

# Chemistry & Physics

## BS Ed Unified Science Major in Physics, 65 hours      Certifies Grades 9-12

### Suggested Course Outline

#### Freshman

Freshman Seminar	71-101	1	Composition	10-112	3
Composition	10-111	3	Calculus I	17-120	4
Precalculus (Math ACT under 27)	17-117	4	General Chemistry II & Lab	24-116/117	4
Computational Methods in Science	40-106	3	Computer Programming I	44-141 or 44-149	3
General Chemistry I & Lab •	24-114/115	4	America – A Historical Survey	33-155	3
<b>Total</b>		<b>15</b>	<b>Total</b>		<b>17</b>
Summer: Western Civilization II	26-103	3	General Earth Science & Lab	27-114/115	4

#### Sophomore

Calculus II	17-121	4	Multivariate Calculus	17-321	4
General Botany & Lab *	04-112/113	4	General Zoology & Lab	04-114/115	4
Fund of Classical Physics I & Lab	25-120/121	5	Fund of Classical Physics II & Lab	25-230/231	5
Secondary Teach Practicum I	65-260	1	Intro to Special Education	66-371	2
Educational Psychology	08-303	3	Fund of Oral Communication	29-102	3
<b>Total</b>		<b>17</b>	<b>Total</b>		<b>18</b>
Summer: American Government	34-102	3	Intro to Literature	10-220	3

#### Junior

Historical Geology & Lab (F alt S)	27-212/213	4	Physics Practicum	25-489	1
Electricity & Magnetism (Fe)	25-330/331	4	Environmental Issues (S)	04-420	4
Intro to Modern Physics & Lab (Fo)	25-350/351	4	Classical Mechanics & Lab (So)	25-320/321	4
Adolescent Psychology	08-322	2	Multiculturalism in Education	61-569	3
Reading in the Content Area	66-353	2	Modern Physics II (Se)	25-352	3
<b>Total</b>		<b>12-16</b>	History of Science & Tech	28-550	3
Summer: Fine Arts		3	<b>Total</b>		<b>14-18</b>

#### Senior

Electronics & Lab (Fo)	25-332/333	4	**Professional Trimester**		
Physics Practicum	25-489	1	Classroom Management Seminar	65-521	1
Physics Elective		3	School & Society	61-462	1
Practicum II	65-360	1	Dir Teaching in the Sec School	65-490	10
School and Society	61-461	2	<b>Total</b>		<b>12</b>
Methods in Sec School Science (F)	28-580	3			
Classroom Management	65-520	2			
<b>Total</b>		<b>16</b>			

- If one has not taken a substantial high school chemistry course, Chemistry 112/113 should be taken prior to Chemistry 114/115. Furthermore, student needs to have mastered Algebra II in high school.
- Without two years of biology in high school, Biology 102/103 needs to be taken prior to Biology 112/113 or 114/115.
- Without an ACT of 27, students must first complete 17-118 and 17-119 or take 17-117. Students with a 27 or above on the Mathematics ACT subscore are eligible to begin with Calculus I

Fo Fall Odd Years

Fe Fall Even Years

So Spring Odd Years

Se Spring Even

( Please note this outline does not supersede the requirements listed in the Northwest Undergraduate Student Catalog nor does it constitute a contractual arrangement, rather it is for information only. It is the student's responsibility to be aware of and to meet all University and Department requirements as listed in the catalog.

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