	3	X	
PHY 474 - Thermal Physics	3	X		PHY 440 - Quantum Mechanics	3	X	
WAC Elective	3		WAC	General Elective	3		
General Elective	2			General Elective	3		
Semester Total	14			Semester Total	15		

Fourth Year

Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
PHY 350 - Electricity and Magnetism I	3	X		PHY 450 - Optics and EM Waves	3	X	
PHY 335, PHY 461, or PHY 455	3	X		PHY 3XX/4XX Elective	3	X	
General Elective	3			General Elective	3		
General Elective	3			General Elective	3		
General Elective	3			General Elective	3		
Semester Total	15			Semester Total	15		

Degree Total hours: 120 hours

Core Curriculum Key:

IL = Inquiry Launch (one course)
 FYV = Finding Your Voice (one course, C or better required)
 SHB = Society & Human Behavior (one course)
 SI = Scientific Inquiry (two courses, one lab credit)
 GHP = Global Human Perspectives (one course)
 ** Inquiry Launch requirement is waived for transfer students.

QFR = Quantitative & Formal Reasoning (one course)
 RPW = Research & Professional Writing (one course, C or better required)
 HCC = Human Culture & Creativity (one course)
 WAC/SPAC = Writing/Speaking Across the Curriculum Req (2 courses, one in the major)
 ACL = American Civic Literacy (one course)
 CPS = Complexities of a Pluralistic Society (one course)
 DDL = Data & Digital Literacy (one course, can be satisfied by a second QFR course)

Electives ensure that a student accumulates the minimum credit hour totals needed for graduation. Students must have a **minimum of 120 total credit hours**, of which a *CIS 260, ESC 151, ESC 152, or MTH 311 may be used as substitutes; ^ PHY 482 is suggested as 300/400 level PHY electives in order to meet WAC requirements.

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Cleveland State University
College of Arts and Sciences
Bachelor of Science in Physics - Applied Physics

First Year							
Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
Inquiry Launch Elective	3		IL	Research & Professional Writing Elective	3		RPW
Finding Your Voice Elective	3		FYV	American Civic Literacy Elective	3		ACL
Society & Human Behavior Elective	3		SHB	MTH 182 Calculus II	4	X	QFR
Human Culture & Creativity Elective	3		HCC	PHY 241 University Physics I	5	X	SI
MTH 181 Calculus I	4	X	QFR				
Semester Total	16			Semester Total	15		

Second Year							
Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
PHY 242 University Physics II	5	X	SI	PHY 201/3XX/4XX Elective	3	X	
MTH 2XX or ESC 250	3	X		Complexities of a Pluralistic Society	3		CPS
PHY 320 Computational Physics*	3	X		Global Human Perspectives Elective	3		GHP
General Elective	3			General Elective	3		
PHY 200 Major's Guide to Physics	1	X		General Elective	3		
Semester Total	15			Semester Total	15		

Third Year							
Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
PHY 330 Introduction to Modern Physics	3	X		PHY 482 Optical Materials [^]	3	X	WAC
PHY 3XX/4XX Elective	3	X		PHY 335, PHY 461, or PHY 455	3	X	
WAC Elective	3		WAC	General Elective	3		
General Elective	3			General Elective	3		
General Elective	2			General Elective	3		
Semester Total	14			Semester Total	15		

Fourth Year							
Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
PHY 3XX/4XX Elective	3	X		PHY 3XX/4XX Elective	3	X	
STEM 3XX/4XX Elective	3	X		STEM 3XX/4XX Elective	3	X	
Upper Division Elective	3	X		Upper Division Elective	3	X	
General Elective	3			General Elective	3		
General Elective	3			General Elective	3		
Semester Total	15			Semester Total	15		

Degree Total hours: 120 hours

Core Curriculum Key:	
IL = Inquiry Launch (one course)	QFR = Quantitative & Formal Reasoning (one course)
FYV = Finding Your Voice (one course, C or better required)	RPW = Research & Professional Writing (one course, C or better required)
SHB = Society & Human Behavior (one course)	HCC = Human Culture & Creativity (one course)
SI = Scientific Inquiry (two courses, one lab credit)	WAC/SPAC = Writing/Speaking Across the Curriculum Req (2 courses, one in the major)
GHP = Global Human Perspectives (one course)	ACL = American Civic Literacy (one course)
** Inquiry Launch requirement is waived for transfer students.	CPS = Complexities of a Pluralistic Society (one course)
	DDL = Data & Digital Literacy (one course, can be satisfied by a second QFR course)

Electives ensure that a student accumulates the minimum credit hour totals needed for graduation. Students must have a **minimum of 120 total credit hours**, of which a **minimum of 36 credit hours** must be upper division (300 or 400-level courses).

*CIS 260, ESC 151, ESC 152, or MTH 311 may be used as substitutes; ^ PHY 482 is suggested as 300/400 level PHY electives in order to meet WAC requirements.

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Cleveland State University
College of Arts and Sciences
Bachelor of Science in Physics - Honors

First Year							
Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
Inquiry Launch Elective	3		IL	Research & Professional Writing Elective	3		RPW
Finding Your Voice Elective	3		FYV	American Civic Literacy Elective	3		ACL
Society & Human Behavior Elective	3		SHB	MTH 182 Calculus II	4	X	QFR
Human Culture & Creativity Elective	3		HCC	PHY 241 University Physics I	5	X	SI
MTH 181 Calculus I	4	X	QFR				
Semester Total	16			Semester Total	15		

Second Year							
Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
PHY 242 University Physics II	5	X	SI	PHY 325 Intro to Theoretical Physics	3	X	
MTH 200-level or ESC 250	3	X		Complexities of a Pluralistic Society	3		CPS
PHY 320 Computational Physics*	3	X		Global Human Perspectives Elective	3		GHP
General Elective	3			General Elective	3		
PHY 200 - Major's Guide to Physics	1	X		General Elective	3		
Semester Total	15			Semester Total	15		

Third Year							
Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
PHY 330 Introduction to Modern Physics	3	X		PHY 482 Optical Materials (as PHY 300/400/500 Elective)^	3	X	WAC
PHY 340 - Mechanics & Vibrations I	3	X		PHY 335, PHY 461, or PHY 455	3	X	
PHY 474 - Thermal Physics	3	X		PHY 440 - Quantum Mechanics	3	X	
WAC Elective	3		WAC	General Elective	3		
General Elective	2			General Elective	3		
Semester Total	14			Semester Total	15		

Fourth Year							
Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
PHY 350 - Electricity and Magnetism I	3	X		PHY 450 - Optics and EM Waves	3	X	
PHY 335, PHY 461, or PHY 455	3	X		PHY 3XX/4XX/5XX - Approved Elective	3	X	
PHY 493 - Advanced Topics in Physics	3	X		PHY 497 - Independent Study	2	X	
General Elective	3			PHY 497H - Honors Senior Project	1	X	
General Elective	3			General Elective	3		
				General Elective	3		
Semester Total	15			Semester Total	15		
Degree Total hours: 120 hours							

Core Curriculum Key:	
IL = Inquiry Launch (one course)	QFR = Quantitative & Formal Reasoning (one course)
FYV = Finding Your Voice (one course, C or better required)	RPW = Research & Professional Writing (one course, C or better required)
SHB = Society & Human Behavior (one course)	HCC = Human Culture & Creativity (one course)
SI = Scientific Inquiry (two courses, one lab credit)	WAC/SPAC = Writing/Speaking Across the Curriculum Req (2 courses, one in the major)
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