

# MATHEMATICS POST-BACCALAUREATE CERTIFICATE

## Advanced Professional Studies - Post-Bacc Cert

| Code  | Title                                 | Hours    |
|---|---------------------------------------|----------|
| <b>COURSE REQUIREMENTS FOR APS</b>  |                                       |          |
| FOUNDATIONS COURSES - Choose 1 of the following options 1-2:  |                                       | 6        |
| Option 1. Foundations Graduate Level  |                                       |          |
| EDFN 590  | Social Foundation of Educ             |          |
| EDFN 545  | Advanced Educational Psychology       |          |
| Option 2. Foundations Undergraduate Level   |                                       |          |
| EDFN 211  | Foundations Modern Education          |          |
| EDFN 241  | Psychological Foundations of Teaching |          |
| <b>ACT 126 - Educator Ethics Training</b>   |                                       |          |
| You must submit your Educator Ethics Training (If applying to APS AFTER Jan 15, 2020)   |                                       |          |
| <b>3.0 Minimum Cert GPA</b>   |                                       |          |
| undefined - See separate block  |                                       |          |
| If you are given the 2.8 GPA Exception for graduation and you graduate with a GPA lower than 3.0, you must have higher certification test scores in order to meet PA state certification requirements.  |                                       |          |
| <b>REQUIRED CLEARANCES</b>  |                                       |          |
| ACT 114 - FBI Fingerprint Needed  |                                       |          |
| You must submit your FBI Fingerprint Clearance  |                                       |          |
| ACT 34 - Criminal Record Check Needed   |                                       |          |
| You must submit your Criminal Record Check  |                                       |          |
| ACT 151 - Child Abuse Clearance Needed  |                                       |          |
| You must submit your Child Abuse Clearance  |                                       |          |
| Negative TB Test or Chest X-ray Needed  |                                       |          |
| You must submit your Negative TB Test or Chest X-ray  |                                       |          |
| <b>No dispositions-related holds</b>  |                                       |          |
| If the requirement above is checked as complete, then there are currently no dispositions-related holds on your APS Status. Registration for APS courses is permitted when all APS requirements have been met. If it is incomplete, you have a hold and APS registration will not be allowed. |                                       |          |
| <b>APS registration status</b>  |                                       |          |
| You ARE NOT eligible to register for courses requiring APS status.  |                                       |          |
| <b>Application for APS status</b>   |                                       |          |
| When all requirements are met, you must submit application for admission to APS status. <a href="#">Click here for the application.</a>   |                                       |          |
| <b>Total Hours</b>  |                                       | <b>6</b> |

## Major in Mathematics, Post-Baccalaureate Cert

| Code   | Title      | Hours |
|--|------------|-------|
| <b>REQUIRED MATHEMATICS COURSES</b>  |            |       |
| A grade of C- or higher is required in all required math courses, except MATH 464. |            |       |
| MATH 161   | Calculus 1 | 4     |
| MATH 211   | Calculus 2 | 4     |

|  |                                |     |
|--|--------------------------------|-----|
| History of Mathematics - Choose 1 of the following:                        |                                | 3   |
| MATH 301   | History of Mathematics         |     |
| MATH 603   | History of Mathematics         |     |
| Intro Math Proof - Choose 1 of the following:                              |                                | 3   |
| MATH 310   | Intro to Mathematical Proof    |     |
| MATH 520   | Logic and Foundations of Math  |     |
| MATH 311   | Calculus 3                     | 4   |
| Linear Algebra I - Choose 1 of the following:                              |                                | 4   |
| MATH 322   | Linear Algebra 1               |     |
| MATH 502   | Linear Algebra                 |     |
| Abstract Algebra I - Choose 1 of the following:                            |                                | 3   |
| MATH 345   | Abstract Algebra 1             |     |
| MATH 504   | Modern Algebra for Teachers    |     |
| Survey of Geometry or Transfrmtnl Geometry - Choose 1 of the following:    |                                | 3-4 |
| MATH 353   | Survey of Geometry             |     |
| MATH 355   | Transformational Geometry      |     |
| MATH 505   | Classical & Modern Geometry    |     |
| MATH 650   | Topics in Geometry             |     |
| Real Analysis I - Choose 1 of the following:                               |                                | 3   |
| MATH 464   | Real Analysis 1                |     |
| MATH 506   | Modern Analysis for Teachers   |     |
| <b>REQUIRED OPTION COURSES</b>   |                                |     |
| STATISTICS REQUIREMENT - Choose 1 of the following options 1-2:            |                                | 4-6 |
| Option 1. Intro to Probability and Statistics - Choose 1 of the following: |                                |     |
| MATH 333   | Probablity and Statistics      |     |
| MATH 503   | Probability and Stats for Tchr |     |
| Option 2. Math Statistics I and Statistics II - Choose 2 of the following: |                                |     |
| MATH 335   | Mathematical Statistics 1      |     |
| MATH 435   | Mathematical Statistics 2      |     |
| MATH 535   | Statistical Methods 1          |     |
| MATHEMATICS ELECTIVES - Choose 6 hours from:                               |                                | 6   |
| MATH 333   | Probablity and Statistics      |     |
| MATH 335   | Mathematical Statistics 1      |     |
| MATH 353   | Survey of Geometry             |     |
| MATH 355   | Transformational Geometry      |     |
| MATH 365   | Ordinary Differential Equation |     |
| MATH 370   | Operations Research            |     |
| MATH 375   | Numerical Analysis             |     |
| MATH 393   | Number Theory                  |     |
| MATH 395   | Introduction Combinatorics     |     |
| MATH 408   | Topics in Mathematics          |     |
| MATH 418   | Topics in Math Education       |     |
| MATH 422   | Linear Algebra 2               |     |
| MATH 435   | Mathematical Statistics 2      |     |
| MATH 438   | Topics in Statistics           |     |
| MATH 445   | Abstract Algebra 2             |     |
| MATH 448   |                                |     |
| MATH 457   | Elementary Differentl Geometry |     |
| MATH 458   |                                |     |
| MATH 465   | Real Analysis 2                |     |

|                            |                                |
|----------------------------|--------------------------------|
| MATH 467                   | Partial Differential Equations |
| MATH 468                   |                                |
| MATH 471                   | Mathematical Modeling          |
| MATH 472                   | Financial Mathematics II       |
| MATH 478                   | Topics in Applied Mathematics  |
| MATH 483                   | Point-Set Topology             |
| MATH 488                   |                                |
| MATH 498                   | Independent Study              |
| MATH 503                   | Probability and Stats for Tchr |
| MATH 535                   | Statistical Methods 1          |
| MATH 536                   | Statistical Methods 2          |
| MATH 566                   | Complex Variables              |
| MATH 577                   | Problems in Applied Math       |
| MATH 592                   | Graph Theory                   |
| Any 6-level MATH course(s) |                                |
| <b>Total Hours</b>         | <b>41-44</b>                   |

### Req Related for Mathematics, Post-Bacc Cert

| Code                            | Title                         | Hours    |
|---------------------------------|-------------------------------|----------|
| <b>REQUIRED RELATED COURSES</b> |                               |          |
| Intro. to Computing I           |                               | 4        |
| CSCI 161                        | Introduction to Programming 1 |          |
| CSCI 140                        | Discrete Structures           | 4        |
| <b>Total Hours</b>              |                               | <b>8</b> |

### Professional Education - Certification

| Code  | Title   | Hours |
|---|---|-------|
| <b>FOUNDATIONS BLOC</b>   |   |       |
| We recommend 590 and 545 for Post-Bacc students. These courses each require 35 hours field placement at an urban school. Offered in the evenings Fall and Spring. Also offered in Summer Session. If enrolling in EDFN 211/241, please register for both courses in the same block. |   |       |
| Foundations of Modern Education - Choose 1 of the following:  |   | 3     |
| EDFN 590  | Social Foundation of Educ                               |       |
| EDFN 211  | Foundations Modern Education                            |       |
| Psychological Foundations of Teaching - Choose 1 of the following:  |   | 3     |
| EDFN 545  | Advanced Educational Psychology                         |       |
| EDFN 241  | Psychological Foundations of Teaching                   |       |
| <b>APS - PROFESSIONAL BLOC</b>  |   |       |
| Students must meet APS eligibility requirements prior to registering. Course Appropriate PRAXIS II Exam should be taken after Professional Bloc, but prior to Student Teaching.   |   |       |
| Issues in Secondary Education - Choose 1 of the following:  |   | 3     |
| EDSE 521  | Issues in Second Education                              |       |
| EDSE 321  | Issues in Secondary Education                           |       |
| Content Area Literacy for Diverse Classrooms - Choose 1 of the following:   |   | 3     |
| EDSE 340  | Content Area Literacy for Diverse Classrooms            |       |
| EDSE 540  | Cntnt Area Litrcy Divers Class                          |       |
| Secondary Students w/Disabilities in Inclusive Settings - Choose 1 of the following:  |   | 3     |
| SPED 346  | Secondary Students w/Disabilities in Inclusive Settings |       |

|   |                                      |           |
|---|--------------------------------------|-----------|
| SPED 546  | Sec Stdnts w Disab Inclu Sttgs       |           |
| MATH 405  | Teaching Math in Secondary Schools 2 | 3         |
| <b>STUDENT TEACHING SEMESTER</b>  |                                      |           |
| Students must meet APS eligibility requirements prior to registering. Submit your Teacher Certification Packet 90 days prior to completion of your certification program. Click here to access the packet on the Certification Website. |                                      |           |
| EDSE 471  | Student Teaching Seminar             | 3         |
| Student Teaching  |                                      | 9         |
| File your Intent to Student Teach Card one year prior to the beginning of the semester in which you wish to Student Teach. Click here to access the Student Teaching Website  |                                      |           |
| <b>Total Hours</b>  |                                      | <b>30</b> |