

**KEAN UNIVERSITY**  
**COLLEGE OF NATURAL, APPLIED and HEALTH SCIENCES**  
**(78297) B.A. IN MATHEMATICAL SCIENCES (TEACHER CERTIFICATION P-12):132 S.H.**  
**EFFECTIVE DATE: Fall 2017**

**START TERM:** \_\_\_\_\_

| NAME  |     | TRANSFER INSTITUTIONS(X)  | Credits: |
|---|-----|---|----------|
| STUDENT ID#   |     | In Progress   |          |
| <b>GENERAL EDUCATION: 48-49 Semester Hours (S.H.)</b>   |     | <b>ACADEMIC MAJOR: 40 Semester Hours (S.H.)</b>   |          |
| <b>Foundation Requirements<sup>1</sup> 13 S.H.</b>  |     | <b>**Foundation Core 18 S.H.</b>  |          |
| GE 1000 Transition to Kean <sup>2</sup> or GE 3000 Transfer Transitions <sup>2</sup>  | 1   | MATH 2415 Calculus I  | 4        |
| ENG 1030 Composition <sup>3</sup>   | 3   | MATH 2416 Calculus II   | 4        |
| MATH 1054 Precalculus <sup>4,5</sup>  | 3   | MATH 2995 Matrix and Linear Algebra   | 3        |
| COMM 1402 Speech Communication <sup>3</sup>   | 3   | MATH 3415 Calculus III  | 4        |
| GE 2024 Research & Technology   | 3   | MATH 3544 Probability and Math Statistics   | 3        |
| <b>Disciplinary &amp; Interdisciplinary Distribution Requirements</b>   |     | <b>**Concentration 16 S.H.</b>  |          |
|   |     | MATH 2526 Applied Statistics I  | 3        |
| <b>Humanities 9 S.H.</b>  |     | MATH 2800 Mathematical Software   | 1        |
| * ENG 2403 World Literature   | 3   | MATH 3110 Intro to Proofs   | 3        |
| <b>Select two courses from different areas:</b>   |     | MATH 3342 Euclidean and Non-Euclidean Geometry  | 3        |
| Fine Arts or Art History  | 3   | MATH 3455 Differential Equations  | 3        |
| Philosophy or Religion  | 3   | MATH 3891 History of Mathematics  | 3        |
| Foreign languages (Must take I and II for credit)   | 3   |   |          |
| Music or Theater  | 3   |   |          |
| Interdisciplinary   | 3   | <b>**Major Electives 6 S.H.</b> (with advisement, 3000-4000 level)  |          |
|   |     | MATH  | 3        |
|   |     | MATH  | 3        |
| <b>Social Sciences 9 S.H.</b>   |     |   |          |
| * HIST 1062 Worlds of History   | 3   |   |          |
| PSY 1000 General Psychology   | 3   | <b>PROFESSIONAL EDUCATION: 30 S.H.</b>  |          |
| SOC 1000 Intro to Soc or ANTH 1800 Cultural Anthropology  | 3   | Must pass Praxis I and have a GPA of 3.0 before applying for admission to the Middle and Secondary Education (MSE) Department.    |          |
| <b>Science and Mathematics 11 or 12 S.H.</b>  |     | <b>Grades of B or higher in professional education courses and "Satisfactory" grades in EMSE 3801 and EMSE 4811 are required.</b> |          |
| CPS 1231 Fund of Computer Science <sup>1</sup>  | 4   | <b>Sophomore Level</b>  |          |
| PHYS 2091 Gen Physics I or PHYS 2095 Physics I  | 4   | EMSE 2801 Intro to Field Experience/Subj K-12   | 3        |
| One course from Biology, Chemistry, Physics, Astronomy, Earth Science, Geology, Meteorology or Interdisciplinary  | 3.4 |   |          |
| <b>Health &amp; Physical Education 3 S.H.</b>   |     | <b>Junior Level</b>   |          |
| ID 1225 Issues in Contemporary Health   | 3   | EDUC 3000 Curriculum Evaluation & Learner   | 3        |
|   |     | EDUC 3401 Language Arts /Reading K-12   | 3        |
| <b>*/**G.E. and Major Capstone 3 S.H.</b>   |     | EMSE 3220 Mathematics Ed K-12 (WE)  | 3        |
| MATH 4890 Senior Seminar in Mathematics (WE)  | 3   | EMSE 3122 Computers in Education  | 3        |
|   |     | EMSE 3801 Field Experience / Subj Area K-12   | 2        |
| <b>ADDITIONAL REQUIRED COURSES: 13 S.H.</b>   |     | EMSE 3903 Eng. Lang. Learning in America (taken w/EMSE 3801)  | 1        |
| CPS 2231 Comp Org and Programming   | 4   |   |          |
| PSY 2110 Psychology of Adolescence  | 3   | <b>Senior Level</b>   |          |
| ID 2955 Disabled Persons in American Society  | 3   |   |          |
| One additional DIS/ID Course (Physics, Computer Science or Economics recommended).  | 3   | EMSE 4811 Prof Internship/Subj Area K-12<br>(Praxis II math exam must be passed before student teaching)                          | 9        |
| Special notes:<br><sup>1</sup> See prerequisites and equivalencies.<br><sup>2</sup> University Requirement for Graduation for all undergraduate students that must be satisfied in one of two ways: Complete GE 1000 (all freshmen and transfers entering with 0-29 credits) OR complete GE 3000 (transfers entering with 30 credits or more)<br><sup>3</sup> ENG 1030 and COMM 1402 require a grade of B- or higher.<br><sup>4</sup> Students who do not qualify on the placement test to take MATH 1054 must take MATH 1000 first.<br><sup>5</sup> Students whose qualifying score on the placement test makes them eligible to take Math 2415 may take that course instead. In that case the student must take another 3 credits in free electives to total 132 S.H. |     | <b>Professional/GE Capstone Course</b>  |          |
|   |     | EDUC 4000 Teacher and Classroom   | 3        |
|   |     | <b>FREE ELECTIVES: 0-1 S.H.***</b>  |          |
|   |     | Special Notes:<br>*G.E. required course; WE: Writing Emphasis<br>**All major courses require a grade of C or better.              |          |
|   |     | ***No mathematics courses allowed other than MATH 1000.   |          |
|   |     | <b>TOTAL CREDITS:</b>   |          |
|   |     | Advisor Signature:  |          |