

2 + 2 Joint Articulation Transfer Agreement

Bachelor of Science in Industrial Engineering

Colorado State University – Pueblo

And

Northeastern Junior College

| B.S. Requirements at CSU-Pueblo | | | A.S. Requirements at NJC | | |
|--|---|-----------|----------------------------------|--|-----------|
| Lower Division General Education Requirements | | | Equivalent Courses at NJC | | |
| Course # | Course Title | Credits | Course # | Course Title | Credits |
| ENG 101 | Composition I | 3 | ENG 121 | English Composition I | 3 |
| ENG 102 | Composition II | 3 | ENG 122 | English Composition II | 3 |
| SPCOM 103 | Speaking and Speaking | 3 | COM 115 | Public Speaking | 3 |
| Humanities | Select from statewide Gen Ed Core | 6 | Humanities | Select from statewide Gen Ed Core | 9 |
| Social Science | Select from statewide Gen Ed Core | 6 | Social Science | Select from statewide Gen Ed Core | 6 |
| History | Select from statewide Gen Ed Core | 3 | History | Select from statewide Gen Ed Core | 3 |
| MATH 126 | Calculus and Analytic Geometry I | 5 | MAT 201 | Calculus I | 5 |
| PHYS 221/L | General Physics I and Lab | 5 | PHY 211 | Physics: Calculus Based I | 5 |
| PHYS 222/1 | General Physics II and Lab | 5 | PHY 212 | Physics: Calculus Based II | 5 |
| Subtotal | | 39 | Subtotal | | 42 |
| Additional Math Requirements | | | Equivalent Courses at NJC | | |
| MATH 207 | Matrix and Vector Algebra with Applications | 2 | | | |
| MATH 224 | Calculus & Analytic Geometry II | 5 | MAT 202 | Calculus II | 5 |
| MATH 337 | Differential Equations I | 3 | | | |
| Subtotal | | 10 | Subtotal | | 5 |
| Major Course Requirements (Lower Division) | | | Equivalent Courses at NJC | | |
| EN 101 | Introduction to Engineering | 2 | *CIS 118 | *Introduction to PC Applications *1 credit may be “carried over” to the Technical Electives Section | 2 + *(1) |
| EN 103 | Problem Solving for Engineers | 3 | | | |
| EN 107 | Engineering Graphics | 2 | | | |
| EN 211 | Engineering Mechanics I | 3 | EGG 211 | Engineering Mechanics – Statics | 3 |
| EN 212 | Engineering Mechanics II | 3 | EGG 212 | Engineering Mechanics – Dynamics | 3 |
| EN 215 | Intro to Industrial & Systems Engr | 3 | | | |
| EN 231/L | Circuit Analysis and Lab | 5 | | | |
| Subtotal | | 21 | Subtotal | | 8 |
| Major Course Requirements (Upper Division) | | | Equivalent Courses at NJC | | |
| EN 321 | Thermodynamics I | 3 | | | |
| EN 324/L | Material Science & Engineering/Lab | 4 | | | |
| EN 343 | Engineering Economy | 3 | | | |
| EN 365 | Stochastic Systems Engineering | 4 | | | |
| EB 420 | Simulation Experiments | 4 | | | |
| EN 430 | Project Planning and Control | 3 | | | |
| EN 439 | Time and Motion Studies | 2 | | | |
| EN 440 | Safety Engineering | 3 | | | |
| EN 441 | Engr of Manufacturing Processes | 4 | | | |
| EN 443 | Quality Control & Reliability | 3 | | | |

| | | | | | |
|--|-----------------------------------|-----------|----------------------------------|---|------------|
| EN 471 | Operations Research | 3 | | | |
| EN 473 | Computer Integrated Manufacturing | 3 | | | |
| EN 475 | Facilities Planning & Design | 3 | | | |
| EN 477 | Operations Planning & Control | 3 | | | |
| EN 488 | Engineering Design Project | 3 | | | |
| EN 493 | Senior Seminar | 2 | | | |
| Subtotal | | 50 | Subtotal | | 0 |
| Technical Electives | | | Equivalent Courses at NJC | | |
| EN | Advisor Approved Tech Electives | 3 | *CIS 118 | *Introduction to PC Applications *1 credit "carried over" from the Course Requirements Section | 1 |
| Math/Science Electives | Advisor Approved Electives | | BIO 111 or CHE 111 | General College Biology I General College Chemistry I | 5 |
| Subtotal | | 6 | Subtotal | | 6 |
| Total Credit Required for A.S. | | | | | 61 |
| Total Transfer Credit Accepted for A.S. | | | | | 60 |
| Total Additional Credit Required for B.S. | | | | | 68 |
| Total B.S. Degree Requirements | | | | | 128 |

Students who successfully complete this program as specified are eligible to apply for a *Destination CSU-Pueblo* scholarship.

This articulation transfer agreement replaces all previous agreements between NJC and CSU-Pueblo in Bachelor of Science in Industrial Engineering. This agreement will be reviewed annually and revised (if necessary) as mutually agreed.

cam: 11/16/09
revised: 06/19/10