Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: University of California, Irvine 2022-2023 General Catalog, Quarter	From: De Anza College 2022-2023 General Catalog, Quarter

Materials Science and Engineering, B.S.

GENERAL INFORMATION

Admission to the Henry Samueli School of Engineering is highly competitive. The most important selection criteria is the completion of the required major preparation courses and academic performance.

Required for admission:
Students must have a cumulative UC transferable GPA of 3.0 (3.4 for TAG). Students must earn a grade of C or better in all listed major preparation courses while maintaining a cumulative GPA of 3.0 in the following required courses.

- Single Variable Calculus I (C-ID MATH 210 or MATH 211)
- Single Variable Calculus II (C-ID MATH 220 or MATH 221) or 2 semester/quarters of Single Variable Calculus Sequence (C-ID MATH 900S or 910S)
- Multivariable Calculus (C-ID MATH 230)
- Ordinary Differential Equations (C-ID MATH 240) or Differential Equations and Linear Algebra (C-ID MATH 910S)
- Introduction to Linear Algebra (C-ID MATH 250) or Differential Equations and Linear Algebra (C-ID MATH 910S)
- Calculus-Based Physics for Scientists and Engineers: A (C-ID PHYS 205)
- Calculus-Based Physics for Scientists and Engineers: B (C-ID PHYS 210)
- Calculus-Based Physics for Scientists and Engineers: C (C-ID PHYS 215) or
- Calculus-Based Physics for Scientists and Engineers: ABC (C-ID PHYS 200S)
- General Chemistry for Science Majors Sequence A (C-ID CHEM 120S)
- Programming and Problem Solving in MATLAB (C-ID ENGR 220) *preferred* or Introduction to Programming Concepts and Methodologies for Engineers (C-ID ENGR 120)

Recommended for admission/Time to degree:
The following courses are not required for admission, however the degree cannot be completed in two years without them:

- Statics (C-ID ENGR 130)
- Materials Science and Engineering (C-ID ENGR 140)
- Circuit Analysis (C-ID ENGR 260) + Circuit Analysis Lab (C-ID ENGR 260L)

For information regarding the AP and IB examination credit policies refer to the UCI General Catalogue

For information regarding the UC Irvine Transfer Admission Guarantee program please visit TAG

MAJOR PREPARATION COURSES REQUIRED FOR TRANSFER

MATH 2A - Single-Variable Calculus (4.00)	←	**MATH 1A** - Calculus (5.00) **--- Or ---** **MATH 1AH** - Calculus - HONORS (5.00)
MATH 2B - Single-Variable Calculus (4.00)	←	**MATH 1B** - Calculus (5.00) **--- Or ---** **MATH 1BH** - Calculus - HONORS (5.00)
MATH 2D - Multivariable Calculus (4.00)	←	**MATH 1D** - Calculus (5.00) **--- Or ---** **MATH 1DH** - Calculus - HONORS (5.00)
MATH 2E - Multivariable Calculus (4.00)	←	**MATH 1D** - Calculus (5.00) **--- Or ---** **MATH 1DH** - Calculus - HONORS (5.00)
MATH 3A - Introduction to Linear Algebra (4.00)	←	**MATH 2B** - Linear Algebra (5.00) **--- Or ---** **MATH 2BH** - Linear Algebra - HONORS (5.00)
MATH 3D - Elementary Differential Equations (4.00)	←	**MATH 2A** - Differential Equations (5.00) **--- Or ---** **MATH 2AH** - Differential Equations - HONORS (5.00)
PHYSICS 7C - Classical Physics (4.00) **--- And ---** **PHYSICS 7LC** - Classical Physics Laboratory (1.00)	←	**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00)

--- And ---		
PHYSICS 7D - Classical Physics (4.00) **--- And ---** **PHYSICS 7LD** - Classical Physics Laboratory (1.00)	←	**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)
--- And ---		
PHYSICS 7E - Classical Physics (4.00)	←	**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)

ENGR 1A - General Chemistry for Engineers (4.00) **--- And ---** **CHEM 1B** - General Chemistry (4.00) **--- And ---** **CHEM 1C** - General Chemistry (4.00) **--- And ---** **CHEM 1LC** - General Chemistry Laboratory (3.00)	←	**CHEM 1A** - General Chemistry (5.00) **--- And ---** **CHEM 1B** - General Chemistry (5.00) **--- And ---** **CHEM 1C** - General Chemistry and Qualitative Analysis (5.00) **--- Or ---** **CHEM 1AH** - General Chemistry - HONORS (5.00) **--- And ---** **CHEM 1BH** - General Chemistry - HONORS (5.00) **--- And ---** **CHEM 1CH** - General Chemistry and Qualitative Analysis - HONORS (5.00)
--- Or ---		
CHEM 1A - General Chemistry (4.00) **--- And ---** **CHEM 1B** - General Chemistry (4.00) **--- And ---** **CHEM 1C** - General Chemistry (4.00) **--- And ---** **CHEM 1LC** - General Chemistry Laboratory (3.00)	←	**CHEM 1A** - General Chemistry (5.00) **--- And ---** **CHEM 1B** - General Chemistry (5.00) **--- And ---** **CHEM 1C** - General Chemistry and Qualitative Analysis (5.00) **--- Or ---** **CHEM 1AH** - General Chemistry - HONORS (5.00) **--- And ---** **CHEM 1BH** - General Chemistry - HONORS (5.00) **--- And ---** **CHEM 1CH** - General Chemistry and Qualitative Analysis - HONORS (5.00)

ENGRMAE 10 - Introduction to Engineering Computations (4.00)	←	**CIS 22A** - Beginning Programming Methodologies in C++ (4.50) **--- Or ---** **CIS 22B** - Intermediate Programming Methodologies in C++ (4.50) **--- Or ---** **CIS 22BH** - Intermediate Programming Methodologies in C++ - HONORS (4.50) **--- Or ---** **CIS 26A** - C as a Second Programming Language (4.50) **--- Or ---** **CIS 26B** - Advanced C Programming (4.50) **--- Or ---** **CIS 26BH** - Advanced C Programming - HONORS (4.50)

MAJOR PREPARATION COURSES NECESSARY TO GRADUATE IN TWO YEARS

ENGRCEE 30 - Statics (4.00) Same-As: ENGR 30, ENGRMAE 30	←	**ENGR 35** - Statics (4.00)
ENGR 54 - Principles of Materials Science and Engineering (4.00)	←	No Course Articulated
ENGRMAE 60 - Electric Circuits (4.00)	←	No Course Articulated

--- Or ---		
EECS 70A - NETWORK ANALYSIS I (4.00)	←	**ENGR 37** - Introduction to Circuit Analysis (5.00)

ADDITIONAL MAJOR REQUIREMENTS

MSE 65A - Thermodynamics of Materials (4.00)	←	No Course Articulated
--- Or ---		
MSE 65B - Diffusion and Heat Transport in Materials (4.00)	←	No Course Articulated

ADDITIONAL MAJOR ELECTIVES

FOUR QUARTER UNITS FROM THE FOLLOWING:

BIO SCI 93 - DNA to Organisms (4.00)	←	**BIOL 6B** - Cell and Molecular Biology (6.00)
BME 50A - Cell and Molecular Engineering (4.00)	←	No Course Articulated
CHEM 51A - Organic Chemistry (4.00)	←	**CHEM 12A** - Organic Chemistry (5.00)
EECS 70B - Network Analysis II (4.00)	←	No Course Articulated
ENGR 7A - Introduction to Engineering I (2.00)	←	No Course Articulated
--- And ---		
ENGR 7B - Introduction to Engineering II (2.00)	←	No Course Articulated
ENGRMAE 52 - Computer-Aided Design (4.00)	←	No Course Articulated
ENGRMAE 80 - Dynamics (4.00) Same-As: ENGR 80, ENGRCEE 80	←	No Course Articulated
PHYSICS 51A - Modern Physics (4.00)	←	**PHYS 4D** - Physics for Scientists and Engineers: Modern Physics (6.00)
STATS 7 - Basic Statistics (4.00)	←	**MATH 10** - Introductory Statistics (5.00) **--- Or ---** **MATH 10H** - Introductory Statistics - HONORS (5.00) **--- Or ---** **PSYC 15** - Statistics and Research Methods in Social Science (4.00) Same-As: SOC 15

END OF AGREEMENT