The College of New Jersey

School of Education ~ Dept. of Elementary & Early Childhood Education ~ Fall 2020

4-Year Course Sequence

**Early Childhood Education and Mathematics**

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| Fall | Spring |
| **Year 1** |
| Course | Goal | Course | Goal |
| FSP101\* First Year Seminar (check to see if it meets gender or global goals) | FYS  | WRI 102 Academic Writing (If not exempt) or Free Elective\* | AW  |
| MAT 127 Calculus A | Quantitative Reasoning | ECE 102 Multicultural Children’s Literature for ECED | Professional Education |
| MAT 105 Mathematical Structures & Algorithms for Educators I | Math course | MAT 128 Calculus B | Quantitative Reasoning |
| BIO 104 Cancer, Genes, and the Environment or PHY 103 Physical, Earth, and Space Science\*\*\*\* | Natural Science  | MAT 200 Proof Writing through Discrete Mathematics  | Math Course |
| MAT 99 & ELE 99 | Orientation seminars |  |  |
| Fall | Spring |
| Year 2 |
| Course | Goal | Course | Goal |
| MAT 229 Multivariable Calculus | Math Course | MAT 301 Number theory | Math Course |
| MAT 205 Linear Algebra | Math Course | STA 216 Statistical Inference & Probability (Spring only)  | Correlate  |
| RAL 222 Literacy, Strategies, Assessment and Instruction- ECHD | Professional Education  | MTT 202 Math Methods | Professional Education  |
| ECE 201 Child and Adolescent Development | Social Science  | MST 202 Methods of Teaching Science, Health & Technology | Professional Education  |
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| Fall | Spring |
| Year 3 |
| Course | Goal | Course | Goal |
| ECE 202 Theories & Practices in Early Childhood | Professional Education | ECE 301 Advanced Core Block: Clinical Practice I | Professional Education(counts as 2 units) |
| MAT 305 Abstract Algebra | Math Course |
| MAT/STA OPTION\*\*\*see attached list | Math Course | SOM 203 Social Studies & Multiculturalism | Professional Education  |
| MAT 351 Geometry | Math Course | RAL 322 Literacy Learning Across the Curriculum- ECHD | Professional Education  |
| Fall | Spring |
| Year 4 |
| Course | Goal | Course | Goal |
| ECE 490 Clinical Practice II: Student Teaching  | Professional Education(counts as 2 units) | U.S. History\* | Social Science  |
| MAT 310 Real Analysis | Math Course |
| ECE 498 Inquiry Into Learning (Capstone) | Social sciences course taken with student teaching | MAT 255 Perspectives on the Development of Math (Spring only) | Math Course |
| \*\*No additional course needed | Full time semester | Visual/Performing Arts\* | VPA |

\*Note that **gender** and **global** requirements must be met through the FSP, U.S. History course, VPA course, or free electives. See list of approved Liberal Learning courses on the TCNJ website.

\*\* Early Childhood Education/Mathematics majors are required to take 32 units to complete both majors. Thus, **students in this program may need to take at least one Maymester, summer, or winter session course** or take a course overload in one regular academic semester. Students should consult with their advisors to see when this course should be taken.

\*\*\*MAT/STA options must be chosen from list of courses on the department website.

\*\*\*\*If BIO 104 is not taken, the Health & Hygiene requirement must be completed online.

* RAL 222 and ECE 201 must be taken together.
* MTT 202 and MST 202 must be taken together.
* The above courses are prerequisites to ECE 301.
* It is recommended that ECE 301 be taken with RAL 322 and SOM 203. In the event that this prevents the student from completing the major courses, flexibility in scheduling these courses is recommended.
* Students are encouraged to take courses during the May or summer semester.
* The information literacy goal is met through a college-wide experience.

Math Department retention requirements:

* Minimum GPA of 2.00. A 2.5 GPA in the courses MAT 127, 128, 200, 205, 229.
* Minimum of 6 units in the math major must be earned in the department. A minimum of 4 of the final 6 units must be earned in the department.
* At least C- in all MAT courses with the following exception: at most one grade of D or D+ in a MAT 3xx/4xx course that is not a prerequisite for another course.