|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| GENERAL EDUCATION: A complete listing of General Education courses can be found at the Office of Academic Support (OASIS) **401** 456-8083 or online at <http://www.ric.edu/recordsoffice/Pages/College-Catalog.aspx> look at catalog for year you enrolled. For Gen Ed courses, aside from Second Language requirement, which varies depending on where you are placed, you need ONE course from each category. Second Language 101/102 options are: American Sign, Arabic, French, German, Italian, Japanese, Korean, Latin, Portuguese, or Spanish. For other ways to satisfy the second language requirement look under the Gen Ed. section of the catalog. Any courses marked (F) offered Fall only; (Sp) Spring only. All courses marked with an asterisk \* have a prerequisite. For information about Math Placement exam visit: <http://www.ric.edu/orientation/Pages/Math-Placement.aspx>. Courses with (WID) are Writing in the Discipline courses and will be writing intensive.   |  |  |  |  | | --- | --- | --- | --- | | **Academic Major Checklist** | **Course** | **More Major and Education Courses** | **Course** | | BIOL 111 Introductory Biology\* |  | PHYS 313 Junior Laboratory\* |  | | CHEM 103 General Chemistry I\* |  | PHYS 413 Senior Laboratory\* |  | | CHEM 104 General Chemistry II\* |  | PHYS 491 Research in Physics\* |  | | PSCI 212 Introduction to Geology (F, Su) |  | ONE from PHYS 309 Nanoscience and Nanotechnology (Sp even)\*, PHYS 315 Optics (F odd)\*, PHYS 320 Analog Electronics (F even), or PHYS 321 Digital Electronics (Sp odd)\* |  | | PSCI 357 Historical & Contemporary Contexts of Science\* |  | | MATH 212 Calculus I\* |  | CEP 315 Educational Psychology\* |  | | MATH 213 Calculus II\* |  | FNED 246 Schooling for Social Justice\* |  | | MATH 314 Calculus III\* |  | SED 406 Instructional Methods, Design, and Tech. (F)\* |  | | PHYS 101 Physics for Science and Mathematics I\* |  | SED 407 Instructional Methods, Design, and Literacy (Sp)\* |  | | PHYS 102 Physics for Science and Mathematics II\* |  | SED 411 Content and Pedagogy in Secondary Ed. (F)\* |  | | PHYS 307 Quantum Mechanics I\* |  | SED 412 Field Practicum (F)\* |  | | PHYS 311 Thermodynamics\* |  | SED 421 and SED 422 Student Teaching\* |  | | PHYS 312 Mathematical Methods in Physics\* |  | SPED 433 Special Education: Best Practices and Applications\* |  |   **NOTE: Will also need BIOL 112 Introductory Biology II\* for General Science certification**  This map is a semester-by-semester plan to help you toward graduation in four years. Not everyone graduates in four years as it depends on how many courses you can take, and how you do in those courses. This map is not your only route; it is a suggestion. You might take additional courses over the summer (or early spring/winter) to catch up or get ahead if the courses you need are offered at these times. While many courses in your major will have prerequisites that will need you to take them in a special order, there is some flexibility in this map, but always double check you have the correct prerequisites for a course you plan to take.  The column to the left on the other side of this page suggests the ideal courses for you to take each semester. There are times when those courses may be full or unavailable the semester you plan to take them, in which case consider another course from a different semester with which you can switch. The column on the right has "Checkpoints" for each semester that show where you should be by the end of that semester. You should work from this map as you plan each semester's schedule, before checking in with your advisor. The Map is designed primarily for freshmen coming to college for the first time, but transfer students may also use the Rhode Map with the understanding that they have most likely completed several requirements through transfer of credit, and will be starting further into the program. Maps assume a Fall start.  **GRADUATION REQUIREMENTS:** The following requirements must be completed by undergraduate degree candidates at Rhode Island College in order to graduate:   * General Education program, including a second language requirement and RIC 100 or its equivalent * College Math Competency (which is separate from the Gen Ed math requirement) * College Writing Competency (satisfied by FYW with a minimum grade of C). **NOTE: Education students need a minimum of B** * Academic Major--includes Education courses and Physics courses—see check chart above. * A minimum of 120 credit hours, with a minimum of 45 credit hours taken at RIC. Of the 45 credit hours, a minimum of 15 credit hours must be in the major (12 of which must be at the 300- or 400-level). * A minimum cumulative grade point average of 2.75 each semester, with minimum of B- in Education courses * A minimum grade point average of 2.50 in your Physics major.   Approved by Department Chair: Robert Cvornyek Date 5/11/2016  Approved by Undergraduate Curriculum Committee: Date 5/30/2016 Revised: 6/1/2020 |
|
|
|
|

|  |  |  |  |
| --- | --- | --- | --- |
| ***SEMESTER 1*** | CR |  | ***SEMESTER 1 CHECKPOINTS *** |
| First Year Writing (FYW 100) or First Year Seminar (FYS 100). | 4 |  | * FYW 100P is a 6 credit option. To decide which FYW to take, see Directed Self-Placement test at [www.ric.edu/firstyearwriting](http://www.ric.edu/firstyearwriting/Pages/default.aspx) |
| RIC 100 Introduction to Rhode Island College | 1 |  | * Exempt if taking COLL 101, COLL 150, or HONR 150 |
| MATH 212 Calculus I\* General Biology I | 4 |  | * Prereq is MATH 209, or consent; minimum grade of C * Satisfies Gen Ed Mathematics (M) |
| PHYS 101 Physics for Science and Mathematics I\* | 4 |  | * Prereq. MATH 120 or placement; minimum grade of C |
| Gen Ed--Second Lang 101 (based on placement, a course higher than 101/102 may be taken). If language requirement already satisfied: Gen Ed Distribution course from Arts (A);History (H); Literature (L), or Social and Behavioral Sciences (SB) | 4 |  | * Language placement test with Dept. of Modern Languages (optional) * Complete Second Lang 101 (if needed) |
| Requirements and GPA |  |  | * Aim for 16 earned credits (While 12 is fulltime, 16 credits are preferred to stay on track to graduate in 4 years) * Math competency completed * Minimum 2.75 overall GPA; 2.50 in the Major |
| # CREDITS EARNED | 17 |  | * Make appointment in Sept. with **Physics advisor** to discuss your schedule for next semester |

|  |  |  |  |
| --- | --- | --- | --- |
| ***SEMESTER 2*** | CR |  | ***SEMESTER 2 CHECKPOINTS *** |
| FYW 100 or FYS 100 | 4 |  | * Complete FYS and FYW, for FYW, grade B or better |
| PHYS 102 Physics for Science and Mathematics II\* | 4 |  | * Prereq. is PHYS 101; minimum grade of C |
| MATH 213 Calculus II\* | 4 |  | * Prereqs MATH 212; minimum grade of C * Satisfies Gen Ed AQSR |
| Gen Ed--Second Lang 102\* (if needed), or other needed Gen Ed course from Arts (A);History (H); Literature (L), or Social and Behavioral Sciences (SB) | 4 |  | * Complete Second Lang 102\* (if needed) |
| Requirements and GPA |  |  | * Aim for minimum of 32 earned credits * Minimum 2.75 overall GPA; 2.50 in the Major |
| # CREDITS EARNED | 16 |  | * Make appointments with Physics and Secondary Education advisors in Feb. to discuss your schedule for next semester |

|  |  |  |  |
| --- | --- | --- | --- |
| ***SEMESTER 3*** | CR |  | ***SEMESTER 3 CHECKPOINTS *** |
| PHYS 307 Quantum Mechanics I (Even Years)\* OR PHYS 311 Thermodynamics (Odd Years)\* | 4 |  | * Prereq for 307 is PHY 102; minimum grade of C * Prereq for 311 are PHYS 101, MATH 213: minimum grade of C |
| CHEM 103 General Chemistry I\* | 4 |  | * Prereq. Math competency/placement; min. grade of C * Satisfies Gen Ed Natural Science (NS) |
| MATH 314 Calculus III\* | 4 |  | * Prereq MATH 213; minimum grade of C |
| Gen Ed Distribution course from Arts (A);History (H); Literature (L), or Social and Behavioral Sciences (SB) | 4 |  |  |
| Requirements and GPA |  |  | * Minimum of 2.75 GPA overall; minimum of B- in Education courses * Minimum GPA of 2.50 in Physics major |
| # CREDITS EARNED | 16 |  | * Make appointments with Physics and Secondary Education advisors in Sept. to discuss your schedule for next semester. |

|  |  |  |  |
| --- | --- | --- | --- |
| ***SEMESTER 4*** | CR |  | ***SEMESTER 4 CHECKPOINTS *** |
| PHYS 312 Math Methods\* | 3 |  | * Prereq is MATH 314; minimum grade of C |
| PHYS 313 Junior Laboratory\* | 3 |  | * Prereqs are PHYS 102 and PHYS 307; minimum grade of C |
| CHEM 104 General Chemistry II\* | 4 |  | * Prereq CHEM 103; minimum grade of C- |
| FNED 246 Schooling for Social Justice\* | 4 |  | * Prereq. FYW with minimum grade of B; minimum grade of B- in FNED 246. |
| Gen Ed Connections (C)\* OR PSCI 357 Historical & Contemporary Contexts of Science\* if being offered | 3-4 |  | * Prereq. for (C) is 45 credits, FYW and FYS * Prereq. for PSCI 357 is any Gen Ed NS |
| SUMMER SESSION: BIOL 111 General Biology I and BIOL 112 General Biology II\* (See note) | (8) Su |  | * Strongly recommend to be able to complete in 4 years * BIOL 111 with minimum of C- is prereq for BIOL 112 |
| Requirements and GPA |  |  | * Core Academic Skills for Educators (ETS# 5751) * Apply to Feinstein School of Education (FSEHD) * Minimum of 2.75 GPA overall; minimum of B- in Education courses * Minimum GPA of 2.50 in Physics major |
| # CREDITS EARNED | 17-18 |  | * Make appointment in Feb. with both advisors to discuss your schedule for next semester |

|  |  |  |  |
| --- | --- | --- | --- |
| ***SEMESTER 5*** | CR |  | ***SEMESTER 5 CHECKPOINTS *** |
| PHYS 307 Quantum Mechanics I (Even Years)\* OR PHYS 311 Thermodynamics (Odd Years)\* | 4 |  | * Prereq for 307 is PHY 102; minimum grade of C * Prereq for 311 are PHYS 101, MATH 213: minimum grade of C |
| PSCI 212 Introduction to Geology (F, Su) or CHEM 310 Biochemistry (F even) | 4 |  | * Minimum grade of C * Prereq. for CHEM 310 is CHEM 206; minimum grade of C |
| CEP 315 Educational Psychology\* | 3 |  | * Prereq. Admission to FSEHD; minimum grade of B- |
| SED 406 Instructional Methods, Design, and Tech. (F)\* | 3 |  | * Prereq. Admission to FSEHD; minimum grade of B- |
| Requirements and GPA |  |  | * Minimum of 2.75 GPA overall; minimum of B- in Education courses * Minimum GPA of 2.50 in Physics major |
| # CREDITS EARNED | 14 |  | * Make appointment in Sept. with both advisors to discuss your schedule for next semester |

|  |  |  |  |
| --- | --- | --- | --- |
| ***SEMESTER 6*** | CR |  | ***SEMESTER 6 CHECKPOINTS *** |
| Gen Ed Connections (C)\* OR PSCI 357 Historical & Contemporary Contexts of Science\* if being offered | 3-4 |  | * Prereq. for (C) is 45 credits, FYW and FYS * Prereq. for PSCI 357 is any Gen Ed NS. Both completed |
| PHYS 413 Senior Laboratory\* | 3 |  | * Prereq are PHYS 102 and PHYS 313; minimum grade of C |
| ONE from PHYS 309 Nanoscience and Nanotechnology (Sp even)\*, PHYS 315 Optics (F odd)\*, PHYS 320 Analog Electronics (F even), or PHYS 321 Digital Electronics (Sp odd)\*, or Gen Ed. | 4 |  | * Prereqs. vary—see catalog |
| SPED 433 Special Education: Best Practices and Applications\* | 3 |  | * Prereq. SED 406; minimum grade of B- |
| SED 407 Instructional Methods, Design, and Literacy (Sp)\* | 3 |  | * Prereq. SED 406; minimum grade of B- |
| Requirements and GPA |  |  | * Minimum of 2.75 GPA overall; minimum of B- in Education courses * Minimum GPA of 2.50 in Physics major * Attend Office of Partnerships and Placements orientation for student teachers; apply for student teaching * Meet with research advisor * Praxis II Principles of Learning and Teaching Exam   (ETS# 5624 – Passing Score: 157)   * Praxis II Physics Content Knowledge Exam (ETS# 5265 – Passing Score: 146) * Apply for degree audit online through MyRIC |
| # CREDITS EARNED | 16-17 |  | * Make appointment in Feb. with both advisors to discuss your schedule for next semester |

|  |  |  |  |
| --- | --- | --- | --- |
| ***SEMESTER 7*** | CR |  | ***SEMESTER 7 CHECKPOINTS *** |
| SED 411 Content and Pedagogy in Secondary Ed. (F)\* | 4 |  | * Prereq. SED 407, concurrent with SED 412, minimum grade of B- * Mini-Teacher Candidate Work Sample |
| SED 412 Field Practicum in Secondary Ed.(F)\* | 2 |  | * Prereq. SED 407, concurrent with SED 411, minimum grade of B- |
| ONE from PHYS 309 Nanoscience and Nanotechnology (Sp even)\*, PHYS 315 Optics (F odd)\*, PHYS 320 Analog Electronics (F even), or PHYS 321 Digital Electronics (Sp odd)\*, or Gen Ed. | 4 |  | * Prereqs vary, see catalog * Complete ONE from PHYS 309, 315, 320 or 321. |
| PHYS 491 Research in Physics | 1 |  | * Prereq. consent; minimum grade of C |
| Gen Ed Distribution course from Arts (A);History (H); Literature (L), or Social and Behavioral Sciences (SB), if needed, or elective | 3-4 |  |  |
| Requirements and GPA |  |  | * Minimum of 2.75 GPA overall; minimum of B- in Education courses * Minimum GPA of 2.50 in Physics major |
| # CREDITS EARNED | 14-15 |  | * Make appointment in Sept. with Education advisor to discuss your schedule for next semester |

|  |  |  |  |
| --- | --- | --- | --- |
| ***SEMESTER 8*** | CR |  | ***SEMESTER 8 CHECKPOINTS *** |
| SED 421 Student Teaching\* | 10 |  | * Satisfactory Recommendation |
| SED 422 Student Teaching Seminar\* | 2 |  | * Minimum grade of B- * Teacher Candidate Work Sample |
| Requirements and GPA |  |  | * Need minimum of 120 earned credits (you will have more) * Completion of all Physics content coursework * Minimum of 2.75 GPA overall * Minimum GPA of 2.50 in Physics major; * Minimum of B- in Education courses |
| # CREDITS EARNED | 12 |  | Attend Gradfest and Commencement |

**For more information, check the Education Studies Department website**:

<http://www.ric.edu/educationalStudies/Pages/default.aspx>

Note: MATH 209 Pre-Calculus Mathematics is a prerequisite for MATH 212, Mathematics Department can test to see if this can be waived or if you need to take this, in which case you should take it as soon as possible in place of a Gen Ed. option

## NOTE: The total credit count for the SED/Physic major is 95 credits, although 12 of those may be offset against Gen Ed. courses (AQSR, M, NS), which leaves 28 more credits of Gen Ed. and possibly 9 more depending on secondary language needs and RIC 100. The minimum credit count will be 123 credits (without secondary language and RIC 100).