



**UNIVERSIDAD POLITÉCNICA DE PUERTO RICO  
GRADUATE PROGRAM IN SCIENCES IN EDUCATION  
IN NATURAL SCIENCES AND MATHEMATICS  
2026 - 2028**



| COURSE                     | COURSE TITLE  | PRE-REQUISITES | 2026-2027 |    |    | 2027-2028 |    |    |
|----------------------------|---|----------------|-----------|----|----|-----------|----|----|
|                            |   |                | FA        | WI | SP | FA        | WI | SP |
| <b>EDUCATION COURSES</b>   |   |                |           |    |    |           |    |    |
| EDUC 5000                  | Problem-Based Education (PBE)   |                |           |    | X  |           |    |    |
| EDUC 5010                  | Curriculum Design and Evaluation  |                |           |    | X  |           |    | X  |
| EDUC 5020                  | Research Methods  |                |           | X  |    | X         |    |    |
| EDUC 5030                  | Teaching and Methodology: 6 <sup>th</sup> to 12 <sup>th</sup> grade Mathematics |                | X         | X  | X  | X         | X  | X  |
| EDUC 5031                  | Teaching and Methodology: 6 <sup>th</sup> to 12 <sup>th</sup> grade Sciences    |                | X         | X  | X  | X         | X  | X  |
| EDUC 6020                  | Assessment and Improvement of Instruction                                       |                | X         |    |    | X         |    |    |
| EDUC 6030                  | Differentiating Instruction   |                |           | X  |    |           | X  |    |
| EDUC 6100                  | Action Research for Teachers  |                | X         |    |    |           | X  |    |
| <b>MATHEMATICS COURSES</b> |   |                |           |    |    |           |    |    |
| MATH 5100                  | Math Modeling   |                | X         |    |    | X         |    |    |
| MATH 5210                  | Advanced Calculus for Teachers I  |                |           | X  |    |           | X  |    |
| MATH 5220                  | Advanced Calculus for Teachers II   | MATH 5210      |           |    | X  |           |    | X  |
| MATH 5500                  | Advanced Math for Teachers  |                | X         |    |    | X         |    |    |
| MATH 6020                  | Rational Numbers and Proportional Reasoning                                     |                |           | X  |    |           | X  |    |
| MATH 6030                  | Measurement, Data, and Geometric Thinking                                       |                |           |    | X  |           |    | X  |
| MATH 6040                  | Algebraic Reasoning, Functions and Equations                                    |                | X         |    |    | X         |    |    |
| MATH 6110                  | Discrete Mathematics  |                |           |    |    |           | X  |    |
| MATH 6120                  | Probability and Statistics for Teachers   |                |           |    | X  |           |    | X  |
| MATH 6130                  | Probability Models for Teachers   |                |           | X  |    |           |    |    |
| MATH 6150                  | Introductory Topology   |                |           |    |    |           | X  |    |
| MATH 6160                  | Applied Modern Algebra  |                |           |    | X  |           |    | X  |
| MATH 6180                  | Modern Geometry for Teachers  |                | X         |    |    | X         |    |    |
| <b>SCIENCES COURSES</b>    |   |                |           |    |    |           |    |    |
| SCIE 5010                  | Fundamentals of Environmental Education   |                |           |    | X  |           |    | X  |
| SCIE 5020                  | Software Applications and Technology  |                | X         |    |    | X         |    |    |
| SCIE 6010                  | Investigating the Living World  |                |           | X  |    |           | X  |    |
| SCIE 6020                  | Exploring the Physical World  |                | X         |    |    | X         |    |    |
| SCIE 6030                  | Exploring the Earth and Beyond  |                |           | X  |    |           | X  |    |
| SCIE 6040                  | Chemistry for Teachers  |                |           |    | X  |           |    | X  |