

KEAN UNIVERSITY - DOROTHY AND GEORGE HENNINGS
COLLEGE OF SCIENCE, MATHEMATICS, AND TECHNOLOGY (DRAFT)
(MSCED/TSD) B.A. MATHEMATICAL SCIENCES EDUCATION
CERTIFICATION FOR TEACHER OF MATHEMATICS (Secondary Education)
124 S.H. | EFFECTIVE DATE: FALL 2026

GENERAL EDUCATION 31-32 S.H.	
Essential Learning Courses 17 S.H.	
CRITICAL READING AND ACADEMIC STUDY SKILLS 4 S.H.	
ALL STUDENTS MUST TAKE 1 CREDIT IN ACADEMIC STUDY SKILLS. GE*1000 Transition to Kean or GE*3000 Transfer Transitions ¹	1
ALL STUDENTS MUST TAKE 3 CREDITS IN CRITICAL READING FROM THE GE PLO COURSE LIST:	3
WRITTEN COMMUNICATION ² 3 S.H.	
ALL STUDENTS MUST TAKE 3 CREDITS IN WRITTEN COMMUNICATION FROM THE GE PLO COURSE LIST:	3
SPEECH COMMUNICATION ² 3 S.H.	
ALL STUDENTS MUST TAKE 3 CREDITS IN SPEECH COMMUNICATIONS FROM THE GE PLO COURSE LIST:	3
QUANTITATIVE AND SCIENTIFIC REASONING ² 6-7 S.H.	
ALL STUDENTS MUST TAKE 3 CREDITS IN QUANTITATIVE REASONING. MATH*1016 Statistics or MATH*1054 Pre-Calculus	3
ALL STUDENTS MUST TAKE 3 CREDITS IN SCIENTIFIC REASONING EDUCATION MAJORS MUST TAKE: BIO*1000 Principles of Biology	4
Core Competency Courses 12 S.H.	
INTERCULTURAL KNOWLEDGE AND UNDERSTANDING ² 3 S.H.	
ALL STUDENTS MUST TAKE 3 CREDITS IN INTERCULTURAL KNOWLEDGE FROM THE GE PLO COURSE LIST:	3
CRITICAL AND CREATIVE THINKING 3 S.H.	
ALL STUDENTS MUST TAKE 3 CREDITS IN CRITICAL AND CREATIVE THINKING FROM THE GE PLO COURSE LIST:	3
ETHICAL REASONING 3 S.H.	
ALL STUDENTS MUST TAKE 3 CREDITS IN ETHICAL REASONING FROM THE GE PLO COURSE LIST:	3
WELLNESS 3 S.H.	
ALL STUDENTS MUST TAKE 3 CREDITS IN WELLNESS EDUCATION MAJORS MUST TAKE: PSY*1000 General Psychology	3
Inquiry and Analysis Passion Project 3 S.H.	
ALL STUDENTS MUST TAKE 3 CREDITS IN INQUIRY AND ANALYSIS FROM THE GE PLO COURSE LIST:	3
ADDITIONAL REQUIRED 7 S.H.	
PSY*2110 Psychology of the Adolescence ⁵	3
PS*1010 Introduction to Politics	3
EMSE*3903 English Language Learners	1
CPS 1231 Fundamentals of Computer Science	4
FREE ELECTIVES 0-3	
NOTES	

ACADEMIC MAJOR 40 S.H.	
Major Required Courses [C or better required]	
Foundation Core Courses (18 S.H.)	
MATH 2415 Calculus I	4
MATH 2416 Calculus II	4
MATH 2995 Matrix and Linear Algebra	3
MATH 2526 Applied Statistics I	3
MATH 3415 Calculus III	4
Concentration Courses (13 S.H.)	
MATH 2800 Mathematical Software	1
MATH 3110 Introduction to Proofs	3
MATH 3342 Euclidean and Non-Euclidean Geometry	3
MATH 3544 Probability and Statistics	3
MATH 3891 History of Mathematics	3
Major Electives (6 S.H.)	
MATH 3000-4000 Level	3
MATH 3000-4000 Level	3
Major Capstone (3 S.H.)	
MATH 4890 Senior Seminar in Mathematics	3
PROFESSIONAL EDUCATION PEDAGOGY ² 39-42 S.H.	
Sophomore Level (First Semester)	
EMSE*2801 Clinical Experiences in Subject Inst [Sophomore Field]	3
Complete with academic major coursework.	
Sophomore Level (Second Semester) TRANSITION: DECLARATION ¹¹	
SPED 2220 Multicultural Learner in Diverse Settings	3
SPED*2056 Human Exceptionality [Formerly ID 2052]	3
Complete with academic major coursework.	
Junior Level (First Semester) TRANSITION: PRE-PROFESSIONAL A	
EDUC*3000 Curriculum, Evaluation, and the Learner	3
RDG*3401 Language Arts/Reading in K-12 [Formerly EDUC 3401]	3
Complete with academic major coursework.	
Junior Level (Second Semester) TRANSITION: PRE-PROFESSIONAL B	
EMSE*3811 Clinical Experience: Applied Practice [optional]	2
EDUC*3002 Lesson Plan [optional]	1
SPED 3053 Technology for Teaching/Inclusive [Formerly ID 3051]	3
Complete with academic major coursework.	
Senior Level (First Semester) TRANSITION: PROFESSIONAL A [PRAXIS REQ.]	
EMSE*3220 Mathematics Education K-12 ⁷	3
SPED 3000 Principles and Practices/Contemporary Educator	3
SPED 3165 Classroom Management [Formerly ID 3163]	3
EMSE*4711 Clinical Practice I ^{7,9,10}	3
Complete with academic major coursework.	
Senior Level (Second Semester) TRANSITION: PROFESSIONAL B	
SPED*4200 Seminar in Clinical Practice ^{8,12}	3
EMSE*4811 Clinical II Practice II ^{8,9}	9

The **Mathematical Sciences Education** program is accredited by the [Council for the Accreditation of Educator Preparation \(CAEP\)](#)

REFERENCE NOTES:

1	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).
2	Required minimum grade of 'B' or higher.
3	Required minimum grade of 'B-' or higher.
4	Required minimum grade of 'C' or higher.
5	Must pass PSY 1000 prior to enrolling in PSY 2110.
6	Students can partner with faculty to earn 1 cr. which may be taken up to two (2) times.
7	EMSE 4711 and EMSE 3240 should be taken concurrently.
8	EDUC 4811 and EMSE 4000 must be taken concurrently.
9	EMSE 4711 and EMSE 4811 must be done back-to-back and in consecutive semesters
10	Candidates must submit passing scores for the appropriate Praxis Subject Test (currently 5581: Social Studies) or qualify for an allowable exception prior to enrolling in Clinical I. Candidates must attempt the Praxis subject test a minimum of two times before they may qualify for any allowable exceptions set by the State of New Jersey. Please see the Office of Student Placement and Clinical Experiences for submission deadlines and the clinical practice application process.
11	Acceptance into the University is NOT acceptance into the Secondary Education Department. This is a separate process. No education courses beyond EMSE*2801 may be taken until student is declared into the program. Declaration requires a minimum of 60 credits earned (e.g. AA/AS liberal arts equivalent); a 3.0 cumulative grade point average (where 4.0 equals an 'A' grade); completion of the following courses: ENG*1030 and COMM*1402 with a "B" or better, and BIO*1000, MATH*1016 or MATH*1054 with a "C" or better; a valid NJ Instructional Substitute Credential and registration with NJEDCERT. An interview with the College of Education department advisor or chairperson may be required. At the discretion of the advisor and department chairperson, flexibility may be granted in the minimum required grade for general education courses.
12	ALL TEACHER CANDIDATES ARE REQUIRED TO COMPLETE THE TPA Portfolio (formerly edTPA, currently KEEP) BEFORE GRADUATION. This performance assessment is completed during Senior Seminar in Clinical Practice (capstone), while concurrently enrolled in Clinical Practice II (full-time student teaching).
*	NJDOE Requirement: Clinical II (EMSE 4811) must be completed in final semester prior to graduation and taken in conjunction with EDUC 4000. Any additional coursework left to final semester is discouraged and may only be done with written permission of the College of Education Dean. Students are highly encouraged to complete all courses prior to the final semester. Even a few remaining credits will delay NJDOE's issuance of a Certificate of Eligibility with Advanced Standing.

SPECIAL NOTES:

Writing Emphasis: All students are required to complete one "writing emphasis" course within their major. Such courses are designed to provide students with an opportunity to explore writing as is done in the field of education. HIST 4990 satisfies this requirement for History Education.

NJ Instructional Substitute Credential: Registration with NJEDCERT is required. In accordance with NJAC 6A:9B-7.2, a criminal history record check is required for the New Jersey instructional substitute credential. Learn more:

<https://www.nj.gov/education/certification/substitutes/>.

NJAC 6A:9B-9.3(a)6. ii: Department issued endorsement and authorizations: For certification as a Social Studies teacher, current regulations require that applicants a minimum of 30 semester-hour credits in a coherent sequence in the subject field of social studies. Within the 30 semester-hour credits, the candidate must present a minimum of 15 semester-hour credits in history to include one course in American history and one course in world history. At least 12 of the 30 semester-hour credits must be at the advanced level of study (junior, senior or graduate level). Coursework should include Anthropology, Economics, Geography, History, Political science, and Sociology. The final determination as to which courses will be counted towards the subject matter is based on content standards found in the New Jersey Student Learning Standards. Courses in pedagogy or education are not acceptable toward the 30 semester-hour credits minimum.

UNIVERSITY REQUIREMENTS:

Testing and Placement: Incoming freshmen and transfer students may be placed in specific GE Essential Learning, Developmental, or ESL courses as a result of testing prior to registration. Students may be exempt from testing due to SAT scores or prior college work. Please refer to the University catalog for the full GE PLO course list, and full details on prerequisites and equivalencies for general education (GE) essential learning, developmental courses, and ESL courses.