

## SOUTH DAKOTA BOARD OF REGENTS ACADEMIC AFFAIRS FORMS

## Substantive Program Modification Program

UNIVERSITY:	SDSU
<b>CURRENT PROGRAM TITLE:</b>	Physics (B.S.) [S.BS.PHY]
	- Science Teaching Specialization [S.BS.PHY-ST]
CIP CODE:	40.0801
<b>UNIVERSITY DEPARTMENT:</b>	Physics
<b>UNIVERSITY DIVISION:</b>	Natural Sciences

## **University Approval**

OR

ENGL 277 Technical Writing in Engineering (3)

SGR 2 - Oral Communication

SPCM 101 Fundamentals of Speech

To the Board of Regents and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.

	Dennis D. Hedg	ge		5/8/18			
	Vice President of Academ President of the Univ	ic Affairs versity	s or			Date	
1. T	his modification addresses a chan	ge in:					
	Total credits required within the	discipline	$\Box$	Total cr	edits of supp	ortive course work	
	Total credits of elective course w	ork		Total credits required for program			
	Program name		$\boxtimes$	Existing	specializatio	on	
	CIP Code		$\boxtimes$	Other: F	Restructure of the test of tes	f College and ments	
2. E 3. P	ffective date of change: 2018-2019 rogram Degree Level: Associate D Bachelor's	Acader	nic Year Master	's □	Doctoral		
<b>4.</b> C	Certificate □ Specializatio	on 🖂	Min	or 🗌	Major		
5. If	<b>a name change is proposed, the c</b> On the effective date for all s	<b>hange w</b> students	vill occur				
	On the effective date for stud from existing program)	dents nev	v to the p	orogram (	enrolled stud	lents will graduate	
F	Proposed new name:						
6. P	rimary Aspects of the Modification	on:					
	Existing Curriculum			Propos	ed Curriculi	ım ( <mark>highlight changes</mark> )	
Pref. Num.	Title	Cr. Hrs.	Pref.	Num.	Title	•	Cr. Hrs.
Systems Genera	stems General Education Requirements			General E	ducation Req	uirements	33
ENGL 101 Com	ENGL 101 Composition I (3)		ENGL 1 AND	01 Compos	sition I (3)		U
ENGL 201 Com	NGL 201 Composition II (3)			ENGL 201 Composition II (3)			

OR

3

ENGL 277 Technical Writing in Engineering (3)

SGR 2 - Oral Communication

SPCM 101 Fundamentals of Speech

3

Existing Curriculum				Proposed Curriculum ( <mark>highlight changes</mark> )						
SGR 3 –	Social Science	ces/Diversity	6	SGR 3 – Social Sciences/Diversity						
Science	Teaching:			Science Teaching:						
GEOG 2	210 World Re	egional Geography (3)		GEOG 2						
SGR 4 –	Humanities a	and Arts/Diversity	6	SGR 4 –	Humanitie	s and Arts/Diversity	6			
Science	Teaching:			Science '	Teaching:					
PHIL 20	0 Introduction	n to Logic (3)		PHIL 20	0 Introduct	ion to Logic (3)				
SGR 5 –	Mathematics		4	SGR 5 –	Mathemati	cs	4			
Math 12	<u>3Calculus I</u>		0	Math 12.	3Calculus I		0			
SGK 0 -	· Natural Sciel	nces	ð	SGK 0 -	11 1111 Int	tences	8			
	II-IIIL IIIIU IVS 113 1131	Introduction to Physics I & Lab (4)			II-IIIL III IVS 113-11	31 Introduction to Physics I & Lab (4)				
(A)	115 115-1151	2 introduction to r hysics if & Lab		or	115 115-11	SE introduction to T hysics if & Lab (4)				
(+) or				PHYS 2	11-211L Ur	niversity Physics I & I ab (4)				
PHYS 2	11-211L Univ	versity Physics I & Lab (4)		AND PF						
AND PH	IYS 213-213I	University Physics II & Lab (4)								
A&S Co	ollege Requir	ements	13+	<b>Departn</b>	nent Requi	rements	<mark>13+</mark>			
Addition	al required ci	redits of coursework beyond SGRs,	3	<b>Addition</b>	al required	credits of coursework beyond SGRs,	<mark>3</mark>			
Major, a	nd Support C	ourses		<mark>Major, a</mark>	ind Support	Courses				
Natural S	Sciences (10+	)	10+	Natural S	Sciences (10	)+)	10+			
Satis	fying coursev	vork must include	0	Satis	fying cours	ework must include	0			
- at least	two classes v	with laboratory components		- at least	two classes	s with laboratory components				
- at least	two different	prefixes		- at least	two differe	nt prefixes				
(MATH a	nd STATS cour	ses do not count toward the Science		(MATH a	nd STATS co	urses do not count toward the Science				
requireme (6 credits	ent.) of SGR #6 are	counted toward this goal and 4		requireme (6 credits	ent.) of SGR #6 a	re counted toward this goal and 4 credits				
credits of	maior courses	vork)		of major	coursework)	re counted toward this goat and 4 creatis				
Physics:	indger coursen		3	Physics:	coursementy		3			
A&S 11	1 Introduction	to Global Citizenship and Diversity	-	AHSS 1	AHSS 111 Introduction to Global Citizenship and Diversity					
(3)		· ·		(3)		· · ·				
Science 2	Teaching Spec	ialization:		Science T	Teaching Sp	ecialization:				
AIS 211	South Dakota	American Indian Culture and		AIS 211	South Dake	ota American Indian Culture and				
Educatio	on (3)			Educatio	n (3)					
One dec	lared minor of	utside of the major prefix OR a	-	One decl	lared minor	outside of the major prefix OR a	-			
second n	najor OR a tea	aching specialization. The minor		second n	najor OR a	teaching specialization. The minor				
may be a	a traditional m	inor within one department or it		may be a	a traditional	minor within one department or it				
may be i	nterdisciplina	ry involving more than one		may be i	nterdiscipli	nary involving more than one				
departme	ent. The mino	r can be in a different college.		departme	ent. The mi	nor can be in a different college. The				
The min	or must be de	clared no later than the student's		minor m	ust be decla	ared no later than the student's third				
third sen	nester of enro			Semester	of enrolim	ent.				
DHVS A	e course withi 90 Seminar	ппајог	-	PHYS 490 Seminar						
Unner Γ	Division Credi	ts (300-400 level coursework	33	Unner D	Division Cre	dits (300-400 level coursework inside	33			
inside au	nd outside of t	the major)	55	and outs	55					
Maior	Requiremen	ts	83-84	Major R	Requiremen	its	83-84			
Major C	ore		43	Major C	ore		43			
EE	216-216L	Linear Circuits I & Lab	4	EE	216-216L	Linear Circuits I & Lab	4			
CHEM	112-112L	General Chemistry I & Lab	4	CHEM	112-112L	General Chemistry I & Lab	4			
CHEM	114-114L	General Chemistry II & Lab	4	CHEM	114-114L	General Chemistry II & Lab	4			
MATH	125	Calculus II	4	MATH	125	Calculus II	4			
МАТН	225	Calculus III	1	МАТН	225	Calculus III	4			
MATH	321	Differential Equations	3	MATH	321	Differential Equations	3			
PHYS	119	First Year Seminar in Physics	1	PHYS	119	First Year Seminar in Physics	1			
PHYS	316-316L	Measurement Theory and	2	PHYS	316-316	Measurement Theory and Experiment	2			
	210 2101	Experiment Design	_		213 2101	Design	-			
PHYS	331	Introduction to Modern Physics	3	PHYS	331	Introduction to Modern Physics	3			
PHYS	341	Thermodynamics	2	PHYS	341	Thermodynamics	2			
PHYS	343	Statistical Physics	2	PHYS	343	Statistical Physics	2			
PHYS	421	Electromagnetism	4	PHYS	421	Electromagnetism	4			
PHYS	451	Classical Mechanics	4	PHYS	451	Classical Mechanics	4			

Program Forms: Substantive Program Modification Form (Last Revised 08/2016)

Existing Curriculum				Proposed Curriculum ( <mark>highlight changes</mark> )					
PHYS	490	Seminar (Capstone)	2	PHYS	490	Seminar (Capstone)	2		
Physics I	Requirements		5	Physics Requirements			5		
CSC	150	Computer Science I	3	CSC	CSC 150 Computer Science I				
PHYS	318	Advanced Laboratory I	2	PHYS	318	Advanced Laboratory I	2		
Physics T	echnical Elec	tives	36	Physics 7	Fechnical E	Electives	36		
Select one	e elective gro	up based on career objectives.	36	Select on	e elective	group based on career objectives.	36		
Group 1:	Professional	and Applied Physics		Group 1:	Professio	nal and Applied Physics			
MATH	331	Advanced Engineering Math (3)	3-4	MATH	331	Advanced Engineering Math (3)	3-4		
OR				OR					
PHYS	481	Mathematical Physics (4)		PHYS	481	Mathematical Physics (4)			
OR	-	, , , , , , , , , , , , , , , , , , ,		OR	-	Jana ( )			
STAT	381	Intro to Probability & Statistics (3)		STAT	381	Intro to Probability & Statistics (3)			
PHYS	418	Advanced Lab II	1	PHYS	418	Advanced Lab II	1		
PHYS	471	Quantum Mechanics	4	PHYS	471	Quantum Mechanics	4		
Technica	al Electives (u	p to a total of 3 credits may be	19	Technical Electives (up to a total of 3 credits may be					
NE/PHY	'S x94, x96, x	98 total) Technical electives will		NE/PHY	S x94, x96	5, x98 total) Technical electives will be			
be select	ed from the fo	ollowing list of approved courses.		selected	from the fo	ollowing list of approved courses.			
Any dep	artures from t	his list must be approved by the		Any dep	artures from	n this list must be approved by the			
Head of	the Physics D	epartment One may not count a		Head of	the Physics	s Department One may not count a			
specific	course require	$\frac{1}{100}$ of $\frac{1}{100}$ of $\frac{1}{100}$ of $\frac{1}{100}$		specific of	course real	uired for an elective group as also			
counting	towards elec	tive credit requirements of the		counting	towards el	ective credit requirements of the			
elective	group	tive create requirements of the		elective	roun	lective credit requirements of the			
CHEM 3	230 2301 Ang	lytical Chemistry (4)		CHEM 3	20 2201 A	nalytical Chemistry (1)			
EE 218	7181 Linear (	Circuits II & Lab (4)		EE 218	EF 218-218L Linear Circuits II & Lab $(A)$				
EE 210-2	210L Linear (	Conversion $\mathcal{C}$ Lab (4)		EE 210-2	210L Liller	Conversion & Lab (4)			
EE 222-2	222L Ellergy	Conversion & Lab (4)		EE 222-2	222L Ellery	gy Conversion & Lab (4)			
EE 320-3	520L Electron	$\frac{11}{100} \frac{1}{100} 1$		EE 520-3	S20L Elect	$\frac{1}{2} \int M_{1} dx $			
EM 321	Mechanics of	Materials (3)		EM 321	Mechanics	of Materials (3)			
EM 331	Fluid Mechar	$\operatorname{hics}(3)$		EM 331	Fluid Mec	hanics (3)			
GE 121 I	Engineering L	Design Graphics (1)		GE 121 I	Engineerin	g Design Graphics (1)			
GE 123 (	Computer Aic	led Drawing (1)		GE 123 (	Computer A	Aided Drawing (1)			
MATH 3	315 Linear Al	gebra (3)		MATH 3	315 Linear	Algebra (3)			
MATH 3	331 Advanced	Engineering Mathematics (3)		MATH 3	31 Advano	ced Engineering Mathematics (3)			
MATH 3	374 Scientific	Computation I (3)		MATH 374 Scientific Computation I (3)					
ME 415	Heat Transfer	r (3)		ME 415	Heat Trans	sfer (3)			
NE 435	Introduction t	o Nuclear Engineering (3)		NE 435	Introductio	n to Nuclear Engineering (3)			
PHIL 20	0 Logic (3)			PHIL 20	0 Logic (3)	)			
PHYS 18	85-185L Astro	onomy I and Lab (3)		PHYS 18	85-185L A	stronomy I and Lab (3)			
PHYS 18	87-187L Astro	onomy II and Lab (3)		PHYS 187-187L Astronomy II and Lab (3)					
PHYS 30	61 Optics (3)	-		PHYS 361 Optics (3)					
PHYS 4	18 Advanced	Laboratory II (1)		PHYS 418 Advanced Laboratory II (1)					
PHYS 433-533 Nuc. and Elem. Particle Physic (3)				PHYS 433-533 Nuc. and Elem. Particle Physic (3)					
PHYS 439-529 Solid State Physics (3-4)				PHYS 439-529 Solid State Physics (3-4)					
PHYS 471-571 Quantum Mechanics (4)				PHYS 47	PHYS 471-571 Quantum Mechanics (4)				
PHYS 481 Mathematical Physics (4)				PHYS 481 Mathematical Physics (4)					
PHYS/NE 337 Foundations of Health Physics (3)				PHYS/NE 337 Foundations of Health Physics (3)					
PHYS/NE 494 Internship (1-3)				PHYS/NE 494 Internship (1-3)					
PHYS/NE 498 Undergraduate Research (1-3)			PHYS/N	PHYS/NF 498 Undergraduate Research (1-3)					
STAT 39	81 Intro to Pro	(1 )		STAT 381 Intro to Probability and Statistics (3)					
Free Electives 8-9			8-9	Free Electives					
Group	Group 2: Health/Medical Physics			Group	2. Health	Medical Physics	0 7		
BIOI	151-1511	General Biology I & Lab	4	BIOI	151_1511	General Biology I & Lab	4		
BIOI	153_1531	General Biology II & Lab		BIOL	153-1531	General Biology II & Lab	<u>т</u> Д		
BIOL	221_2211	Human Anatomy & Lab	-+ /	BIOL	221.2211	Human Anatomy & Lab	-+ /		
BIOL	221-2211	Physiology & Lab	-+	BIOL	221-2211	Dhysiology & Lab	-+ /		
CUEM	226-2261	Organia Chamistry I & I -1	4	CUEM	225-323L	Organia Chamistry I & I al	4		
CHEM	320-320L	Organic Chemistry I & Lab	4	CHEM	320-320L	Digame Chemistry I & Lab	4		

Existing Curriculum Pr						ed Curriculum ( <mark>highlight changes</mark> )		
CHEM	328-328L	Organic Chemistry II & Lab (4)	4	CHEM	328-328L	Organic Chemistry II & Lab (4)	4	
OR				OR				
CHEM	332-332L	Analytical Chemistry & Lab (4)		CHEM	332-332L	Analytical Chemistry & Lab (4)		
OR				OR				
PHYS	471	Quantum Mechanics (4)		PHYS	471	Quantum Mechanics (4)		
NE	337	Foundations of Health Physics	3	NE	337	Foundations of Health Physics	3	
PHYS	433	Nuclear & Elementary Particle	3	PHYS	433	Nuclear & Elementary Particle Physics	3	
OR		Physics (3)		OR		(3)		
NE	435	Intro to Nuclear Engineering (3)		NE	435	Intro to Nuclear Engineering (3)		
PHYS	418	Advanced Laboratory II	1	PHYS	418	Advanced Laboratory II	1	
STAT	381	Introduction to Probability and	3	STAT	381	Introduction to Probability and	3	
		Statistics				Statistics		
Free Elec	ctives		2	Free Ele	ctives		2	
Group 3:	: Flexible Em	phasis		Group 3	: Flexible E	Emphasis	• •	
Directed	Electives		20	Directed	Electives		20	
Technica	Il Electives (u	ip to a total of 3 credits may be	7	Technica	al Electives	(up to a total of 3 credits may be	7	
NE/PHY	S x94, x96, x	(98 total) Technical electives will		NE/PHY	S x94, x96	, x98 total) Technical electives will be		
be select	ed from the f	ollowing list of approved courses.		selected	from the to	llowing list of approved courses. Any		
Any depa	artures from t	this list must be approved by the		departur	es from this	list must be approved by the Head of		
Head of	the Physics L	Department. One may <u>not</u> count a		the Phys	ics Departn	nent. One may <u>not</u> count a specific		
specific o	course require	ed for an elective group as also		course re	equired for	an elective group as also counting		
counting	towards elec	tive credit requirements of the		towards	elective cre	dit requirements of the elective group.		
elective g	group.			CHEM 3	532-332L A	nalytical Chemistry (4)		
CHEM 3	32-332L Ana	alytical Chemistry (4)		EE 218-2	218L Linea	r Circuits II & Lab (4)		
EE 218-2	218L Linear (	$C_{\text{incuits II & Lab}}(4)$		EE 222-2	222L Energ	y  Conversion & Lab (4)		
EE 222-2	222L Energy	Conversion & Lab (4)		EE 320	320L Electi	onics I (4)		
EE 520-3	Mashaniaa ad	$\frac{1100}{1000} \frac{1}{1000} \frac{1}{1000} \frac{1}{1000} \frac{1}{1000} \frac{1}{1000} \frac{1}{10000} \frac{1}{10000} \frac{1}{10000000000000000000000000000000000$		EM 321	Finial March	of Materials (3)		
EM 321	Fluid Masher	i Materials (3)		EM 331	Fluid Meet	tanics (3)		
EM 221	Fluid Mechai	nics(3)		EM 551	Fiuld Mech	anics (3)		
EM 331	Fluid Mecha	nics (3)		GE 121	Engineering	besign Graphics (1)		
GE 121 I	Engineering I	Jesign Graphics (1)		GE 125	Computer <i>F</i>	Alashas (2)		
GE 125 C	Computer Al	achera (2)		MATH	215 Linear A	Algebra (3)		
MATH	15 Linear Al	gebra (3)		MATH	21 Advor	Algeora (5)		
MATH	21 Advance	geora (5)		MATH	74 Solontii	Engineering Mathematics (5)		
MATH 2	74 Scientific	Computation L(2)		ME 415	Upot Trong	for (2)		
ME 415	Ugot Transfo	r(3)		NE 415	Introduction	to Nuclear Engineering (3)		
NE 415	Introduction t	( <i>J</i> ) To Nuclear Engineering (2)		NE 455	0  Logia (2)	i to Nuclear Engineering (3)		
NE 455 I	0  Logia(3)	o Nuclear Engineering (5)		PHIL 20	0 LOGIC (5)	stronomy L and L ab (2)		
DUVS 19	0  LOgic(5) 25 1851 Astr	onomy Land Lab (3)		PHIS 1	93-103L AS	stronomy II and Lab (3)		
DHVS 19	35-185L Asu 87 1871 Astr	onomy II and I ab $(3)$		DHVS 3	61  Ontion  (	3)		
PHYS 36	51  Ontics (3)	onomy if and Lab (3)		PHYS 418 Advanced Laboratory II (1)				
PHYS 41	18 Advanced	Laboratory II (1)		PHVS 423 Nucl and Elem Particle Drugics (3)				
PHYS 433 Nuc and Elem Particle Physics (3)				PHVS 439 Solid State Physics $(3, 4)$				
PHYS 439 Solid State Physics (3-4)				PHYS 4	71-571 Oua	Intum Mechanics (4)		
PHYS 47	71-571 Quant	um Mechanics (4)		PHYS 4	81 Mathem	atical Physics (4)		
PHYS 481 Mathematical Physics (4)				PHYS/NF 337 Foundations of Health Physics (3)				
PHYS/NE 337 Foundations of Health Physics (3)			PHYS/N	E 494 Inter	nship (1-3)			
PHYS/NE 494 Internship (1-3)			PHYS/N	PHYS/NE 498 Undergraduate Research (1-3)				
PHYS/NE 498 Undergraduate Research (1-3)				STAT 38	81 Intro to I	Probability and Statistics (3)		
STAT 38	81 Intro to Pr	obability and Statistics (3)						
Free Elec	ctives		9	Free Ele	ctives		9	
Science 7	Teaching Spe	cialization Requirements	6	Science '	Teaching S	pecialization Requirements	6	
PHY	185	Astronomy I and Lab (3)	3	PHYS	185	Astronomy I and Lab (3)	3	
S				OR				
OR	187	Astronomy II and Lab (3)		PHYS	187	Astronomy II and Lab (3)		
PHY								
S								

PHY   337   Foundations of Health Physics   3     Section Specialization Requirements   34   Teaching Specialization Requirements   34     Alls   211   South Dakon American Indian Culture and Education (College Requirements)   34   Teaching & Learning I   34     EDPN   101   Exploration of Tackhing & Larning I   1   EDPN   351   Teaching & Learning II   1     EDPN   351   Teaching & Learning II   3   EDPN   351   Teaching & Learning II   3     EDPN   351   Teaching & Learning II   3   EDPN   351   Teaching & Learning II   3     EDPN   452   Teaching & Learning III   2   EDPN   453   Teaching & Learning III   3     EDPN   453   Teaching & Learning III   3   EDPN   451   Teaching & Learning III   3     EDPN   452   Teaching & Learning III   5   EDPN   451   Teaching & Learning III   3     EDPN   452   Teaching & Learning III   5   EDPN   451   Teaching & Learning III   5     EDPN   472   Reaning &		Existing Curriculum Proposed Curriculum (highlight changes						)
Second Specialization Requirements 34 Teaching Specialization Requirements 34   AIS 211 South Dakota American Indian -   AIS 211 South Dakota American Indian -   FDPN 101 Exploration of Teaching & 1   EDPN 131 Teaching & Learning 1   EDPN 351 Teaching & Learning I 1   EDPN 352 Teaching & Learning III ab 2   EDPN 352 Teaching & Learning III ab 2   EDPN 352 Teaching & Learning III ab 2   EDPN 453 Teaching & Learning III ab 2   EDPN 453 Teaching & Learning III ab 2   EDPN 454 Teaching & Learning IV 11   EDPN 452 Teaching & Learning IV 11   EDPN 454 Teaching & Learning IV 11   EDPN 455 Teaching & Learning IV 11   EDPN 145 Capstone Action Research 1   ELPIN 12	PHY	337	Foundations of Health Physics	3	PHYS	337	Foundations of Health Physics	3
AIS   211   South Dakona American Indian Culture Culture and Education (College Requirements)   -   AIS   211   South Dakona American Indian Culture and Education Operational Requirements)   -     EDPN   101   Exploration of Teaching & Learning   1   EDFN   101   Exploration of Teaching & Learning I   1     EDPN   352   Teaching & Learning III   3   EDFN   351   Teaching & Learning III   3     EDPN   352   Teaching & Learning III   4   EDFN   352   Teaching & Learning III   5     EDPN   352   Teaching & Learning III Lab   2   EDFN   433   Teaching & Learning III Lab   2     EDPN   453   Teaching & Learning III Lab   2   EDFN   453   Teaching & Learning IV   11     EDPN   453   Teaching & Learning III Lab   2   EDFN   453   Teaching & Learning IV   11     EDFN   455   Capatore Action Research   1   EDFN   456   Capatore Action Research   1     EDFN   455   Capatore Action Research   1   EDFN   456   Capatore Action Research   1	5 Teachin	g Specializa	tion Requirements	34	Teachin	g Speciali	zation Requirements	34
Culture and Education (College Requirements)     Ind     Education (Operating Requirements)       EDPN     101     Exploration of Teaching & Learning I     1       EDPN     351     Teaching & Learning I     1       EDPN     352     Teaching & Learning II     3       EDPN     352     Teaching & Learning II     3       EDPN     352     Teaching & Learning II     4       EDPN     453     Teaching & Learning III     5       EDPN     4531     Teaching & Learning III     5       FDPN     4531     Teaching & Learning III     5       EDPN     4531     Teaching & Learning IV     11       EDPN     454     Teaching & Learning IV     11       EDPN     455     Teaching & Learning IV     11       EDPN     456     Capstone /Action Research     1       EDPN     456     Capstone /Action Research     1       EDPN     450     7-12 Realing & Content Lienccy     2       SEED     450     Capstone /Action Research     1       Ibritis and PLY	AIS	211	South Dakota American Indian	-	AIS	211	South Dakota American Indian Culture	-
Requirements)     Requirements/ Exploration of Teaching & Learning     Image: Construction of Teaching & Learning     Image: Construction Teaching & Learning <td></td> <td></td> <td>Culture and Education (College</td> <td></td> <td></td> <td></td> <td>and Education (Department</td> <td></td>			Culture and Education (College				and Education (Department	
EDFN   101   Exploration of Teaching & Learning   1     EDFN   351   Teaching & Learning I   1     EDFN   351   Teaching & Learning II   3     EDFN   352   Teaching & Learning II   3     EDFN   352   Teaching & Learning II   3     EDFN   453   Teaching & Learning III   5     EDFN   453   Teaching & Learning III   5     EDFN   453   Teaching & Learning III   2     EDFN   454   Teaching & Learning III   2     EDFN   454   Teaching & Learning IV   11     EDFN   454   Teaching & Control II tracy   2     SEED   413   7-12 Science Methods   3   SFED     SEED   456   Capston-Action Reading & Control Literacy   2     Iphysics courses and a GPA or above in PHYS 211-213 (or PHYS   The program requ			Requirements)				Requirements)	
FDPN   351   Teaching & Learning I   1   EDFN   351   Teaching & Learning II   3     EDPN   352   Teaching & Learning II   3   EDFN   352   Teaching & Learning III   3     EDPN   4531   Teaching & Learning III   5   EDFN   4531   Teaching & Learning III   5     EDPN   4531   Teaching & Learning IV   11   EDFN   454   Teaching & Learning IV   11     EDPN   454   Teaching & Learning IV   11   EDFN   454   Teaching & Learning IV   11     EDPN   454   Teaching & Learning IV   11   EDFN   455   Teaching & Learning IV   11     EDPN   454   Teaching & Learning IV   11   EDFN   455   Capatone & Common & Commo	EDFN	101	Exploration of Teaching & Learning	1	EDFN	101	Exploration of Teaching & Learning	1
EDFN 352 Teaching & Learning II 3 EDFN 352 Teaching & Learning II 3   EDFN 453 Teaching & Learning III 5 EDFN 453 Teaching & Learning III 5   EDFN 453 Teaching & Learning III 5 EDFN 453 Teaching & Learning III 5   EDFN 454 Teaching & Learning IV 11 EDFN 454 Teaching & Learning IV 11   EDFN 454 Teaching & Learning III 5 EDFN 456 Learning III 5   SEED 450 7-12 Reading & Content Literacy 2 SEED 450 7-12 Reading & Content Literacy 2   SEED 450 7-12 Reading & Content Literacy 2 SEED 450 Capstone Action Research 1   Edgree requirements) 0 1 Edgree requirements 0 1 Edgree requirements 0 1   The program requires a cumulative GPA of 2.0 or above for all physics courses and a GPA or above in PHYS 211-213 (or PHYS 111-113) and PHYS 231. 111-130 and PHYS 231. 111-130 and PHYS 231. 111-130 and PHYS 231. 113-134   Additional required credits of coursework beyond SGRs, 3 3 System General Education Requirements 33   Additional required act	EDFN	351	Teaching & Learning I	1	EDFN	351	Teaching & Learning I	1
EDFN   3521.   Teaching & Learning II Lab   2   EDFN   4531.   Teaching & Learning III   5     EDFN   4531.   Teaching & Learning III   2   EDFN   4531.   Teaching & Learning III   5     EDFN   4541.   Teaching & Learning III   3   EDFN   4531.   Teaching & Learning III   2     EDFN   4541.   Teaching & Learning III   3   EDFN   454   Teaching & Learning III   3     SEED   413   7-12 Science Methods   3   SEED   450   7-12 Reading & Content Literacy   2     SEED   450   7-12 Reading & Content Literacy   2   SEED   450   7-12 Reading & Content Literacy   2     SEED   450   Capston/Action Research   1   Electives (Taken as needed to complete any additional   0   1   degree requirements   111-113) and PHYS 331.     The program requires a cumulative GPA or above in PHYS 211-213 (or PHYS   111-113) and PHYS 331.   111-113) and PHYS 331.   113-113     111-113 and PHYS 331.   Teaching & Learning III   13   ASS College Requirements   33     ASS College Requirements   33 <td< td=""><td>EDFN</td><td>352</td><td>Teaching &amp; Learning II</td><td>3</td><td>EDFN</td><td>352</td><td>Teaching &amp; Learning II</td><td>3</td></td<>	EDFN	352	Teaching & Learning II	3	EDFN	352	Teaching & Learning II	3
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EDFN   454   Teaching & Learning IV   11   EDFN   454   Teaching K Learning IV   11     EDFN   475   Human Relations   3   EDFN   475   Human Relations   3     SEED   413   7-12 Science Methods   3   SEED   456   Capstone/Action Research   1     Electives (Taken as needed to complete any additional degree requirements)   0-1   degree requirements)   0-1     The program requires a cumulative GPA of 2.0 or above for all physics courses and a GPA or above in PHYS 211-213 (or PHYS 111-113) and PHYS 331.   The program requires a cumulative GPA of 2.0 or above for all physics courses and a GPA or above in PHYS 211-213 (or PHYS 111-113) and PHYS 331.     System General Education Requirements   33   System General Education Requirements   33     Additional required credit of coursework beyond SGRs, Major, and Support Courses   3   Major core (43)   13+     Major Core (43)   Major Core (43)   Major Core (43)   13+     Physics Requirements (5)   Physics Requirements (5)   13+     Technical Electives (Taken as needed to complete any additional equire dreadts of coursework beyond SGRs, Major, and Support Courses   13   System General Education Requirements (5)   13+     Technical Electives (Taken as n	EDFN	453L	Teaching & Learning III Lab	2	EDFN	453L	Teaching & Learning III Lab	2
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## 7. Explanation of the Change:

The Department of Physics will move from the College of Arts & Sciences to the College of Natural Sciences effective July 1, 2018. The College of Arts & Sciences requirements have been realigned as department requirements within the program. Additional changes include:

• The College of Arts & Sciences has been restructured and renamed the College of Arts, Humanities, and Social Sciences. The A&S prefix has also been replaced with the AHSS prefix to make it easier to identify the coursework.