

Checklist for Physics/Dual-Degree Engineering Majors under the 2019-2020 Catalog

IMPORTANT: This checklist DOES NOT take the place of the officially published 2019-2020 Catalog.

Civitas Core Requirements

First-Year Courses (both courses required) _____ ENGL 165 (3) _____ CTZN 110 (3)

Aesthetic Expression Pillar (3 credit hours)

Global Citizenship Pillar (3-4 credit hours)

Historical & Contemporary Insights Pillar (3 credit hours)

Human Behavior & Social Institutions Pillar (3 credit hours)

Quantitative Reasoning Pillar (3 credit hours) _____ MATH 164 ***Pre-requisite for MATH 261

Scientific Reasoning Pillar (4 credit hours) _____ CHEM 111

Perspectives: Aesthetic OR Global (3 credit hours)

Perspectives: Historical/Contemporary OR Behavior/Social (3 credit hours)

Perspectives: Quantitative OR Scientific Reasoning (3 credit hours) _____ MATH 304
(suggest for math minor)

Perspectives: World Languages (3 credit hours)

Symposium (3 credit hours) _____ CTZN 410

Additional Requirements For Bachelor of Science Degree

Bachelor of Science Degree: _____ MATH 262

Core Physics Requirements

Physics Courses

- _____ PHYS 220 University Physics I (Fall only course)
 - _____ PHYS 221 University Physics II (Spring only course – pre-req. PHYS 220)
 - _____ PHYS 222 University Physics I Lab (Fall only course – pre-req. PHYS 220 & MATH 261)
 - _____ PHYS 223 University Physics II Lab (Spring only course – pre-req. PHYS 221 & 222, & MATH 262)
 - _____ PHYS 321 Modern Physics (Fall only course – pre-req. PHYS 221 pre or co-req. MATH 261)
 - _____ PHYS 324 Thermodynamics (Spring only – pre-req. PHYS 221, pre or co-req. MATH 262)
 - _____ PHYS 332 Classical Electricity and Magnetism (Fall only course – pre-req. PHYS 221 & MATH 361)
 - _____ PHYS 352 Mechanics (Spring only course – pre-req. PHYS 221 pre or co-req. MATH 362)
 - _____ PHYS 370 Advanced Physics Lab I (Fall only course – pre-req. PHYS 223 & 321)
 - _____ Physics electives at the 200 level or above (6 credits)
 - _____ PHYS 492, 496, or 498
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Chemistry Courses

- _____ CHEM 111 Fundamentals of Chemistry (4) *Satisfied by Scientific Reasoning Pillar*
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Math Courses

- _____ MATH 261 The Differential and Integral Calculus I (pre-req. MATH 164)
- _____ MATH 262 The Differential and Integral Calculus II (additional degree) (pre-req. MATH 261)
- _____ MATH 361 Multivariable Calculus (pre-req. MATH 262)
- _____ MATH 362 Differential Equations (Spring only course – pre-req. MATH 262)

Additional Requirements For Physics Concentration

- _____ PHYS 401 Quantum Mechanics (Spring odd years only – pre-req. PHYS 321 & MATH 261)
- _____ PHYS 470 Advanced Physics Lab II (Spring only course – pre-req. PHYS 370)

Additional Requirements For Dual Degree Concentration

Engineering Credits from transfer institution

- _____ 7 credits of engineering electives
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Chemistry Courses

- _____ CHEM 112 Fundamentals of Chemistry II (Spring only course)
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Math Courses – Highly recommended but not required.

- _____ MATH 280 Linear Algebra (Fall only course)