

**DUAL DEGREE PROGRAM IN ENGINEERING AGREEMENT
BY AND BETWEEN
BETHANY COLLEGE AND
CASE WESTERN RESERVE UNIVERSITY**

This Dual Degree Program in Engineering Agreement ("Agreement") by and between Bethany College ("College") and Case Western Reserve University ("Case") is effective as of the last date executed by the parties below.

WHEREAS, College wishes to provide students with the opportunity to pursue an engineering degree program not available at College; and

WHEREAS, Case offers an engineering degree program from its Case School of Engineering; and

WHEREAS, Case offers to undergraduate students from College with requisite coursework and grades acceptable to Case, admission to the Dual Degree Program for Engineering Studies ("Program") to seek a baccalaureate degree from College and a Bachelor of Science in Engineering from Case;

WHEREAS, the parties desire to memorialize the terms of the Program in this Agreement;

NOW THEREFORE, College and Case agree as follows:

1. Dual Degree Program. The Program is a "three + two" dual degree program between Case and College, leading to a baccalaureate degree from College and a Bachelor of Science in Engineering degree from Case.
2. Admission Requirements. Prior to admission to the Program students must:
 - a. Complete the equivalent of 90 semester hours or 135 quarter hours at College and earn a grade point average of 3.0 or greater on a scale of 0.0-4.0. Furthermore students must have a 3.0 cumulative grade point average in Math and Science courses at College.
 - b. Complete the then current Dual Degree Entrance Course Requirements established by Case. (At the time of execution of this agreement, the requirements are set forth on the Case website at <http://www.engineering.case.edu/desp/dualdegree>
 - c. Be in disciplinary good standing at College.

3. Admission Process.

- a. Application to Case is made through Case's Office of Undergraduate Admission. The application process can be reviewed on-line through the Undergraduate Admissions home page. Acceptance into the Program and Case shall be at the sole discretion of Case and the student's application does not guarantee acceptance.
- b. Acceptances to the Program prior the end of a student's junior year shall be conditional, with formal admission contingent upon the student's final grade point average and academic requirements at the end of the junior year meeting the Program requirements. Students must provide Case a final transcript prior to a final decision being made by Case. Final acceptance into the Program is contingent upon Case's issuance of a written statement confirming said acceptance.

4. Tuition. Each student shall be responsible for paying the tuition and fees to the institution in which he or she is enrolled during the time enrolled and for complying with all of the policies and procedures of such institution. Students in the Dual Degree Program may apply and qualify for financial aid.

5. Minimum Requirements. In order to receive a degree from Case, Dual Degree students must earn a minimum of 50 credit hours at Case with a GPA of at least 2.00.

6. Degree to be Awarded. Students successfully completing the Program will be awarded a baccalaureate degree from College and a Bachelor of Science in Engineering from Case Western Reserve University.

7. Responsibilities of College.

- a. College will appoint a faculty liaison for the Program. The faculty liaison will periodically, upon request from Case, provide information to Case concerning: how the Program was publicized at College; how many students were referred to and/or visited Case; and how many students enrolled at Case; College's academic requirements and course content; and other relevant information.
- b. College agrees that it shall be a goal that a minimum of five qualified students shall apply to the Program over a three year period. If less than five students apply over a three year time frame, this agreement with College will be assessed by Case to determine whether it shall be continued by Case.
- c. College will advertise the availability of the Program through their catalogue literature, special bulletins, web sites and other means.

8. Coordination between College and Case. College and Case shall meet periodically as needed to discuss and publicize the Program. Case will provide to the College faculty liaison

curriculum outlines from each Engineering major department and the contact information for one faculty member in each department of the Case School of Engineering who will serve as the Program faculty advisor for incoming students. Case will advise the College faculty liaison of any curricular changes so that College can better advise its students regarding preparation for or application to the Program.

9. Term and Termination. This agreement will be in effect for one year from the date hereof, and will automatically be extended from year-to-year for an indefinite period unless one of the parties notifies the other party in writing sixty (60) days prior to the end of any academic year that the agreement is not to be renewed for the following academic year. In the event that Case terminates this agreement, students who currently are enrolled in the program shall be permitted to complete their individual program, subject to the terms and conditions of the Program in effect at the time of their enrollment. In the event of termination for any reason, College shall cease referring to the Program in College's documents (electronic or hard copy).
10. Not a Third Party Beneficiary Agreement. This agreement is not a third-party beneficiary contract and confers no rights upon any students or employees of the parties.
11. No Discrimination. The parties agree not to discriminate on the basis of race, religion, age, sex, color, disability, sexual orientation, national or ethnic origin, political affiliation, or status as a veteran.
12. Confidentiality of Student Information. The parties understand and agree that information regarding students is subject to the provisions of the Family Educational Rights and Privacy Act. The parties agree to use such information only for the purpose for which it was disclosed and not to make it available to any third party without first obtaining the student's consent.
13. Amendments. The Agreement may not be amended or modified without the written consent of the parties hereto.
14. Choice of Law and Venue. This Agreement shall be construed in accordance with the laws of the state of Ohio without regard to its conflict of laws provisions and exclusive venue and jurisdiction for any litigation arising out of this Agreement shall be in a court of competent jurisdiction located in Cuyahoga County, Ohio.
15. Use of Name. College agrees to not use Case's name or logos for any advertising or other commercial purposes, or otherwise disclose any provisions of this Agreement, without the prior written approval of Case.
16. Notice. All notices and other correspondence related to this Agreement shall be in writing and shall be delivered by certified mail, return receipt, or by facsimile transmission or electronic mail if the necessary information for delivery of such is shown below, addressed as follows:

If to College:

Attn: _____

If to Case:

Case School of Engineering
10900 Euclid Ave.
Cleveland, OH 44106
Attn: Deborah Fatica

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date stated below.

BETHANY COLLEGE

BY:



Name: Darin E. Fields
Title: Vice President for Academic
Affairs and Dean of Faculty

CASE WESTERN
RESERVE UNIVERSITY

BY:

Name: Norman Tien
Title: Dean, Case School of Engineering

And

Name: William A. Baeslack, III
Title: Provost

And

Name:
Title:



Dual Degree Program Course Requirements

Bethany College

Engineering Requirements for all majors/departments

Course Code	Course Title	Semester Credit Hours	Description	List Comparable Course offered at Bethany College
CHEM 105	Principles of Chemistry I	3	Atomic structure; thermochemistry; periodicity, bonding and molecular structure; intermolecular forces; properties of solids; liquids, gases and solutions. Prereq: One year of high school chemistry.	General Chemistry I CHEM 112 (includes lab) 4 Sem Crd Hr
CHEM 106	Principles of Chemistry II	3	Thermodynamics, chemical equilibrium; acid/base chemistry; oxidation and reduction; kinetics; spectroscopy; introduction to nuclear, organic, inorganic, and polymer chemistry. Prereq: CHEM 105 or equivalent.	General Chemistry II CHEM 221 (includes lab) 4 Sem Crd Hr
CHEM 113	Principles of Chemistry Lab	2	A one semester laboratory based on quantitative chemical measurements. Experiments include analysis, synthesis and characterization, thermochemistry and chemical kinetics. Computer analysis of data is a key part of all experiments. Coreq: CHEM 105, CHEM 106, CHEM 111, or ENGR 145.	Laboratory offered with the courses Chem 112 and 221
ENGR 131	Elementary Computer Programming (JAVA)	3	Students will develop an understanding of, and an appreciation for, the use of algorithms to solve problems, as well as the ability to translate them into good computer programs. The problems dealt with in this course will be chosen to illustrate the fundamentals for computer programming. Java is the programming language used in this course, and students create and debug Java programs as an important part of learning the fundamentals of computer programming.	Computer Science I CPSC 151 3 Sem Crd Hr
MATH 121	Calculus for Science and Engineering I	4	Functions, analytic geometry of lines and polynomials, limits, derivatives of algebraic and trigonometric functions. Definite integral, antiderivatives, fundamental theorem of calculus, change of variables. Prereq: Three and one half years of high school mathematics.	Calculus I MATH 201 4 Sem Crd Hr

MATH 122	Calculus for Science and Engineering II	4	Continuation of MATH 121. Exponentials and logarithms, growth and decay, inverse trigonometric functions, related rates, basic techniques of integration, area and volume, polar coordinates, parametric equations. Taylor polynomials and Taylor's theorem. Prereq: MATH 121.	Calculus II MATH 202 4 Sem Crd Hr
MATH 223	Calculus for Science and Engineering III	3	Introduction to vector algebra; lines and planes. Functions of several variables: partial derivatives, gradients, chain rule, directional derivative, maxima/minima. Multiple integrals, cylindrical and spherical coordinates. Derivatives of vector valued functions, velocity and acceleration. Vector fields, line integrals, Green's theorem. Prereq: MATH 122.	Calculus III MATH 203 4 Sem Crd Hr
MATH 224	Elementary Differential Equations	3	A first course in ordinary differential equations. First order equations and applications, linear equations with constant coefficients, linear systems, Laplace transforms, numerical methods of solution. Prereq: MATH 223.	Differential Equations MATH 341 3 Sem Crd Hr
PHYS 121	General Physics I	4	Particle dynamics, Newton's laws of motion, energy and momentum conservation, rotational motion, and angular momentum conservation. his course has a laboratory component. Prereq: MATH 121 or MATH 123 or MATH 125 or one year of high school calculus.	General Physics I PHYS 201 4 Sem Crd Hr
PHYS 122	General Physics II	4	Electricity and magnetism, emphasizing the basic electromagnetic laws of Gauss, Ampere, and Faraday. Maxwell's equations and electromagnetic waves, interference, and diffraction. his course has a laboratory component. Prereq: PHYS 121 or PHYS 123. Coreq: MATH 122, MATH 124, or MATH 126.	General Physics II PHYS 202 4 Sem Crd Hr

University: ____Bethany College_____

Dual Degree Contact

Name: Dr. Robert Spangler_____

Email: _rspangler@bethanywv.edu_____

Phone: 304-829-7722_____

Signature: _____



Date: 7-21-10