

**MEMORANDUM OF UNDERSTANDING BETWEEN  
MIAMI-DADE COMMUNITY COLLEGE  
AND THE  
UNIVERSITY OF FLORIDA COLLEGE OF ENGINEERING  
FOR A CUSTOMIZED PROGRAM OF STUDIES LEADING TO A  
BACHELOR OF SCIENCE DEGREE IN ENGINEERING**

**Preamble**

This agreement establishes a plan whereby a student will complete a Pre-Engineering Associate in Arts degree at Miami-Dade Community College, an outline of which is appended as Attachment A, and transfer to the University of Florida College of Engineering for continuation and completion of engineering studies. Upon completion of the academic requirements of the two cooperating institutions, the student shall be awarded a Bachelor of Science degree from the University of Florida in any of the engineering majors listed below:

- Aerospace Engineering
- Agricultural & Biological Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Engineering Science
- Environmental Engineering
- Industrial & Systems Engineering
- Materials Science & Engineering
- Mechanical Engineering
- Nuclear Engineering
- Nuclear Engineering Sciences
- Surveying & Mapping

**Program of Study at the Community College**

As of the date of this Memorandum of Understanding, the student shall complete a minimum of sixty (60) semester hours of coursework at the community college, incorporating 36 hours of required general education studies, and the required preprofessional courses in calculus, differential equations, chemistry, and physics with calculus. Upon completion of this program of study, the student shall be eligible for the award of an Associate in Arts degree. If any of the required preprofessional courses is not offered at the community college, special provision will be made for such a course to be completed at the University of Florida. Notwithstanding the number of credits completed at the community college, and based upon current interpretation of state guidelines, a maximum of 60 credit hours will be transferrable to the University of Florida for application to the bachelor of science degree program requirements. Furthermore, it should be noted that not all courses completed to fulfill the requirements of the Associate in Arts degree, are transferrable to the bachelor of science degree program.

**Approval for Degree-Seeking Status at the University of Florida**

In order for a participating student to achieve degree-seeking status at the University of Florida, he or she must have:

1. Completed the Pre-Engineering Associate in Arts degree program at the community college, and received an AA degree.
2. Achieved a minimum grade point average of 2.50 in the required pre-professional courses: calculus, differential equations, chemistry, and physics with calculus.
3. Complied with all admission requirements of the University of Florida.
4. Received a recommendation from a designated official at the community college.

**Hours Required to Complete Designated Bachelor's Degree**

The student participating in this program will be required to complete a University of Florida program of study which covers the number of credit hours and courses stipulated for the particular degree being sought. If the official program of study at the University of Florida includes free electives, and the participating student has excess hours of credit at the community college which are equivalent in course content, these hours may be used to reduce the hours required at the University of Florida, provided that the number of hours accepted from the community college does not exceed 60 hours, in accordance with the current interpretation of SB 2330.

**PRE-ENGINEERING ASSOCIATE IN ARTS DEGREE**  
**A Customized Program of Engineering Studies Between**  
**Miami-Dade Community College and the University of Florida College of Engineering**

Proposed:  
 Associate in Arts Degree:  
 Bachelor of Science Degree:

Structured Program of Engineering Studies  
 Pre-Engineering  
 UF College of Engineering

**Program Description**

The Pre-Engineering Associate in Arts degree was designed to prepare students for programs of study in all disciplinary areas at the University of Florida College of Engineering (UFCoE). Upon satisfactory completion of this program, with a combined minimum technical grade point average of 2.5 in the mathematics and natural sciences categories, students will be directly admitted into the College of Engineering, subject to compliance with University of Florida admission requirements. It should be noted that not all credits completed at the community college to meet AA degree requirements, are transferrable to the bachelor of science degree programs.

A Bachelor of Science degree may be earned in any of the following majors:

Aerospace Engineering, Agricultural & Biological Engineering, Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Environmental Engineering, Engineering Science, Industrial & Systems Engineering, Materials Science & Engineering, Mechanical Engineering, Nuclear Engineering, Nuclear Engineering Sciences, Surveying & Mapping.

Students should refer to the Transfer Advisement Manual for details of programmatic requirements leading to the bachelor of science degree for each major.

**YEAR ONE**

**First (Fall) Term**

ENGLISH ..... ENC1101  
 HUMANITIES ..... HUM1020  
 NATURAL SCIENCES ..... CHM1045  
 NATURAL SCIENCES ..... CHM1045L  
 MATHEMATICS ..... MAC2311

**Credits**

English Composition ..... 3  
 Humanities ..... 3  
 General Chemistry I ..... 3  
 General Chemistry I Laboratory ..... 2  
 Calculus and Analytic Geometry I ..... 5  
**Total for Term ..... 16**

**Second (Spring) Term**

ENGLISH ..... ENC1102  
 SOCIAL SCIENCE/HISTORY .... ISS1120  
 NATURAL SCIENCES ..... CHM1046  
 NATURAL SCIENCES ..... CHM1046L  
 MATHEMATICS ..... MAC2312

**Credits**

English Composition II ..... 3  
 Social Environment ..... 3  
 General Chemistry II ..... 3  
 General Chemistry II Laboratory ..... 2  
 Calculus and Analytic Geometry II ..... 4  
**Total for Term ..... 15**

**Third (Fall) Term**

HUMANITIES .....  
 ENGLISH ..... ENC2301  
 NATURAL SCIENCES ..... PHY2048  
 NATURAL SCIENCES ..... PHY2048L  
 MATHEMATICS ..... MAP2302

**YEAR TWO**

**Credits**

Approved Course ..... 3  
 Advanced Composition I ..... 3  
 Physics with Calculus I ..... 5  
 Physics with Calculus I Laboratory ..... 1  
 Differential Equations ..... 3  
**Total For Term ..... 15**

**Fourth (Spring) Term**

ENGINEERING ELECTIVE .....  
 SOCIAL SCIENCE/HISTORY .... PSY1000  
 NATURAL SCIENCES ..... PHY2049  
 NATURAL SCIENCES ..... PHY2049L  
 MATHEMATICS ..... MAP2313

**Credits**

Approved Course ..... 3  
 The Individual in Transition ..... 3  
 Physics with Calculus II ..... 5  
 Physics with Calculus II Laboratory ..... 1  
 Calculus and Analytic Geometry III ..... 4  
**Total for Term ..... 16**

(over)

**Summary of Credits for the Miami-Dade Community College Pre-Engineering Associate in Arts Degree:**

<u>Category</u>	<u>Credit Hours</u>
English	9 hours
Mathematics	16 hours
Humanities	6 hours
Natural Sciences	22 hours
Social Sciences/History	6 hours
Engineering Elective	<u>3 hours</u>
<b>Total for Degree:</b>	<b>62 Hours</b>

**CONTACTS**

Miami-Dade

Community College:

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District Dean of Academic Affairs  
11380 NW 27th Avenue  
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Tel: (305) 237-7440  
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University of Florida:

Dr. Jonathan F.K. Earle  
Assistant Dean for Academic Programs  
College of Engineering  
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- Notes:**
1. Course selection in English, Natural/Physical Science, and Mathematics based upon Placement Testing.
  2. Students may be required to complete certain preparatory courses prior to commencing the designated pre-professional courses in mathematics, chemistry, and physics.
  3. Writing competence requirement may be satisfied by approved Humanities and Social Sciences courses.
  4. Students should refer to the course listing under AA General Education Requirements for all approved courses.
  5. Students must comply with all graduation requirements for the Associate in Arts degree.
  6. The technical grade point average (gpa) is based on a 4.0 scale, and will be computed on all attempts for which a letter grade was earned and included on the transcript.
  7. The courses to be used in computation of the technical gpa are : MAC 2311, MAC 2312, MAC 2313, MAP 2302, CHM 1045, CHM 1046, PHY 2048, PHY 2049. If MAP 2302 or its equivalent is not offered at the community college, it may be completed at the University of Florida.
  8. The general education requirements of the Accreditation Board for Engineering and Technology (ABET) will be met through satisfactory completion of the general education requirements for the Associate in Arts degree.
  9. The State University System requires 8 semester hours of college foreign language courses for admission. Students without two years of high school foreign language must complete two terms of college level language courses prior to enrolling at the university.
  10. Satisfactory completion or waiver of the College Level Academic Skills Test (CLAST) is a requirement for admission to the University of Florida.
  11. Students are expected to enter the engineering program with computer skills. Programming in C and/or C ++ is suggested.
  12. Students should consult with Chemistry instructors for correct placement in the sequence.
  13. Co-op credits in engineering are acceptable.

**Student Readmission**

Any participating student admitted to the University of Florida who does not successfully complete his or her requirements for the Bachelor of Science degree prior to leaving the university in good academic standing, will be given the opportunity to pursue completion of the degree at a later date, subject to compliance with University of Florida readmission policies.

**Termination/Modification**

A. This memorandum is subject to change or modification as deemed necessary by either party. It is understood and agreed that this memorandum may be modified as may be necessary to bring it within the purview of and in accord with the directives and policies of the Board of Regents of the State University System of Florida, the Statutes of the University of Florida, or the policies governing operation of the public community colleges of Florida.

B. This memorandum may be terminated by either party upon written notice to the other party.

**SIGNATURES OF RESPONSIBLE AUTHORITIES AT THE COOPERATING INSTITUTIONS**

**MIAMI-DADE COMMUNITY COLLEGE**

Signature obscured  
for security

Eduardo J. Padrón, President  
Miami-Dade Community College

Signature obscured  
for security

Barbara S. Echord  
District Dean of Academic Affairs

**UNIVERSITY OF FLORIDA COLLEGE OF  
ENGINEERING**

Signature obscured  
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Winfred M. Phillips, Dean

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for security

Warren Viessman, Jr.  
Associate Dean for Academic Programs

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for security

Jonathan F. K. Earle  
Assistant Dean for Academic Programs  
Program Coordinator

11/96

Date

11/08/96

Date