



**KEAN
OCEAN**

KEAN UNIVERSITY – COLLEGE OF NATURAL, APPLIED AND HEALTH SCIENCES

(78299) B.A. IN MATHEMATICAL SCIENCES (Teacher Certification): 132 SEMESTER HOURS (S.H.)



**OCEAN
COUNTY COLLEGE**

For students graduating from Ocean County College with the A.A. in Liberal Arts or or the A.S. General Studies with a Mathematics Concentration and transferring to Kean University

Kean University Courses are in Blue (59 S. H.) Ocean County College Courses are in Green (73 S. H.)

EFFECTIVE DATE: Fall 2016

KEAN DECLARATION AND GRADUATION GPA REQUIREMENT: 3.0

| GENERAL EDUCATION REQUIREMENTS: 49 S.H. | | | ACADEMIC MAJOR COURSES ² : 40 S.H. | | |
|---|--|---|--|--|---|
| Foundation Requirements: 13 S.H. | | | Required: Foundation Core²: 18 S.H. | | |
| GE 3000 Transfer Transitions | | 1 | MATH 2415 Calculus I | MATH 265 Calculus I | 4 |
| ENG 1030 English Comp ¹ | ENGL 151 English I ¹ | 3 | MATH 2415 Calculus II | MATH 266 Calculus II | 4 |
| MATH 1054 Precalculus ^{2,3} | MATH 192 Pre-Calculus II ^{2,3} | 3 | MATH 2995 Matrix & Lin. Algebra | MATH 275 Linear Algebra | 3 |
| COMM 1402 Speech Comm ¹ | COMM 154 Public Speaking ¹ | 3 | MATH 3415 Calculus III | MATH 267 Calculus III | 4 |
| GE 2024 Research & Technology | ENGL 152 English II | 3 | MATH 3544 Probability and Math Statistics | | 3 |
| | | | Required: Concentration²: 13 S.H. | | |
| DISCIPLINARY & INTERDISCIPLINARY DISTRIBUTION COURSES | | | MATH 2800 Mathematical Software | | |
| Humanities: 9 S.H. | | | MATH 3110 Introductions to Proofs | | |
| ENG 2403 World Literature | General Education Literature (GHUM) | 3 | MATH 3342 Euclidean and Non-Euclidean Geometry | | 3 |
| Select Two courses from below | | | MATH 3455 Differential Equations | MATH 280 Differential Equations | 3 |
| Fine Arts or Art History | Select two courses from the OCC GHUM courses, excluding English and History. Note: Credit for a foreign language is granted upon completion of 6 credits of the same language, with 3 credits used here and 3 credits used in Additional Required Courses. | 3 | MATH 3891 History of Mathematics | | 3 |
| Philosophy or Religion | | | Math 3351 Advanced Calculus | | 3 |
| Foreign Languages | | | Required: Major Electives²: 6 S.H. (With advisement, 3000-4000 level) | | |
| Music or Theatre | | | MATH 3000-4000 level course | | 3 |
| Interdisciplinary | | | MATH 3000-4000 level course | | 3 |
| Social Sciences: 9 S.H. | | | Professional Education: 30 S.H. | | |
| HIST 1000 or HIST 1062 | General Education History (GHIS) | 3 | Must pass the Praxis Core Academic Skills for Educators and have a GPA of 3.0 before applying for Admission to the Middle and Secondary Education (MSE) Department. | | |
| PSY 1000 General Psychology | PSYC 172 Intro to Psychology | 3 | Grades of "Satisfactory" in EMSE 3801 and EMSE 4811 are required. | | |
| SOC 1000 Intro to Sociology | SOC 181 Intro to Sociology | 3 | Sophomore Level | | |
| Science and Mathematics: 12 S.H. | | | EMSE 2801 Intro Field Experience ¹ | EDUC 175 Intro to Education ¹ | 3 |
| CPS 1231 Fund. Comp. Sci. | CSIT 165 Programming I | 4 | Junior Level | | |
| PHYS 2091 Gen. Physics I or PHYS 2095 (recommended) | PHYS 171 Physics I or PHYS 281 General Physics I (recommended) | 4 | EDUC 3000 Curriculum Evaluation & Learner ¹ | | 3 |
| Select a class from Biology, Physics, Chemistry or Astronomy | Select a science class from the OCC GSCL list. | 4 | EDUC 3401 Language Arts / Reading K-12 ¹ | | 3 |
| | | | EMSE 3220 Mathematics Education K-12 (WE) ^{1,4} | | 3 |
| | | | EMSE 3122 Computers in Education ¹ | | 3 |
| | | | EMSE 3801 Field Experience / Subject Area K-12 | | 2 |
| | | | EMSE 3903 English Lang Learning in America (taken w/EMSE 3801) ¹ | | 1 |
| Health/Physical Education: 3 S.H. | | | Senior Level | | |
| ID 1225 Issues in Contemporary Health | HEHP 225 Contemporary Health | 3 | EMSE 4811 Prof. Internship / Subject Area K-12 (Praxis II Math Exam must be passed before taking this course) | | 9 |
| GE and Major Capstone²: 3 S.H. | | | Professional/GE Capstone Course | | |
| MATH 4890 Senior Seminar in Mathematics (WE) ^{2,4} | | 3 | EDUC 4000 Teacher and Classroom ¹ | | 3 |
| Additional Required Courses: 13 S.H. | | | TOTAL CREDITS 132 S.H. | | |
| CPS 2231 Comp. Org. & Prog. | CSIT 166 Programming II | 4 | ² Requires a grade of C or better. | | |
| PSY 2110 Psychology of Adolescence | | 3 | ³ Students whose qualifying score on the placement test makes them eligible to take MATH 2415 (MATH 265 at OCC) can start with that course, and will have an additional 3 credits of free electives to total 132 degree credits. Students whose qualify score does not make them eligible to take MATH 192 or MATH 191 will need to take the appropriate pre-requisite courses. | | |
| ID 2955 Disabled Persons in American Society | | 3 | | | |
| One additional Disciplinary & Interdisciplinary course (Physics, Computer Science or Economics recommended) | One course not already taken from PHYS, CSIT or ECON at OCC or second foreign language class | 3 | | | |
| ¹ Requires a grade of B- or better. | | | ⁴ WE = Writing Emphasis course. | | |