University of Pittsburgh
School of Engineering

3-2 Agreement
with

Gettysburg College

October 4, 2000
3-2 Agreement Between the University of Pittsburgh School of Engineering and Gettysburg College

Overview of Program
The purpose of this document is to formally establish a "3-2" agreement between the University of Pittsburgh School of Engineering and Gettysburg College. A "3-2" joint degree program enables a student enrolled in a liberal arts college to receive a second degree in engineering. The student is able to do this by undertaking a structured program at the liberal arts college during the first three years and then transferring to the University of Pittsburgh School of Engineering for the last two years. The first three years will typically include the general education requirements for the liberal arts degree, and specific mathematics, chemistry, physics required for all engineering degree programs. In addition students may take selected courses that are judged to be equivalent to specific engineering science requirements and, if possible, certain preparatory courses for the student's chosen engineering major. A quality point average of 2.8 or better and recommendation from the student's academic adviser or 3/2 program director is generally required for direct admission into the chosen engineering program. In addition to completing the requirements for an engineering degree during the last two years, through careful course selection the student should also satisfy the requirements for the liberal arts degree. For certain engineering departments, students may need to attend the School of Engineering during one summer term.

Introduction
This agreement specifies the terms by which the University of Pittsburgh and Gettysburg College agree to cooperate in facilitating the transfer of students to pursue dual baccalaureate degrees from Gettysburg College and the University of Pittsburgh School of Engineering.

The 3/2 engineering program between Gettysburg College and the University of Pittsburgh will normally consist of three years of instruction at Gettysburg College followed by two years of instruction at the University of Pittsburgh. Depending on the preparation of the student, certain engineering degree programs may require Summer Term attendance prior to the student's first Fall term at the University of Pittsburgh. Provided that all stipulated criteria have been met, the student will receive a liberal arts degree from Gettysburg College and a Bachelor of Science in Engineering degree from the University of Pittsburgh.

The School of Engineering offers under B.S. degrees in Bioengineering, Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Engineering Physics, Industrial Engineering, Materials Science and Engineering, and Mechanical Engineering. Appropriate syllabi will be developed for those degree programs of interest to Gettysburg College. Students from Gettysburg College who will be transferring to the University of Pittsburgh as part of this agreement will also be eligible to participate in the School's other education enhancement programs including the Cooperative Education Program and the Engineering Study Abroad Program. Students may also choose to pursue either a minor or certificate in another engineering or arts and sciences area. Participation in these optional programs may require additional time to graduate. Interested students should consult the University of Pittsburgh Undergraduate Bulletin for more information. (See http://www.univ-relations.pitt.edu/bulletins/undergrad/index.html).
Any and all modifications of this document must occur through formal notification and revision of this agreement.

Recruitment
The availability of the 3/2 program between Gettysburg College and the University of Pittsburgh School of Engineering will be included in literature developed and distributed by both institutions. Gettysburg College is encouraged to develop brochures and other suitable material outlining the course content and the features of this program. Such information concerning the program may be distributed through Gettysburg College’s Office of Admissions. Gettysburg College will be primarily responsible for student recruitment for this 3/2 Program. As required, the appropriate School of Engineering faculty and staff will be available by telephone and e-mail to assist Gettysburg College students, faculty and staff.

All descriptive literature, promotional material or advertising material developed by Gettysburg College describing or discussing this Program should be submitted to the Associate Dean for Academic Affairs at the University of Pittsburgh School of Engineering for review and approval prior to publication and distribution. Written approval by the University of Pittsburgh for such material and literature will not be unreasonably delayed.

Application for Admission
Students admitted to this program should have a strong background in science and mathematics in order to be competitive for transfer to the University of Pittsburgh. They should complete the prerequisite courses as outlined in the attached course listing at Gettysburg College during their first three years at Gettysburg College in order to be able to complete the University of Pittsburgh course work in the prescribed time.

A transfer application for admission should be requested from:

The Office of Admissions and Financial Aid
4227 Fifth Avenue
Pittsburgh, PA 15260
(412) 624-PITT

or on-line from http://www.pitt.edu/~oafa/transfer.html

Additional information may be found at http://www.pitt.edu/~oafa/oafa.html

Completed application materials must indicate that the student is following the terms of the Gettysburg College/University of Pittsburgh articulation agreement and must be submitted by July 15 for consideration for Fall semester admission, November 15 for Spring admission and March 15 for Summer admission. A recommendation from the Gettysburg College 3/2 Program Advisor is also required.

Ideally, the student should indicate interest in the program during his/her first year at Gettysburg College. He/she should consult with the 3/2 Program Advisor to make sure that the appropriate courses are taken. During the student’s second year, the Gettysburg College 3/2 Program Advisor should inform
the School of Engineering of the student’s intent to transfer and indicate the engineering program of interest.

Candidate Selection
The School of Engineering agrees to review in an expeditious and non-prejudicial manner those students who follow the 3/2 agreement between Gettysburg College and the University of Pittsburgh.

To be considered for transfer, students must have a minimum cumulative Quality Point Average (QPA) of 2.50 (based on a 4.00 scale). Students who have earned a 2.8 QPA or better, completed the required courses and have been recommended by the Program Advisor will be able to transfer directly into the School of Engineering Program of their choice. The University of Pittsburgh will accept up to 90 credits for transfer. A grade of “C” or better must be earned in the approved courses (See Curriculum) in order to receive transfer credit. Courses in which a grade of C- or lower was received will not be counted for transfer credit.

Statute of Limitations
All course work must be completed within the 12-year statute of limitations for the University of Pittsburgh.

Course Selection
Transfer courses equivalent to the School of Engineering’s freshman year of studies will include as a minimum those from the attached list (See Curriculum). Additional upper-level courses approved for transfer are listed by program (see Curriculum). The provisions and contents of this document are subject to change at any time at the University’s sole discretion. The University of Pittsburgh will make reasonable efforts to allow students already in the 3-2 program at the time changes are made, to complete the program under the conditions in effect at the time of their enrollment in the 3/2 program. However, all 3/2 students must take a minimum of 30 credits at the University of Pittsburgh School of Engineering in order to receive the BS in Engineering degree.

Advising Services
Gettysburg College’s appropriate advisors and associated faculty will advise students during the first three years. Students may also contact the Freshman Program Office or the appropriate undergraduate program coordinator.

Student Services
Students transferring from a 3/2 program to the University of Pittsburgh School of Engineering will be treated on an equal basis with all other School of Engineering students with regard to selection of courses and other student services. The 3/2 transfer students will be treated as first time students for the purpose of obtaining campus housing. Campus housing for the first two years at Pitt is guaranteed provided the students has met the May 1st deposit deadline.

Terms of the Agreement
The 3/2 liaisons from both institutions will review this agreement annually, revising it if necessary. An extensive review will take place five years from the date of signing. Attachments regarding curriculum requirements should be reviewed as required.
Lacking such a review, the agreement will continue until either the Dean of Gettysburg College or the Dean of the School of Engineering receives written notification of termination. Students enrolled in this program at the time of termination shall be allowed to proceed according to the policies outlined previously in this agreement.

Acting for our representative institutions we accept the foregoing agreement.

Daniel R. DeNicola  
Provost, Gettysburg College  

Gerald D. Holder  
Dean, University of Pittsburgh School of Engineering

Date  

Date
Degree Requirements for the School of Engineering at the University of Pittsburgh

Freshman Year (All Engineering Programs)

**FIRST TERM**
- MATH 0220 Analytic Geometry and Calculus 1 4
- CHEM 0960 General Chemistry for Engineers 1 3
- PHYS 0104 Basic Physics for Science and Engineering 1 3
- ENGR 0011 Introduction to Engineering Analysis 3
- Humanities or Social Science elective* 3
- ENGR 0081 Freshman Seminar 0

Total 16

**SECOND TERM**
- MATH 0230 Analytic Geometry and Calculus 2 4
- CHEM 0970 General Chemistry for Engineers 2 3
- PHYS 0105 Basic Physics for Science and Engineering 2 3
- ENGR 0012 Introduction to Engineering Computing 3
- Humanities or Social Science elective* 3
- ENGR 0082 Freshman Seminar 0

Total 16

* Humanities/Social Science Requirement: Engineering students must complete a total of six approved humanities and social science electives. Two of these electives must be from two different humanities areas; and two must be from two different social science departments. One elective must be an upper-level humanity or social science in an area where a student has already taken a lower level course. Neither Introductory survey courses nor courses viewed as primarily "skill" courses are acceptable. At least one humanity or social science elective must include an extensive writing component – W courses.

Sophomore through Senior Years

Required of all Programs:
- PHYS 0106 Basic Physics for Science and Engineering 3
- MATH 0240 Analytical Geometry and Calculus 3* 4
- MATH 0250 Matrix Theory and Differential Equations 4

* Not required for Computer Engineering

Remainder of course requirements for the sophomore through senior years depend on the student's engineering program selection. More detailed information for individual program course requirements can be found on the School of Engineering webpage at http://www.engmg.pitt.edu/~engwww/.
Equivalent courses offered at Gettysburg College

Example

School of Engineering,

<table>
<thead>
<tr>
<th>Course</th>
<th>Gettysburg College</th>
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</thead>
<tbody>
<tr>
<td>ENGR 0081 Freshman Seminar</td>
<td>No equivalent; not required of transfer students</td>
</tr>
<tr>
<td>ENGR 0082 Freshman Seminar</td>
<td>No equivalent; not required of transfer students</td>
</tr>
<tr>
<td>CHEM 0960 General Chemistry for Engineers 1</td>
<td>Chemistry 107 Chemical Structure Bonding</td>
</tr>
<tr>
<td>CHEM 0970 General Chemistry for Engineers 2</td>
<td>Chemistry 108 Chemical Reactivity</td>
</tr>
<tr>
<td>ENGR 0011 Introduction to Engineering Analysis</td>
<td>No equivalent (replace with technical elective)</td>
</tr>
<tr>
<td>ENGR 0012 Introduction to Engineering Computing</td>
<td>CS 104 Introduction to Computer Science</td>
</tr>
<tr>
<td>MATH 0220 Analytic Geometry and Calculus I</td>
<td>Math 111 Calculus 1</td>
</tr>
<tr>
<td>MATH 0230 Analytic Geometry and Calculus II</td>
<td>Math 112 Calculus 2</td>
</tr>
<tr>
<td>PHYS 0104 Basic Physics for Science and Engineering 1</td>
<td>Physics 111 Mechanics and Heat</td>
</tr>
<tr>
<td>PHYS 0105 Basic Physics for Science and Engineering 2</td>
<td>Physics 112 Waves and Electricity and Magnetism</td>
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Sophomore Year Courses

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>MATH 0240 Analytic Geometry and Calculus 3</td>
<td>Math 211 Multivariate Calculus</td>
</tr>
<tr>
<td>MATH 0250 Matrix Theory and Differential Equations</td>
<td>Math 363 Differential Equations and</td>
</tr>
<tr>
<td>PHYS 0106 Basic Physics for Science and Engineering 3</td>
<td>Math 212 Linear Algebra (both courses)</td>
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<tr>
<td></td>
<td>Physics 112 Waves and Electricity and Magnetism</td>
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Additional Course Equivalencies

Bioengineering

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BIOSCI 0150 Foundations of Biology 1</td>
<td>Biology 112 Form and Function in Living Organisms</td>
</tr>
<tr>
<td>BIOSCI 0050 Foundations of Biology Lab 1</td>
<td>Biology 112</td>
</tr>
<tr>
<td>BIOSCI 0160 Foundations of Biology 2</td>
<td>Biology 111 Introductory Biology: Introduction to Ecology and Evolution</td>
</tr>
<tr>
<td>BIOSCI 0060 Foundations of Biology Lab 2</td>
<td>Chemistry 334 Biochemistry</td>
</tr>
<tr>
<td>BIOSCI 1000: Introduction to Biochemistry</td>
<td>Chemistry 203 Organic Chemistry 1</td>
</tr>
<tr>
<td>CHEM 0310 Organic Chemistry 1 and CHEM 0330 Organic Chemistry Laboratory</td>
<td>Chemistry 204 Organic Chemistry 2</td>
</tr>
<tr>
<td>CHEM 320 Organic Chemistry 2 and CHEM 340 Organic Chemistry Lab 2</td>
<td>Physics 319 Classical Mechanics</td>
</tr>
<tr>
<td>ENGR 0135: Statics</td>
<td>Math 351 Mathematical Probability I and Statistics I</td>
</tr>
<tr>
<td>EE 0031 Linear circuits and systems 1</td>
<td>and Math 352 Mathematical Probability and Statistics II</td>
</tr>
<tr>
<td>ENGR 0020 Probability and Statistics for Engineers 1</td>
<td></td>
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</tbody>
</table>
Chemical and Petroleum Engineering
CHEM 0310 Organic Chemistry 1
and CHEM 0330 Organic Chemistry Laboratory*
CHEM 320 Organic Chemistry 2
and CHEM 340 Organic Chemistry Lab 2*
CHEM 1410 Physical Chemistry 1
and CHEM 1430 Physical Chemistry Lab 1*
CHEM 1480 Intermediate Physical Chemistry
and CHEM 1440 Physical Chemistry Lab 2*
ENGR 0020 Probability and Statistics for Engineers 1

ENGR 0135: Statics
* Only two of these four labs are required.

Civil and Environmental Engineering
ECON 0100: Introduction to Microeconomic Theory
ENGR 0135: Statics
ENGR 0145: Dynamics
ENGR 0020 Probability and Statistics for Engineers 1

Computer Engineering
CoE 0445 Information Structures
CS 0447 Computer Organization
Assembly Language Programming
CoE 1550 Operating Systems
CoE 1186 Software Engineering
CoE 1520 Programming Languages
ENGR 0020 Probability and Statistics for Engineers 1

CoE 1150 Computer Networks
CoE Technical Elective
CoE Technical Elective
CoE Technical Elective
CoE Technical Elective
CoE Technical Elective

Electrical Engineering
EE 0142 Computer Organization
ENGR 0020 Probability and Statistics for Engineers 1

Chemistry 203 Organic Chemistry 1
Chemistry 204 Organic Chemistry 2
Chemistry 305 Physical Chemistry 1
Chemistry 306 Physical Chemistry 2
Math 351 Mathematical Probability I and Statistics I and Math 352 Mathematical Probability and Statistics II
Physics 319 Classical Mechanics

Economics 103 Principles of Microeconomics
Physics 319 Classical Mechanics
Math 351 Mathematical Probability I and Statistics I and Math 352 Mathematical Probability and Statistics II

CS 216 Data Structures
CS 221 Computer Organization and

CS 324 Principles of Operating Systems
CS 335 Software Engineering
CS 341 A Survey of Programming Languages
Math 351 Mathematical Probability I and Statistics I and Math 352 Mathematical Probability and Statistics II
CS 322 Introduction to Computer Networks
CS 327 Parallel Processing
CS 340 Advanced Systems Design
CS 360 Principles of Database Systems
CS 371 Introduction to Artificial Intelligence
CS 374 Compilers

Math 351 Mathematical Probability I and
Math 352 Mathematical Statistics II
ENGR 1010 Communications Skills for Engineers
EE 1259 Electromagnetics
EE 1232 Introduction to Lasers and Optical Electronics (technical elective)

Industrial Engineering
ENGR 0020 Probability and Statistics for Engineers I

ENGR 0135: Statics
ENGR 1010 Communications Skills for Engineers
IE 1081 Operations Research
Buserv 1925 Cost Accounting Concepts

Materials Science
ENGR 0135: Statics
MSE 0048: Energetics I

Mechanical Engineering
ENGR 0135: Statics
ME 0050: Thermodynamics

Speech 101 Public Address

Physics 330 Electricity and Magnetism
Physics 352 Optics and Laser Physics

Math 351 Mathematical Probability I and Statistics I and Math 352 Mathematical Probability and Statistics II
Physics 319 Classical Mechanics
Speech 101 Public Address

Math 262 Operations Research
Management 353 Cost Accounting

Physics 319 Classical Mechanics
Physics 312 Thermodynamics and Statistical Physics

Physics 319 Classical Mechanics
Physics 312 Thermodynamics and Statistical Physics
University of Pittsburgh School of Engineering Contacts

For assistance with transfer admission questions:
Contact the Engineering Student Services Office:

B80H Benedum
Pittsburgh, PA 15261
412-624-9825

For assistance with student records questions:
Contact the School of Engineering Office of Administration:

Betty Victor
Director
bvictor@engrmg.pitt.edu
412-624-9800

Rama Bazaz
Associate Director
paurb4@vms.cis.pitt.edu
412-624-9801

For assistance with administrative and academic questions:
Contact the Associate Dean's Office:

Larry Shuman
Associate Dean for Academic Affairs
shuman@engrmg.pitt.edu
412-624-9814

Marcia Lasky
Administrative Assistant
assec@engrmg.pitt.edu
412-624-9815

For additional information about our institution, visit our web site(s):
University of Pittsburgh: http://www.pitt.edu/
School of Engineering: http://www.engrmg.pitt.edu
<table>
<thead>
<tr>
<th>Department</th>
<th>Undergraduate Coordinator</th>
<th>Telephone</th>
<th>E-mail</th>
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<tbody>
<tr>
<td>Bioengineering</td>
<td>Mark Redfern</td>
<td>412-624-6445</td>
<td><a href="mailto:Redfernms@max.upmc.edu">Redfernms@max.upmc.edu</a></td>
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<tr>
<td>Chemical and Petroleum Engineering</td>
<td>Robert Enick</td>
<td>412-624-9649</td>
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</tr>
<tr>
<td>Civil and Environmental Engineering</td>
<td>Attila Sooky</td>
<td>412-624-9869</td>
<td><a href="mailto:sooky@civ.pitt.edu">sooky@civ.pitt.edu</a></td>
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<td>412-624-9676</td>
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<td>412-624-3244</td>
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<td><a href="mailto:maran@engrmp.pitt.edu">maran@engrmp.pitt.edu</a></td>
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