Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

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

NANO: NanoEngineering B.S.

GENERAL INFORMATION

DATED MATERIAL, SUBJECT TO CHANGE. PLEASE CONSULT CURRENT UCSD GENERAL CATALOG FOR ANY ADDITIONAL INFORMATION.

Effective Fall 2017, major preparation will be required for this major. For details, visit: http://admissions.ucsd.edu/MajorPrep

Effective Fall 2015, admission to all of the engineering majors at UC San Diego will be limited, as the majors have been declared capped. Students must apply to be directly admitted to the NanoEngineering major.

Transfer students must have completed the following required courses in order to be considered for admission to the NanoEngineering major:

- Calculus I - for Science and Engineering (Math 20A)
- Calculus II - for Science and Engineering (Math 20B)
- Calculus and Analytic Geometry (Math 20C)
- Differential Equations (Math 20D)
- Calculus-based physics series (Physics 2AB)
- General Chemistry (Chemistry 6ABC)

Special Advising Note:

Preparing well for the major helps students move efficiently toward graduation. Transfer students may complete the B.S. in NanoEngineering in three years, if students have completed the required courses above, in addition to the following highly recommended courses:

- Linear Algebra (Math 18, formerly 20F)
- Calculus-based physics series(Physics 2CD)
- General Chemistry Lab (Chemistry 7L)

NanoEngineering is an ABET-accredited four-year curriculum which encompasses studies in nanoscale science, engineering and technology that have the potential to make valuable advances in various areas, such as new materials, biology and medicine; energy conversion; sensors; and environmental remediation. Nanoengineering is a highly diversified and multidisciplinary field.

For more information please visit http://nanoengineering.ucsd.edu

UC San Diego Advanced Placement (AP) and International Baccalaureate (IB) credit policies are detailed in the links below:

Advanced Placement (AP) https://www.ucsd.edu/catalog/pdf/APC-chart.pdf

International Baccalaureate (IB) https://catalog.ucsd.edu/_files/international-baccalaureate-credits-chart.pdf

MATH 18 - Linear Algebra (4.00)	←	**MATH 2B** - Linear Algebra (5.00) **--- Or ---** **MATH 2BH** - Linear Algebra - HONORS (5.00)
MATH 20A - Calculus for Science and Engineering (4.00)	←	**MATH 1A** - Calculus (5.00) **--- Or ---** **MATH 1AH** - Calculus - HONORS (5.00)
MATH 20B - Calculus for Science and Engineering (4.00)	←	**MATH 1B** - Calculus (5.00) **--- Or ---** **MATH 1BH** - Calculus - HONORS (5.00)

MATH 20C - Calculus and Analytic Geometry for Science and Engineering (4.00)	←	**MATH 1C** - Calculus (5.00) **--- And ---** **MATH 1D** - Calculus (5.00) **--- Or ---** **MATH 1CH** - Calculus - HONORS (5.00) **--- And ---** **MATH 1DH** - Calculus - HONORS (5.00)
MATH 20D - Introduction to Differential Equations (4.00)	←	**MATH 2A** - Differential Equations (5.00) **--- Or ---** **MATH 2AH** - Differential Equations - HONORS (5.00)
MATH 20E - Vector Calculus (4.00) • *Articulation is subject to placement by proficiency exam* • *Petition department after transfer*	←	No Course Articulated

PHYS 2A - Physics - Mechanics (4.00)	←	**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00)
PHYS 2B - Physics - Electricity and Magnetism (4.00)	←	**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)
PHYS 2C - Physics - Fluids, Waves, Thermodynamics, and Optics (4.00)	←	**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)
PHYS 2D - Physics - Relativity and Quantum Physics (4.00)	←	**PHYS 4D** - Physics for Scientists and Engineers: Modern Physics (6.00)

NANO 4 - Experience NanoEngineering (1.00)	←	This course must be taken at the university after transfer
NANO 15 - Engineering Computation Using MATLAB (4.00)	←	No Course Articulated

CHEM 6A - General Chemistry I (4.00)	←	**CHEM 1A** - General Chemistry (5.00) **--- Or ---** **CHEM 1AH** - General Chemistry - HONORS (5.00)
CHEM 6B - General Chemistry II (4.00)	←	**CHEM 1B** - General Chemistry (5.00) **--- Or ---** **CHEM 1BH** - General Chemistry - HONORS (5.00)
CHEM 6C - General Chemistry III (4.00)	←	**CHEM 1C** - General Chemistry and Qualitative Analysis (5.00) **--- Or ---** **CHEM 1CH** - General Chemistry and Qualitative Analysis - HONORS (5.00)
CHEM 7L - Introductory Inorganic Chemistry Laboratory (4.00)	←	**CHEM 1B** - General Chemistry (5.00) **--- And ---** **CHEM 1C** - General Chemistry and Qualitative Analysis (5.00) **--- Or ---** **CHEM 1BH** - General Chemistry - HONORS (5.00) **--- And ---** **CHEM 1CH** - General Chemistry and Qualitative Analysis - HONORS (5.00)

BILD 1 - The Cell (4.00)	←	**BIOL 6A** - Form and Function in the Biological World (6.00) **--- And ---** **BIOL 6B** - Cell and Molecular Biology (6.00) **--- And ---** **BIOL 6C** - Ecology and Evolution (6.00) **--- Or ---** **BIOL 6AH** - Form and Function in the Biological World - HONORS (6.00) **--- And ---** **BIOL 6B** - Cell and Molecular Biology (6.00) **--- And ---** **BIOL 6CH** - Ecology and Evolution - HONORS (6.00)

END OF AGREEMENT