



# Itasca Community College/North Dakota State University

## Biosystems Engineering Transfer Guide

Biosystems Engineering Program: 133 Credits

YEAR: 2017-2018

# NDSU

ICC students are encouraged to connect with NDSU admission and engineering advisors one full semester prior to transfer

**Transfer Recruitment:** Megan.Ehora@ndsu.edu **Engineering advisor:** Joel.Hanson@ndsu.edu

- NDSU requires 37 credits of lower division general education (Gen Ed) credits
- If an ICC student completes the Associates of Arts (AA) degree or the MN Transfer Curriculum prior to transfer, the 37 lower division Gen Ed credits will be satisfied upon transfer to NDSU
- Students transferring 24+ credits are not required to take ABEN 189
- Visit [www.ndsu.edu/transfer](http://www.ndsu.edu/transfer), select "Course Equivalencies Database", then navigate to "ICC" to see ICC/NDSU equivalencies

**English and Communication** Note: An upper-division technical writing course is also required – taken at NDSU

Itasca Course	Cr	NDSU Equivalent	Cr	NDSU Gen Ed
ENGL 1101 Expository Writing	3	ENGL 110 College Composition I	3	Communication (C)
ENGL 1105 or 1113 Technical/Research Writing	3	ENGL 120 College Composition II	3	Communication (C)
SPCH 1105 Fundamentals of Public Speaking	3	COMM 110 Fund of Public Speaking	3	Communication (C)

### Math

Itasca Course	Cr	NDSU Equivalent	Cr	NDSU Gen Ed
MATH 1122 Calculus I	4	MATH 165 Calculus I	4	Quantitative Reasoning
MATH 1123 Calculus II	4	MATH 166 Calculus II	4	
MATH 2102 Multivariable Calculus	4	MATH 259 Multivariate Calculus	3	
MATH 2104 Diff Eq/Intro to Linear Algebra	4	MATH 266 Diff Eq and 129* & Linear Alg.	3/3	*sub MATH 129 for 128

### Chemistry, Physics, Engineering, and Other

Itasca Course	Cr	NDSU Equivalent	Cr	NDSU Gen Ed/Electives
BIOL 1201 General Biology I	4	BIOL 150 General Biology I	3	
CHEM 1201 General Chemistry I	4	CHEM 121/L General Chemistry I/L	3/1	Science & Technology (S)
CHEM 1202 General Chemistry II	4	CHEM 122/L General Chemistry II/L	3/1	Science & Technology (S)
ENGR 1220 Intro to Engineering	3	ABEN 110 Intro to ABEN	2	
ENGR 2101 Statics	3	ME 221 Engineering Mechanics I	3	
ENGR 2102 Dynamics	3	ME 222 Engineering Mechanics II	3	
ENGR 2103 Mechanics of Materials	3	ME 223 Mechanics of Materials	3	Engineering Elective
ENGR 2105 Thermodynamics	3	ME 351 Thermodynamics	3	*substitute ME 351 for 350
ENGR 2106 Circuits I	4	ECE 301 Electrical Engr I	3/1	Engineering Elective
PHYS 1202 Gen Physics II	4	PHYS 252 Univ Physics II/L	4/1	Science & Technology (S)
ENGR 1232, ENGR 2233, & ENGR 2234	3/3/3	ENGR 402 Ethics	1	
ENGR 1220, 1232 and 2233	3/3/3	ME 212 Visual Communications	3	
CSCI 1205 C++	3	ECE 173	4	Need one or the other, not both

### Humanities & Fine Arts (A), Social/Behavioral (B) - 6 credits each, and Wellness (W) - 2 credits minimum

Itasca Course	Cr	NDSU Equivalent	Cr	NDSU Gen Ed
The Humanities & Fine Arts	3	NEED 6 credits in each of the following categories: Humanities & Fine Arts Social/Behavioral Sciences. Also need a Cultural Diversity (D) and a Global Perspectives (G) designated course. Certain (D) and (G) courses double count for categories (A) or (B). *No more than 3 of the 6 Humanities & the Fine Arts credits may be in fine arts performance.		
The Humanities & Fine Arts	3			
History & the Social/Behavioral Sciences	3			
History & the Social/Behavioral Sciences	3			
PE 1201, HLTH 1201, or HLTH 1202	2/3	HNES 100, HDFS 242, or HNES 200	2/3	Wellness (W)

\* Other course substitutions may be available. Transfer students must meet with NDSU department advisor to review transfer work.

**NOTE:** Program requirements change periodically. It is the student's responsibility to be in contact with advisors from both institutions to obtain the most current program information to help ensure a smooth transfer.