KEAN UNIVERSITY – COLLEGE OF NATURAL, APPLIED & HEALTH SCIENCES

(78312) B.S. in Computer Science (Information Systems Option): 120 S.H.

Minimum GPA Required for Declaration: 2.50

Minimum GPA Required for Major: 2.50

Overall Minimum GPA Required for Graduation: 2.50

EFFECTIVE DATE: Fall 2022

GENERAL EDUCATION	33 S.H.
Foundation Requirements [1]	**13 S.H.**
GE 1000 Transition to Kean [2] *or* GE 3000 Transfer Transitions [2]	1
ENG 1030 College Composition [3]	3
MATH 1000 Algebra for College Students [4]	3
COMM 1402 Speech Communication as Critical Citizenship	3
GE 2024 Research & Technology	3
Disciplinary & Interdisciplinary Distribution Requirements [1]	
Humanities	**6 S.H.**
ENG 2403 World Literature *	3
take one "GE Approved" course from one area below	
Fine Arts/Art History	3
Philosophy or Religion	3
Foreign Languages *(must take I and II for credit)*	3
Music or Theatre	3
Interdisciplinary	3
Social Sciences	**6 S.H.**
HIST 1062 Worlds of History *	3
take one "GE Approved" course from one area below	
Psychology	3
Economics or ES 1010 World Geography	3
Political Science	3
Sociology or Anthropology	3
Interdisciplinary	3
Science and Mathematics	**8 S.H.**
CPS 1231 Fundamentals of Computer Science **, [5]	4
Lab Science (BIO 1000, BIO 1300, CHEM 1083, ENV 1100, ES 1100, ES 1200, ES 1300, *or* PHYS 2091)	4
Special Notes:	
[1] See pre-requisites and equivalencies (on page 2)	
[2] 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)	
[3] ENG 1030 requires grade of C or higher	
[4, 5, 6, 9, 10] See notes (on page 2)	
[7] See details for Health Information Technology Minor (on page 2)	
[8] See details for pre-qualifications for MBA degree (on page 2)	
[11] Prior research experience and petition required for CPS 4961	
*GE Distribution course required of all students	
**All Major courses, All Additional and supporting courses, including Capstone requires grade of C or higher	
[WE] Writing Emphasis course	

ACADEMIC MAJOR	41 S.H.
Major Core **	**14 S.H.**
CPS 2231 Computer Programming [5]	4
CPS 2232 Data Structures	4
CPS 2390 Computer Organization and Architecture	3
CPS 3250 Computer Operating Systems	3
Major Concentration **	**12 S.H.**
CPS 3351 Information Systems Programming	3
CPS 3500 Programming World Wide Web Servers	3
CPS 3740 Database Management Systems	3
CPS 4301 Software Engineering [WE]	3
Major Electives **, [6]	**12 S.H.**
CPS 3xxx or 4xxx	3
CPS 3xxx or 4xxx	3
CPS 3xxx or 4xxx or 5xxx	3
CPS 3xxx or 4xxx or 5xxx	3
Major Capstone **	**3 S.H.**
CPS 4951 Senior Project *or* CPS 4961 Senior Research [11]	3
ADDITIONAL REQUIRED COURSES **	**34 S.H.**
TECH 2920 Computer Systems	3
COMM 3590 Business and Professional Communication	3
ENG 3091 Technical Writing	3
MGS 2030 Principles of Management	3
MATH 1054 Precalculus [4]	3
MATH 2110 Discrete Structures	3
MATH 2415 Calculus I	4
MATH 2526 Applied Statistics I	3
take one of the "approved" tracks below	
Web Systems	
TECH 1010 IT Foundations	3
TECH 3620 Mobile Application Development	3
TECH 3910 IT Project Management	3
Health Information Systems [7]	
TECH 3620 Mobile Application Development	3
TECH 3750 Health Information Technology	3
TECH 4750 Health Informatics	3
Information Management [8]	
ACCT 2200 Accounting I	3
MGS 3032 Organizational Behavior	3
MGS 3040 Management Information Systems	3
FREE ELECTIVES	**12 S.H.**
at least 50% must be 3000/4000 level	
(recommended: CPS 1996 Research Initiative for Freshmen) [9]	1
(recommended: CPS 2010 Career Education) [9]	1
(recommended: CPS 3291/92/93 Career Internship in CS) [10]	1-6

GENERAL EDUCATION AND UNIVERSITY REQUIREMENTS

GENERAL EDUCATION INFORMATION AND REQUIREMENTS

Testing and Placement

Incoming freshmen and transfer students may be placed in specific GE Foundations, Developmental or ESL courses as a result of testing and/or multiple measures placement prior to registration. Students may be exempt from testing due to SAT/ACT scores or prior college work.

Prerequisites and Equivalencies for GE Foundations Courses

GE 1000/GE 3000 is a University Graduation Requirement

GE 1000
Required of all freshmen & transfers entering with 0-29 credits
Prereq: None
Equiv: ID 1001

GE 3000
Required of transfers entering with 30 credits or more
Prereq: 30 credits and ENG 1030

ENG 1030
Prereq: Placement testing or exemption from placement testing
ENG 1025 if required by placement testing
Equiv: ENG 1031/1032, ENG 1033/1034, ENG 1430 (ESL version), ENG 1620 (Honors version), ENG 1020, ENG 1400

MATH 1000 or MATH 1044*
Prereq: MATH 0901 if required by placement testing
*MATH 1044 is available as a Foundation option for CBPM students only
Equiv of MATH 1000: MATH 1001/1002, MATH 1003/1004, MATH 1051

MATH 1010 or 1016 or 1030
Prereq: MATH 0901 if required by placement testing
Co-requisite: Math 0902 (only required, with advisement, based on placement test score and intended major)

MATH 1054
Prereq: MATH 0901 if required by placement testing and MATH 1000

COMM 1402
Prereq: CS 0412 if required by placement testing
ENG 1025 if required by placement testing
May be taken concurrently with ENG 1030
Equiv: COMM 1400

GE 2021- 2026 Research and Technology is offered as college-based course
GE 2021 College of BPM
GE 2022 College of EDU
GE 2023 All College of CLA
GE 2024 College of NAHS & NJCSTM & NWGC (Speech Language and Hearing Science majors)
GE 2025 SFPA & Michael Graves College
GE 2026 Undecided Majors and other special populations
Prereqs: CS 0412 if required by placement testing; ENG 1030 or equivalent course
Equiv: GE 2020

GE Distribution Courses

Approved GE Distribution Courses

All courses taken under the General Education Disciplinary/Interdisciplinary Distribution requirements must be selected from the Approved General Education Distribution Course List. These courses are designated as GEHU, GESS, and GESM.

GEHU Humanities
GESS Social Sciences
GESM Science and Mathematics

Required GE Distribution Courses

ENG 2403 is a required Humanities Distribution course with an emphasis on diversity.
Prereq: CS 0412 if required by placement testing; ENG 1030 or equivalent
Equiv: ENG*2203

HIST 1062 is a required Social Sciences Distribution course.
Prereq: None

Foreign Language Credit

The three credits for a foreign language that may satisfy the GE Disciplinary/Interdisciplinary Distribution Requirement are awarded only upon successful completion of the second of two semesters of study at the introductory or intermediate level.
Credit for the first semester may be used as elective credit.

UNIVERSITY REQUIREMENTS

GE 1000/3000 Requirement

All undergraduate students must satisfy this University requirement for graduation by successfully completing one of the following courses at Kean University: GE 1000 Transition to Kean (all freshmen and transfers entering with 0-29 credits) or GE 3000 Transfer Transitions (transfers entering with 30 credits or more).

Writing-Emphasis Requirement

All students are required to complete one "Writing- Emphasis" course. The "W-E" course must be within the major portion of your program. Consult your major program advisor for specific information.

Note: Equivalent courses may be prior General Education or prerequisite course work taken by students that is now discontinued.

(78306) B.S. Computer Science (Information Systems Option)

[4] Students eligible to take MATH 1054 based on their placement test may take that course in place of MATH 1000 (In this case, MATH 1054 will fulfill GE Foundation Requirement and the student may take an additional 3 credits in Free Electives to total 120 S.H.).

[5] Students who have had prior programming experience may enter CPS 2231 directly with approval of the Departmental Advisory Committee (In this case, CPS 2231 will fulfill GE Science and Mathematics Distribution and the student may take another 4 credits in Major Electives to total 120 S.H.).

[6] With approval of the Graduate Program Coordinator, undergraduate students may take up to two CPS 5xxx level graduate courses as Major Electives (NOTE: For any graduate course to be credited towards the graduate program, students must take additional credits in Major or Free Electives to total 120 S.H.).

[7] See Health IT Minor guide sheet for additional information.

[8] Pre-qualification requirements for the MBA degree program are COMM 3590, MATH 1054, MATH 2526, MGS 3032, MGS 3040. Students must pass these courses with grade B or higher to be pre-qualified. See Kean University's MBA program for additional information.

[9] **Optional Freshman Research Course**

Students can take 1 credit which may fulfill Free Electives requirements with approval of the Departmental Advisory Committee. CPS 1996 Research Initiative for Freshmen is recommended to be taken in the second semester of the freshman year. CPS 1996, CPS 2010 are courses acceptable for use in Free Electives and are managed by the School of Computer Science and Technology.

[10] **Optional Internship Course**

Students can take a maximum of 6 credits for CPS 3291/92/93 Career Internship in CS which are internship courses acceptable for use in Free Electives managed by Career Services. Students interested should contact Career Services.

Additional Required Courses Prerequisites (Pre/corequisites may change, consult KeanWise)

Course	Prerequisite
TECH 2920 Computer Systems	CPS 1231
ENG 3091 Technical Writing	ENG 1030
COMM 3590 Business and Professional Communication	COMM 1402
MATH 1054 Precalculus	MATH 1000
MATH 2110 Discrete Structures	MATH 1054
MATH 2415 Calculus I	
MATH 2526 Applied Statistics I	
TECH 1010 IT Foundations	No Prerequisite
TECH 3620 Mobile Application Development	CPS 2232 or CPS 2240
TECH 3750 Health Information Technology	
TECH 3910 IT Project Management	ENG 3091
TECH 4750 Health Informatics	TECH 3750 and (CPS 3740 or TECH 3740)
ACCT 2200 Accounting I	No Prerequisite
MGS 2030 Principles of Management	COMM 1402 and GE 202x
MGS 3032 Organizational Behavior	MGS 2030
MGS 3040 Management Information Systems	MGS 2030, ACCT 2200, CPS 1032 or 1231, and MATH 1054

REQUIREMENTS FOR DECLARATION TO THE MAJOR

The School of Computer Science and Technology has adopted the following standards for declaration to all options of the Computer Science major:

a) Minimum cumulative GPA of 2.5 at the time of declaration to the major.
b) Completion of at least 12 credits of CPS Major courses at Kean University with a grade of C or higher in each.

Your major department is located in Green Lane Academic Building (GLAB), Room 228, Tel: 908-737-4700.