

**Valparaiso University**  
**Secondary Education**  
**SAMPLE Four-Year Plan of Study**  
*With content major in Physics & Astronomy*

REV: 7/14/09, 9/27/11

| <b>Freshman Fall</b>  | <b>CR</b>  | <b>Freshman Spring</b>   | <b>CR</b>  |
|---|--|--|--|
| CORE 110: The Human Experience<br>Humanities elective<br>PHYS 141: Mechanics & Heat<br>PHYS 141L: Experimental Physics I<br>PHYS 499: Seminar<br>MATH 131: Analytic Geometry & Calculus I   | 5<br>3<br>3<br>1<br>4<br>0<br><hr/> 16               | CORE 115: The Human Experience<br>Social Science Elective<br>PHYS 142: Electricity, Magnetism, & Waves<br>PHYS 142L: Experimental Physics II<br>PHYS 499: Seminar<br>MATH 132: Analytic Geometry & Calculus II   | 5<br>3<br>3<br>1<br>4<br>0<br><hr/> 16               |
| <b>Sophomore Fall</b>   | <b>CR</b>  | <b>Sophomore Spring</b>  | <b>CR</b>  |
| THEO 200<br>ASTR 101: Astronomy<br>ASTR 101: Astronomy Laboratory<br>PHYS 243: Atoms & Nuclei<br>PHYS 499: Seminar<br>MATH 253: Calculus III<br>ED 203: Intro to Education  | 3<br>3<br>1<br>3<br>4<br>3<br>0<br><hr/> 17          | PSY 110/111: General Psychology & Laboratory<br>COMM 243: Public Comm.<br>PHYS 245: Experimental Physics III<br>PHYS 246: Data Reduction & Error Analysis<br>PHYS 250: Mechanics<br>PHYS 499: Seminar<br>MATH 234: Differential Equations & Linear Algebra                               | 4<br>3<br>1<br>1<br>3<br>0<br>4<br><hr/> 16          |
| <b>Junior Fall</b>  | <b>CR</b>  | <b>Junior Spring</b>   | <b>CR</b>  |
| <b>ED BLOCK 1:</b><br><i>Integrated Field Experience</i><br>▪ ED 304: Development<br>▪ ED 306: School & Society<br>▪ ED 350: Seminar<br>PHYS 281: Electricity & Electronics<br>PHYS 345: Experimental Physics IV<br>(or ASTR 221: Observational Astronomy 1 cr. In Spring)<br>PHYS 371: Electromagnetic Fields<br>(or ASTR 252: Astrophysics for 3 cr. In Spring)<br>PHYS 499: Seminar<br>NS 290: Investigation of Contemporary issues in Science | 3<br>3<br>0<br>3<br>1<br>3<br>0<br>3<br><hr/> 16     | <b>ED BLOCK 2:</b><br><i>Integrated Field Experience</i><br>▪ ED 308: Technology as Pedagogy<br>▪ ED 351: Seminar<br>▪ ED 357: Curr. & Assessment<br>▪ ED 389: Content Area Instruction<br>THEOLOGY<br>PHYS 360: Thermal Physics<br>PHYS 499: Seminar<br>NS 490: The Scientific Endeavor | 3<br>0<br>2<br>3<br>3<br>0<br>3<br><hr/> 17          |
| <b>Senior Fall</b>  | <b>CR</b>  | <b>Senior Spring</b>   | <b>CR</b>  |
| <b>ED BLOCK 3:</b><br><i>Integrated Field Experience</i><br>▪ ED 450: Seminar<br>▪ ED 460: Literacy in Content Areas<br>▪ ED 470: Home, School, Community<br>▪ SPED 440: Lrng. Exceptionalities<br><br>Social Science Elective<br>Humanities Elective<br>PHYS 445: Senior Project<br>PHYS 449: Seminar  | 0<br>3<br>3<br>3<br><br>3<br>3<br>1<br>0<br><hr/> 16 | <b>ED BLOCK 4:</b><br><i>Student Teaching</i><br>▪ (ED 459 or ED 449)<br>▪ ED 451: Seminar<br>▪ ED 452: Seminar  | <br><br><br><br><br><br><br>12<br>1<br>1<br><hr/> 14 |