<table>
<thead>
<tr>
<th>Grade</th>
<th>Science</th>
<th>Research</th>
<th>Math</th>
<th>Credits</th>
</tr>
</thead>
</table>
| 11    | University Physics I: Calculus-based  
2 HS Science  
VPCC - PHY 241, 4 credits | Research Methodology & Ethics  
1 HS Elective  
VPCC: MTH 245  
3 credits | Calculus  
1 HS Math  
VPCC - MTH 263, 4 credits  
VPCC - MTH 264, 4 credits | 4 HS credits  
VPCC 15 credits |
| 12    | University Physics II: Calculus-based  
2 HS Science  
VPCC - PHY 242, 4 credits | Honors Research & Mentorship  
2 HS Electives  
VPCC: NAS 206, 3 credits | Calculus  
1 HS Math  
VPCC - MTH 263, 4 credits  
VPCC - MTH 264, 4 credits | 5 HS credits  
VPCC 15 credits |
|       |         |          | Differential Equations  
1 HS Math  
VPCC - MTH 267, 3 credits | 5 HS credits  
VPCC 10 credits |
|       |         |          | Multivariable & Linear Algebra  
1 HS Math  
VPCC - MTH 265, 4 credits  
VPCC - MTH 266, 3 credits | 5 HS credits  
VPCC 14 credits |
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| 11    | University Physics 1: Calculus-based  
2 HS Science  
VPCC: PHY 241, 4 credits  
OR  
General College Physics 1: Algebra-based  
2 HS Science  
VPCC: PHY 201, 4 credits  
VPCC: PHY 202, 4 credits | 1 HS Elective  
VPCC: MTH 245  
3 credits | Precalculus  
1 HS Math  
VPCC - MTH 161,  
3 credits  
VPCC - MTH 162,  
3 credits | 4 HS credits  
VPCC 13 credits |
|       |                                                                         |                               | Calculus  
1 HS Math  
VPCC - MTH 263,  
4 credits  
VPCC - MTH 264,  
4 credits | 4 HS credits  
VPCC 15 credits |
|       |                                                                         |                               | Multivariable & Linear Algebra  
1 HS Math  
VPCC - MTH 265,  
4 credits  
VPCC - MTH 266,  
3 credits | 4 HS credits  
VPCC 14 credits |
| 12    | Advanced Biological Analysis  
2 HS Science  
VPCC: BIO 101, 4 credits  
VPCC: BIO 102, 4 credits | Honors Research & Mentorship  
2 HS Electives  
VPCC: NAS 206,  
3 credits | Calculus  
1 HS Math  
VPCC - MTH 263,  
4 credits  
VPCC - MTH 264,  
4 credits | 5 HS credits  
VPCC 19 credits |
|       |                                                                         |                               | Differential Equations  
1 HS Math  
VPCC - MTH 267,  
3 credits | 5 HS credits  
VPCC 14 credits |
|       |                                                                         |                               | Multivariable & Linear Algebra  
1 HS Math  
VPCC - MTH 265,  
4 credits  
VPCC - MTH 266,  
3 credits | 5 HS credits  
VPCC 18 credits |
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| 11    | Computational Physics: Algebra-based physics  
2 HS Science  
VPCC: PHY 201, 4 credits  
VPCC: PHY 202, 4 credits | Research Methodology & Ethics  
1 HS Elective  
VPCC: MTH 245, 3 credits | Precalculus  
1 HS Math  
VPCC: MTH 161, 3 credits  
VPCC: MTH 162, 3 credits | 4 HS credits  
VPCC 17 credits |
| 12    | Computational Computer Programming  
2 HS Science  
VPCC: CSC 221, 222, 223, 9 credits | Honors Research & Mentorship  
2 HS Electives  
VPCC: NAS 206, 3 credits | Calculus  
1 HS Math  
VPCC: MTH 263, 4 credits  
VPCC: MTH 264, 4 credits | 5 HS credits  
VPCC 20 credits |
|       |         |          | Differential Equations  
1 HS Math  
VPCC: MTH 267, 3 credits | 5 HS credits  
VPCC 15 credits |
|       | Multivariable & Linear Algebra  
1 HS Math  
VPCC: MTH 265, 4 credits  
VPCC: MTH 266, 3 credits |      | 4 HS credits  
VPCC 19 credits |

**IMPORTANT INFORMATION:**

It is imperative that all students meet with their high school counselor to ensure that the requirements for the Advanced Diploma are met.

Dual enrollment credits and fees, determined by VCCS and VPCC, are not guaranteed and may change even during the school year.

Revised 1.1.2024