

**Memorandum of Agreement**  
**Between**  
**Clemson University and Francis Marion University**  
**Dual-Education Program**

The parties to this Memorandum of Agreement are Clemson University (hereinafter Clemson) and Francis Marion University (hereinafter Francis Marion).

Students enrolled in a Bachelor of Science program at Francis Marion who wish to prepare for a career in engineering may, upon successful completion of an approved three-year dual-education curriculum, transfer to Clemson to complete requirements for the Bachelor of Science degree in an engineering major from Clemson and the Bachelor of Science degree from Francis Marion if they satisfy all of the criteria outlined below. The College of Engineering and Science at Clemson recommends a program of study at Francis Marion that includes the general education courses required by all engineering curricula. Additionally courses are recommended that will facilitate timely progress toward the degree. The details of the program and the understanding are as follows:

1. During the first three terms at Francis Marion, the student participating in the dual-education program must complete and send to the Associate Dean of Engineering of the College of Engineering and Science at Clemson the form "Intention to Pursue the Dual-Education Program at Clemson University" (Attachment A). The Associate Dean at Clemson will appoint an academic advisor for the student and will forward the name and contact information of the advisor to the Francis Marion dual-education coordinator/director.
2. A three-year dual-education program of study will be developed by the Francis Marion faculty in consultation with the Clemson Associate Dean of Engineering and Science from courses offered at Francis Marion. This program of study shall include the general education courses required by Francis Marion and by the engineering curricula at Clemson. A list of courses recommended by Clemson to be included in this dual-education program is appended to this agreement (Attachment B).
3. The total study program at Francis Marion shall include a minimum of 86 semester hours. Dual-education candidates shall complete all basic requirements at Francis Marion for their Francis Marion degree before transfer to Clemson.
4. The student will apply to the Clemson Office of Admissions after completion of the second academic year at Francis Marion. A student with grades no lower than "C" in all courses in the dual-education program, and a cumulative grade point average of at least 2.7/4.0, is assured of admission into most Clemson engineering programs. Some Clemson engineering departments may require a higher cumulative grade point for admission and students must meet the intended department's standard for acceptance. Students not meeting these requirements will be considered for admission under Clemson's general transfer student admissions standards. Prior to enrollment at Clemson, the student must be certified by the Francis Marion academic official as having satisfactorily completed the academic requirements of Francis Marion as stated in Item 3 above.
5. Credit for courses in the approved dual-education program at Francis Marion that are passed with a grade of "C" or higher will be transferred to Clemson University. It shall be the joint responsibility of the Dean of Clemson's College of Engineering and Science and Francis Marion's Dean of Science to appoint the appropriate academic personnel and advisors to coordinate the transfer equivalency of the Clemson

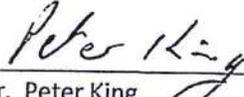
and Francis Marion courses appropriate to the dual-education engineering program and serve as the points-of-contact.

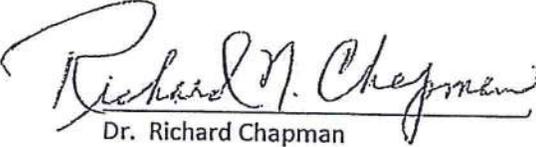
6. A student transferring to Clemson under this program will follow the general education requirements outlined in the Clemson Undergraduate Announcements at the time the student entered Francis Marion provided the student has been continuously enrolled at Francis Marion prior to transfer. If there is no continuous enrollment, the general education requirements outlined in the Clemson Undergraduate Announcements at the time of transfer will apply.
7. Upon completion of an engineering curriculum at Clemson University, the student will be awarded a Bachelor of Science degree in an engineering degree program from Clemson University. After completing the fourth year of study, students will be eligible for the Bachelor of Science from Francis Marion. Prior to, or upon receipt of, the engineering degree from Clemson, the student must apply to the proper Francis Marion University official for his/her diploma.
8. Francis Marion will provide academic advising to assist students in the dual-education program with all matters related to their transfer to Clemson University. The Associate Dean of Engineering and Science, or duly appointed representative, at Clemson University will cooperate in the advising of these students. While advice and counsel will be offered, the final responsibility with regard to transfer remains with the student.
9. While not required, dual-education students at Francis Marion are encouraged to attend summer school at Clemson (or another accredited engineering college) to take certain fundamental courses (Attachment C) in order to ease the transition into engineering studies at Clemson and facilitate entry into the engineering program at a more advanced level. To ensure transfer and applicability of coursework to the intended engineering major, courses taken at any other school must be approved as an equivalent course by Clemson faculty prior to the student's enrollment in those courses.
10. Clemson engineering and Francis Marion dual-education faculty and advisors will confer regularly to review the curricula and all matters related to the dual-education program agreement.
11. Dual-education candidates from Francis Marion are eligible to seek B.S. degrees in any of the following majors at Clemson University:

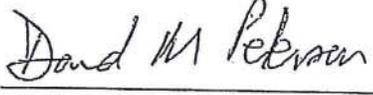
Bioengineering	Electrical Engineering
Bio-systems Engineering	Environmental Engineering
Chemical Engineering	Industrial Engineering
Civil Engineering	Materials Science and Engineering
Computer Engineering	Mechanical Engineering
12. The effective date of this Agreement will be January 1st, 2012. The term of this Agreement will be five years from the effective date. The parties can renew this agreement for additional 5 year terms by mutual written agreement. Either party can terminate this Agreement for any reason with 90 days prior written notice to the other party. This Agreement will continue in effect until it is modified, terminated or the term of the Agreement ends without renewal. Any Intention to pursue the Dual Degree forms submitted to the Associate Dean of Engineering of the College of Engineering and Science at Clemson by a student prior to modification, termination or ending of the agreement will be honored by both parties provided the student satisfies all criteria outlined herein.

Francis Marion University

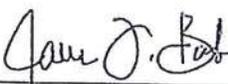
  
\_\_\_\_\_, 6/18/12  
Date  
Dr. Luther Fred Carter  
President, Francis Marion University

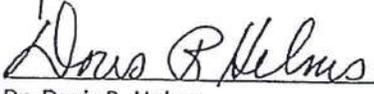
  
\_\_\_\_\_, 6-7-12  
Date  
Dr. Peter King  
Associate Vice Provost for Academic Affairs and  
Enrollment Management

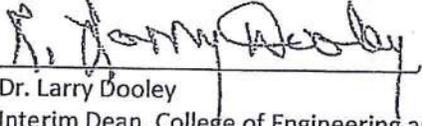
  
\_\_\_\_\_, 6-14-2012  
Date  
Dr. Richard Chapman  
Dean, College of Liberal Arts

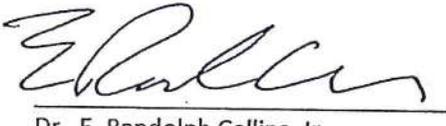
  
\_\_\_\_\_, 6/7/12  
Date  
Dr. David Peterson  
Chair, Department of Physics and Astronomy  
Dual Education Advisor  
LSF 103C

Clemson University

  
\_\_\_\_\_, 5/18/12  
Date  
James F. Barker, FAIA  
President, Clemson University

  
\_\_\_\_\_, 5/18/12  
Date  
Dr. Doris R. Helms  
Provost and Vice President for Academic Affairs

  
\_\_\_\_\_, 5/7/12  
Date  
Dr. Larry Dooley  
Interim Dean, College of Engineering and Science

  
\_\_\_\_\_, 4-30-2012  
Date  
Dr. E. Randolph Collins, Jr.  
Associate Dean for Undergraduate and International  
Studies, College of Engineering and Science

Attachment A  
INTENTION TO PURSUE A DUAL-EDUCATION PROGRAM AT  
CLEMSON UNIVERSITY

TODAY'S DATE \_\_\_\_\_

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CURRENT CONTACT INFORMATION

STUDENT NAME \_\_\_\_\_

SCHOOL ID# \_\_\_\_\_

E-MAIL ADDRESS \_\_\_\_\_

CURRENT DEGREE PROGRAM \_\_\_\_\_ CUMULATIVE GPA \_\_\_\_\_

COLLEGE/UNIVERSITY \_\_\_\_\_ ENTRANCE DATE \_\_\_\_\_

ADVISOR \_\_\_\_\_ ADVISOR'S PHONE # \_\_\_\_\_

ADVISOR'S EMAIL: \_\_\_\_\_

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ENROLLMENT AT CLEMSON UNIVERSITY

ANTICIPATED ENROLLMENT DATE \_\_\_\_\_

ENGINEERING CURRICULUM PLANNED \_\_\_\_\_

The current Clemson University Undergraduate Announcements is available on the web at  
<http://www.registrar.clemson.edu/html/catalog.htm>.

*Please note that dual-enrollment students must apply to Clemson for admission as a transfer student,  
which should be done at least one full semester in advance of planned enrollment.*

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NOTE: PLEASE RETURN THIS FORM AND DIRECT ANY QUESTIONS TO:  
Associate Dean for Undergraduate and International Studies  
College of Engineering and Science  
107 Riggs Hall, Clemson University  
Clemson, SC 29634-0901  
Phone: (864) 656-4440  
E-mail: engr-dd@clemson.edu

## Attachment B

### General Course Recommendations for Dual-education Programs

The courses below comprise a very general list of courses that students may transfer to Clemson University under dual-education agreements. Degree requirements vary by intended engineering major and the courses listed may not apply to all degree programs (majors) at Clemson. Please refer to the specific engineering curriculum and any notes listed below each curriculum in Clemson's *Undergraduate Announcements*. A substitution of a required course may be possible if an engineering department at Clemson deems it appropriate and it is approved via Clemson's approval process.

To ensure timely progress toward graduation and to view the curricular requirements of each engineering degree program, please refer to the current version of the *Undergraduate Announcements* available on line at: <http://www.registrar.clemson.edu/html/catalog.htm>.

General Chemistry (with lab, CH 101)	(4 credit hours)
Departmental Science Requirement (BIOL 103/105, CH 102, GEOL 101/103, MS & E 210)	(3- 4 hours)
Mathematics (MTHSC 106, 108, 206, 208)	(12 – 16 credit hours)
Physics (calculus-based, labs may be required) (PHYS 122, PHYS 221, labs-PHYS 124/223)	(6 – 8 credit hours)
Accelerated Composition (ENGL 103)	(3 credit hours)
Engineering Disciplines & Skills (CES 102)	(2 credit hours)
Engineering Problem-Solving & Programming (ENGR 130, ENGR 141, CH E 130)	(2 - 3 credit hours)
Engineering Graphics (EG 208, EG 210)	(2 hours)
General Education Courses (below)	(15 - 18 credit hours)
English Literature	(3 credit hours)
Social Sciences (2 different areas)	(6 credit hours)
Non-literature Humanity	(3 credit hours)
CoES Requirement (either Hum/SS)	(3 - 6 credit hours)

Note: CU also requires 3 credit hours of Cross-Cultural Awareness and 3 credit hours of Science and Technology in Society. With careful planning those credits may be incorporated into the required general education courses. These courses are subject to change at any time. For more information consult the current *University Announcements*.

For more information, contact the designated departmental Dual-Education Coordinator at Clemson University.

January 2012

Electrical Engineering

CES 102, CH 102, ENGR 141, CPSC 111  
ECE 201, ECE 209, ECE 202, ECE 211  
ECE 262, ECE 272, ECE 273, ECE 212

Environmental Engineering

CES 102, CH 102, ENGR 130, EG 210  
CE 201, EE & S 201, EE & S 202, CE 208

Industrial Engineering

CES 102, ENGR 141, EG 208  
BIOL 103/105 OR GEOL 101/103 OR CH 102,  
I E 200, I E 201, I E 280  
MS & E 210, I E 210, I E 384, CE 201

Materials Engineering

CES 102, CH 102, ENGR 141, EG 208 (both  
concentrations)

(Inorganic)

MS & E 210, MS & E 241, CE 201

(Polymeric Materials)

MS & E 210, MS & E 250, CE 201

Mechanical Engineering

CES 102, ENGR 141, EG 208, MS& E 210  
ME 200, ME 201\*, ME 222, ME 202, ME 203  
ECE 307/309

\*Transfer students are allowed to substitute approved Statics and Dynamics equivalents at other schools in lieu of ME 201 prior to enrolling at Clemson.

The CU rubric for Statics and Dynamics for non-mechanical engineering students has changed from EM to CE. Transfer students may also substitute EM 201 and EM 202 for CE 201 and CE 208 respectively.

January 2012