

**KEAN UNIVERSITY**  
**COLLEGE OF NATURAL, APPLIED AND HEALTH SCIENCES**  
 (78305) **B.S. IN COMPUTER SCIENCE** 132 S.H.  
 (EFFECTIVE: 9/02)

NAME \_\_\_\_\_  
 STUDENT I.D.# \_\_\_\_\_  
 START TERM \_\_\_\_\_

TRANSFER INSTITUTIONS (X) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

In Progress ( ) \_\_\_\_\_  
 Kean University( ) \_\_\_\_\_

ID 1001 Freshman Seminar<sup>1</sup> \_\_\_\_\_ 1 \_\_\_\_\_

**GENERAL EDUCATION REQUIREMENT: 49-50 S.H**

**FOUNDATIONS REQUIREMENTS<sup>2</sup>: 12 S.H.**

ENG 1030 College Composition<sup>3</sup> \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 1000 Algebra for Coll. Students<sup>4</sup> \_\_\_\_\_ 3 \_\_\_\_\_  
 COMM 1402 Speech Communication as  
           Critical Citizenship \_\_\_\_\_ 3 \_\_\_\_\_  
 GE 2024 Research & Technology \_\_\_\_\_ 3 \_\_\_\_\_

**DISCIPLINARY/INTERDISCIPLINARY**

**DISTRIBUTION REQUIREMENTS:**

**HUMANITIES 9 S.H.**

\*ENG 2403 World Literature \_\_\_\_\_ 3 \_\_\_\_\_  
 (Select two courses from different areas)  
 Fine Arts or Art History \_\_\_\_\_ 3 \_\_\_\_\_  
 Philosophy or Religion \_\_\_\_\_ 3 \_\_\_\_\_  
 Foreign Languages<sup>5</sup> \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ Music or Theatre \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ Interdisciplinary \_\_\_\_\_ 3 \_\_\_\_\_

**SOCIAL SCIENCES 9 S.H.**

\*HIST 1000 History of Civil Society  
           in America \_\_\_\_\_ 3 \_\_\_\_\_  
 (Select two courses from different areas)  
 Psychology \_\_\_\_\_ 3 \_\_\_\_\_  
 Economics or Geography \_\_\_\_\_ 3 \_\_\_\_\_  
 Political Science \_\_\_\_\_ 3 \_\_\_\_\_  
 Sociology or Anthropology \_\_\_\_\_ 3 \_\_\_\_\_  
 Interdisciplinary \_\_\_\_\_ 3 \_\_\_\_\_

**SCIENCE & MATHEMATICS 11 S.H.**

\*Math 1054 Precalculus<sup>4</sup> \_\_\_\_\_ 3 \_\_\_\_\_  
 CPS 1231 Fund. of Computer Science<sup>6</sup> \_\_\_\_\_ 4 \_\_\_\_\_  
 \_\_\_\_\_  
 Physics 2095 Physics I \_\_\_\_\_ 4 \_\_\_\_\_

**HEALTH/PHYSICAL EDUCATION 2,3 S.H.**

ID 1225 Issues Contemporary Health \_\_\_\_\_ 3 \_\_\_\_\_  
 OR  
 Physical Education \_\_\_\_\_ 1 \_\_\_\_\_  
 Physical Education \_\_\_\_\_ 1 \_\_\_\_\_

**CONCENTRATION<sup>3</sup> 6 S.H.**

MATH 2526 Applied Statistics or  
 MATH 2026 Statistical Decision Theory \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 2110 Discrete Structures \_\_\_\_\_ 3 \_\_\_\_\_

**ADDITIONAL REQUIREMENTS<sup>3</sup> 29 S.H.**

TECH 1500 Intro. to Telecom. \_\_\_\_\_ 3 \_\_\_\_\_  
 TECH 2504 Dig. Circ. & Systems \_\_\_\_\_ 4 \_\_\_\_\_  
 TECH 2506 Data Comm. Technology \_\_\_\_\_ 3 \_\_\_\_\_  
 TECH 3510 Micro. Thry. Appl. & Intr. \_\_\_\_\_ 4 \_\_\_\_\_  
 ENG 3090 Bus., Prof., & Tech. Wr. \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 2411 Calculus I \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 2412 Calculus II \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 2995 Matrix & Linear Alg. \_\_\_\_\_ 3 \_\_\_\_\_

**(Select only one course from below)**

MATH 3155 Math. Logic \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 3225 Comp Meth Matrix& Lin. Alg.II \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 3247 Abstract Algebra I \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 3455 Differential Equations \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 3544 Probability & Math Stat \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 3570 Multivariate Analysis \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 3940 Numerical Analysis \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 4404 Intro. App. Math. \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 4545 App. Math. Stat. \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 4800 Elements Graph Theory \_\_\_\_\_ 3 \_\_\_\_\_

**MAJOR AND CAPSTONE REQUIREMENTS<sup>3</sup> 41 S.H.**

**MAJOR CORE REQUIREMENTS<sup>3</sup> 14 S.H.**

CPS 2231 Comp. Org. & Prog. Lang. \_\_\_\_\_ 4 \_\_\_\_\_  
 CPS 2232 Data Structure & Alg. Anal. \_\_\_\_\_ 4 \_\_\_\_\_  
 CPS 2390 Org. Architecture \_\_\_\_\_ 3 \_\_\_\_\_  
 CPS 3250 Comp. Operating Systems \_\_\_\_\_ 3 \_\_\_\_\_

**CONCENTRATION REQUIREMENTS<sup>3</sup> 15 S.H.**

CPS 4150 Comp. Architecture \_\_\_\_\_ 3 \_\_\_\_\_  
 CPS 4200 Systems Programming \_\_\_\_\_ 3 \_\_\_\_\_  
 CPS 4222 Principles of Networking \_\_\_\_\_ 3 \_\_\_\_\_  
 CPS 4301 Software Engineering WE \_\_\_\_\_ 3 \_\_\_\_\_

**MAJOR/GE CAPSTONE COURSE<sup>3</sup>**

CPS 4893 Sr. Seminar in Comp. Sci. \_\_\_\_\_ 3 \_\_\_\_\_

**MAJOR ELECTIVES<sup>3,7</sup> 12 S.H.**

CPS \_\_\_\_\_ 3 \_\_\_\_\_  
 CPS \_\_\_\_\_ 3 \_\_\_\_\_  
 CPS \_\_\_\_\_ 3 \_\_\_\_\_  
 CPS \_\_\_\_\_ 3 \_\_\_\_\_

**FREE ELECTIVES: 11-12 S.H.**

(50% of free electives must be taken at the 3000-4000 level)

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

(OVER)

## (78305) B.S. in Computer Science

<sup>1</sup> Required of all Freshmen and Transfers with fewer than 10 credits.

<sup>2</sup> See prerequisites and equivalencies on page 3.

<sup>3</sup> All major and supporting courses, including the Capstone, require a grade of C or better.

<sup>4</sup> Students whose qualifying score on the placement test makes them eligible to take MATH 1054 or MATH 2411 may take either course instead.

In that case the student may take another three or six credits in free electives to total 132 S.H.

<sup>5</sup> Credit granted only upon completion of two semesters of elementary or intermediate foreign language. Three credits may be applied to Humanities and three credits may be applied to free electives.

<sup>6</sup> Students who have had prior programming experience may enter CPS 2231 directly. In this case, CPS 2231 will be counted as a General Education requirement, and the student may take another four credits in free electives to total 132 S.H.

<sup>7</sup> Select four courses with department advisement at the 3000 level or higher.

\*Required Distribution Course

### **NOTE ON FREE ELECTIVES**

CPS 4999 Cooperative Education may be counted as a free elective (no more than 3 S.H.). There are four prerequisites for CPS 4999 which include the following:

- (a) a minimum of 21 credits in Computer science, including all Core Requirements in the major, CPS 2351 and CPS 2352;
- (b) a minimum 3.00 GPA in the major;
- (c) a minimum 2.75 cumulative GPA; and
- (d) approval of the Departmental Advisory Committee.

### **ADMISSION REQUIREMENTS**

The Department of Mathematics and Computer Science has formally adopted the following standards for admission to all options of the Computer Science major:

1. Minimum cumulative GPA of 2.6 at the time of admission to the major.
2. Completion of at least 9 credits of CPS courses at Kean University with a grade of "C" or better in each.

**Comments:**

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Evaluator's Signature \_\_\_\_\_ Date \_\_\_\_\_

Advisor's Signature \_\_\_\_\_ Date \_\_\_\_\_

Advisor's Signature \_\_\_\_\_ Date \_\_\_\_\_

Advisor's Signature \_\_\_\_\_ Date \_\_\_\_\_

Advisor's Signature \_\_\_\_\_ Date \_\_\_\_\_

Advisor's Signature \_\_\_\_\_ Date \_\_\_\_\_

Advisor's Signature \_\_\_\_\_ Date \_\_\_\_\_

Advisor's Signature \_\_\_\_\_ Date \_\_\_\_\_

Your major department is located in the New Academic Building (N), Room 210, phone (908)737-3800.

**YOU MUST BRING THIS EVALUATION AND YOUR KEAN UNIVERSITY  
TRANSCRIPT TO ALL ADVISING/REGISTRATION SESSIONS.**

**ADDITIONAL MAJOR INFORMATION AND REQUIREMENTS**

designated as GEHU, GESS, GESM, GEHPE or GECP.

GEHU Humanities  
GESS Social Sciences  
GESM Science and Mathematics  
GEHPE Health and Physical Education  
GECP Approved GE Concentration Pairs:  
Special Disciplinary Pairs and Pairs  
Across Disciplines

**Required GE Distribution Courses**

ENG 2403 is a required Humanities Distribution course with an emphasis on diversity.

HIST 1000 is a required Social Sciences Distribution course with an emphasis on diversity.

MATH 1010, 1016, 1054, CPS 1031, 1032 or 1231 may be used to satisfy the Science and Mathematics Distribution requirement.

**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 prior to registration. Students may be exempt from testing due to SAT scores or prior college work.

**Prerequisites and Equivalencies for GE Foundations Courses**

**ENG 1030**

Prereq: Placement testing  
Equiv: ENG 1031/32; 1033/34; 1430;  
ENG 1020; 1400

**MATH 1000**

Prereq: Placement testing  
Equiv: MATH 1001/02; 1003/04; 1051

**COMM 1402**

Prereq: CS 0411 or 0412 if required by placement testing  
ENG 1031/32; 1033/34  
May be taken concurrently with ENG 1030  
Equiv: COMM 1400

**GE 2021-2024** Research and Technology is offered as college-based course

GE 2021 College of BPA

GE 2022 College of ED

GE 2023 College of AHSS

GE 2024 College of NAHS

Prereq: ENG 1030 or equivalent  
MATH 1000 or equivalent  
Equiv: GE 2020

**Course Paired with Reading**

Must be taken concurrently with CS 0412 if required by placement testing.

**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, printed in Registration Bulletin. These courses are

**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 two semesters of study at the introductory or intermediate level.

**GE Concentration Sequences**

A concentration is a two-course sequence in the Liberal Arts and Sciences, outside the major, that builds upon an introductory GE Distribution course. Three different options for satisfying the concentration exist:

(1)two courses in the same discipline at the two thousand level or above; (2)two courses from different disciplines at the two thousand level or above that cover a similar topic or theme (students taking this second option must obtain approval from the GE office prior to registration); (3)a preapproved pair of courses at the 1000 level or above that is published in the University Bulletin under GECP Distribution courses.

**Major/GE Capstone Course**

A Capstone course is a major course that satisfies three credits of GE requirements. Each major guide sheet will count three credits for the Capstone as either GE credits or major credits, but not both.

**UNIVERSITY REQUIREMENT**

**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.

