



# ASSOCIATE of SCIENCE in ENGINEERING at COLLEGE OF SOUTHERN MARYLAND to

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

TEMPLE UNIVERSITY OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION (Effective Fall 2021)

College of Southern Maryland (CSM) and Temple University (Temple) enter into this agreement in order to facilitate the transfer of students who have entered the Associate of Science in Engineering at College of Southern Maryland into Temple's Bachelor of Science in Mechanical Engineering in the College of Engineering.

Once students transfer to Temple University, they shall be able to complete the Bachelor of Science in Mechanical Engineering within four (4) regular semesters of full-time enrollment, assuming that no remedial or repeated courses are needed, that the recommended course are successfully completed, and all applicable Temple grade and other requirements are met to the satisfaction of Temple.

Students who complete College of Southern Maryland curriculum specified in the required course equivalencies table on page 4 of this agreement are guaranteed the transfer credit for courses as indicated in that section. Courses not listed there but brought into Temple in transfer by a student covered by this agreement, will be granted credit according to standard Temple-College of Southern Maryland equivalencies.

This agreement does not change the regular Temple policy that grants transfer credit to courses taken elsewhere only if they were completed with a grade of C or higher. Nor does this agreement waive Temple's minimum score requirements for transfer credit through testing (Advanced Placement Tests, International Baccalaureate Exams, the College Level Examination Program, or DANTES Subject Standardized Tests). While students may transfer under this agreement, should they not meet transfer grade or score requirements, those credits will not be counted by Temple toward graduation. This may require more than four regular full-time semesters of course work to complete Temple's program. For a detailed listing of required scores, visit <a href="https://www.temple.edu/vpus/transfer/priorlearning.html">https://www.temple.edu/vpus/transfer/priorlearning.html</a>.

Students who transfer under the terms of this agreement are responsible for meeting requirements in their major field of study, and any other curricular requirements applying to all Temple students, that were in effect at Temple at the time of their admittance to Temple. These students will abide by the policies and procedures, and any revisions thereof, that apply to all Temple students.

This agreement does not cover students who transfer from College of Southern Maryland to Temple without an Associate of Science in Engineering degree.

#### TERMS AND CONDITIONS OF ADMISSION TO TEMPLE

- 1) Students entering Temple under the terms of this agreement must meet all regular Temple admission requirements and all applicable Temple requirements and deadlines pertaining to application for admission and payment of tuition and fees.
- 2) Evaluation of transfer credit is based on a student's major, and the student's Temple school/college makes the final determination of which transfer credits are applicable to the student's degree program. Transfer evaluations may change for students who change majors.
- 3) Because the College of Southern Maryland Associate of Science in Engineering degree is not approved for GenEd-to-GenEd Transfer to Temple, students under this program agreement must satisfy Temple's 45+ General Education Curriculum (GenEd) requirements.

CSM A.S. in Engineering to Temple B.S. in Mechanical Engineering (Effective Fall 2021)





4) Temple University requires that all undergraduate degree candidates complete 45 hours of the last 60 hours of the degree or program as matriculated students at Temple University. If a matriculated student previously took Temple courses on a non-matriculated basis, those courses are counted towards this requirement.

#### JOINT RESPONSIBILITIES FOR MAINTENANCE OF THIS AGREEMENT

College of Southern Maryland will maintain and distribute information about the current form of this agreement, and any changes relevant to it, to students, counselors, faculty and advisors.

Temple University's College of Engineering will keep appropriate Temple offices (including the Office of Undergraduate Studies and the Undergraduate Admissions Office) informed of this agreement and any modifications thereto and will be responsible for distributing information concerning any changes.

Both institutions will encourage College of Southern Maryland students to meet with representatives of Temple University to discuss issues related to admissions and financial aid well in advance of their expected date of entry.

Faculty from each institution teaching in the curriculum for which this agreement has been developed will be encouraged to meet to discuss issues of curriculum and student development.

Temple University and College of Southern Maryland will collaborate when possible, on research activities that will help assess the effectiveness of this transfer program in meeting the needs of students transferring form College of Southern Maryland to Temple University.

## REVISION, RENEWAL AND TERMINATION OF THIS AGREEMENT

Temple University's College of Engineering and the Transfer Office at College of Southern Maryland are responsible for identifying, and communicating to each other, changes in their respective courses, requirements, or polices that affect this agreement.

This agreement will be in effect as of the Fall 2021 semester and will be reviewed annually by Temple College of Engineering and the Transfer Office at College of Southern Maryland will automatically be renewed until superseded by a new agreement, addendum, or formal termination. Revisions in the course equivalency lists may be made with the verbal consent of the representatives of the two schools; major revisions to this agreement require their signatures on a letter of agreement or a revised version of the agreement. All revisions, however, require that documentation is sent and approved by the Office of Undergraduate Studies at Temple University to ensure that updates are made to the appropriate systems in order to effectively implement this agreement. Either institution may terminate this agreement at any time by written notice at least one year in advance of the effective date of termination. Should this agreement be terminated, it is understood that the termination will not apply to students already accepted to Temple University under the terms of this agreement, but not yet enrolled in classes at Temple.

College of Southern Maryland and Temple University understand that they shall act in an independent capacity in the performance of this agreement, and shall not be considered as employees, agents, affiliates, or subsidiaries of each other. Neither Temple University nor College of Southern Maryland have the right to bind or obligate one another in any manner inconsistent with or unrelated to this agreement. This agreement is governed by the laws of the Commonwealth of Pennsylvania.



FOR COLLEGE OF SOUTHERN MARYLAND



FOR TEMPLE UNIVERSITY OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION

### **SIGNATURES**

The willingness of both institutions to enter this agreement in order to facilitate the transfer of students from College of Southern Maryland to Temple University and to expand their opportunities for academic success at Temple is indicated by the following signatures.

# Maureen Murph Gregory N. Mandel Maureen Murphy President Interim Provost 10/11/2021 Oct 11, 2021 Rodney Redmond odney Redmond (Oct 11, 2021 15:00 EDT) Rodney Redmond Keya Sadeghipour Provost & Vice President of Learning Dean, College of Engineering Oct 11, 2021 Date: 10/5/2021 Date: Tracy Harris Kenneth Kaiser Vice President of Student Equity and Success Chief Administrative Officer Oct 12, 2021 Date: Oct 4, 2021 Date:





Associate of Science in Engineering Note 1
at College of Southern Maryland
to Bachelor of Science in Mechanical Engineering
at Temple University College of Engineering
(Effective Fall 2021)

College of Southern Maryland Recommended Course			Temple University Equivalent	
First Semester		Credit	First Semester	
EGR 1100	Introduction to Engineering	3	ENGR 1101	Introduction to Engineering & Engineering Technology
ENG 1010	Composition and Rhetoric	3	ENG 0802	Analytical Reading & Writing
MTH 1200	Calculus I and Analytic Geometry Note 2	4	MATH L***	Lower Level Elective- MATH
	General Chemistry I/	7	CHEM 1031/	General Chemistry I/
CHE 1200/	General Chemistry II		CHEM 1031/	General Chemistry II
CHE 1210	OR	3	OR	OR
OR CHE 1350	Recommended: General Chemistry for Engineering Note 3	Ü	CHEM 1035	Chemistry for Engineers
Art GenEd	See CSM Requirements Note 1, Note 4	3		Dependent upon course selection Note 12
	Semester Total:	16		
Second Semester			Second Semester	
EGR 1210	Statics	3	ENGR 2331	Engineering Statics
MTH 1210	Calculus II Note 2	4	MATH L***	Lower Level Elective-MATH
PHY 1210/ PHY 1210L	Calculus Based Physics I: Mechanics and Fluids/ Calculus Based Physics I: Lab Note 5	4	PHYS L***	Lower Level Elective- PHYS
Humanities GenEd	See CSM Requirements Note 1, Note 8	3	-	Dependent upon course selection Note 12
Social/Behavioral Science GenEd	See CSM Requirements Note 1, Note 11	3		Dependent upon course selection Note 12
	Semester Total:	17		
Third Semester			Third Semeste	er in the second of the second
Elective	Recommended: CSC 2020: Computing Fundamentals for Engineers Note 5	3	ENGR T***	Elective- ENGR
MTH 2210	Differential Equations	4	MATH 2041	Differential Equations I
Elective	Recommended: EGR 2720: Introduction to CAD Note 7	2	ENGR 1117	Engineering Graphics
MTH 2200	Calculus III Note 2	4	MATH L***	Lower Level Elective- MATH
PHY 2200/ PHY 2200L	Calculus Based Physics II: Vibrations, Heat and Electricity/Calculus Based Physics II: Lab Note 5	4	PHYS L***	Lower Level Elective- PHYS
	Semester Total:	17		
Fourth Semester			Fourth Semes	ter
Elective	Recommended: EGR 2200: Mechanics of Materials <sup>Note 9</sup>	3	ENGR 2333	Mechanics of Solids
PHY 2210 /2210L	Calculus Based Physics III: Magnetism, Optics, and Modern Physics/Calculus Based Physics III: Lab Note 5	4	PHYS L***	Lower Level Elective- PHYS
Elective	Recommended: EGR 2210: Dynamics Note 10	3	ENGR 2332	Engineering Dynamics
Social/Behavioral Science GenEds	See CSM Requirements Note 1, Note 11	6		Dependent upon course selection Note 12
	Semester Total:	16		
	Total Credits Taken	66		





#### Notes:

- 1.) Students who transfer with an A.S. in Engineering from College of Southern Maryland require certification that five (5) social science and/or humanities classes have been completed for students to transfer as GenEd-to-GenEd; students who are not certified as GenEd-to-GenEd will be required to complete Temple's 45+ General Education requirements. If course recommendations at College of Southern Maryland are followed, then students will have the remaining GenEd areas to satisfy for the 45+ General Education program upon transfer to Temple: Intellectual Heritage I: The Good Life or Intellectual Heritage II: The Common Good (choose one). Students may complete courses in these General Education areas prior to transferring to Temple. For more information about how selected courses might transfer to Temple University, refer to Temple University's Transfer Equivalency Tool: <a href="https://admissions.temple.edu/apply/transfer-students/transfer-equivalency-tool">https://admissions.temple.edu/apply/transfer-students/transfer-equivalency-tool</a>) Students who do not take the recommended courses at College of Southern Maryland may require additional time to degree completion.
- 2.) Students who successfully complete MTH 1200: Calculus I and Analytic Geometry, and MTH 1210: Calculus II, and MTH 2200: Calculus III will satisfy Temple MATH 1041: Calculus I, MATH 1042: Calculus II, and MATH 2043: Calculus III through a DARS exception. Student transferring without these courses may require additional time to degree completion.
- 3.) It is strongly recommended students select CHE 1350: General Chemistry for Engineering. CHE 1350: General Chemistry for Engineering transfers to Temple as CHEM 1035: Chemistry for Engineers and satisfies a major requirement. CHE 1350 will also satisfy CHEM 1033: General Chemistry Laboratory I through a DARS exception. Student transferring without this course may require additional time to degree completion.
- 4.) It is strongly recommended students select an Art GenEd course that transfers to Temple to fulfill Temple's GenEd Arts requirement. Students transferring without this course may require additional time to degree completion. For more information about how selected courses might transfer to Temple University, refer to Temple University's Transfer Equivalency Tool: <a href="https://admissions.temple.edu/apply/transfer-students/transfer-equivalency-tool">https://admissions.temple.edu/apply/transfer-students/transfer-equivalency-tool</a>)
- 5.) Students who successfully complete PHY 1210/PHY 1210L: Calculus Based Physics I: Mechanics and Fluids/ Calculus Based Physics I: Lab, and PHY 2200/ PHY 2200L: Calculus Based Physics II: Vibrations, Heat and Electricity/Calculus Based Physics II: Lab, and PHY 2210: Calculus Based Physics III: Magnetism, Optics, and Modern Physics/Calculus Based Physics III: Lab will satisfy Temple PHYS 1061: Elementary Classical Physics I and PHYS 1062: Elementary Classical Physics II through a DARS exception. Student transferring without these courses may require additional time to degree completion.
- 6.) It is strongly recommended students select CSC 2020: Computing Fundamentals for Engineers to satisfy CSM's elective requirement. CSC 2020: Computing Fundamentals transfers to Temple as ENGR T\*\*\*: Engineering Elective. CSC 2020 will satisfy ENGR 1102: Introduction to Engineering Problem Solving through a DARS exception. Students transferring without this course may require additional time to degree completion.
- 7.) It is strongly recommended students select EGR 2720: Introduction to CAD to satisfy CSM's elective requirement. EGR 2720: Introduction to CAD transfers to Temple as ENGR 1117: Engineering Graphics. ENGR 1117 will satisfy MEE 1117: Fundamentals of Mechanical Engineering Design through a DARS exception. Students transferring without this course may require additional time to degree completion.
- 8.) It is strongly recommended students select a Humanities GenEd course that transfers to Temple to fulfill Temple's GenEd Race and Diversity requirement. Students transferring without this course may require additional time to degree completion. For more information about how selected courses might transfer to Temple University, refer to Temple University's Transfer Equivalency Tool: <a href="https://admissions.temple.edu/apply/transfer-students/transfer-equivalency-tool">https://admissions.temple.edu/apply/transfer-students/transfer-equivalency-tool</a>)
- 9.) It is strongly recommended students select EGR 2200: Mechanics of Materials to satisfy CSM's elective requirement. EGR 2200: Mechanics of Materials transfers to Temple as ENGR 2333: Mechanics of Solids and satisfies a major requirement. Students transferring without this course may require additional time to degree completion.
- 10.) It is strongly recommended students select EGR 2210: Dynamics to satisfy CSM's elective requirements. EGR 2210: Dynamics transfers to Temple as ENGR 2332: Engineering Dynamics and satisfies a major requirement. Students transferring without this courses may require additional time to degree completion.
- 11.) It is strongly recommended students select Social/Behavioral Science GenEd courses that transfer to Temple to fulfill Temple's GenEd Human Behavior and World Society requirements. Students transferring without these courses may require additional time to degree completion. For more information about how selected courses might transfer to Temple University, refer to Temple University's Transfer Equivalency Tool: <a href="https://admissions.temple.edu/apply/transfer-students/transfer-equivalency-tool">https://admissions.temple.edu/apply/transfer-students/transfer-equivalency-tool</a>)
- 12.) For more information on how individual courses transfer to Temple, please refer to the Temple Transfer Tool: <a href="https://admissions.temple.edu/transfer-equivalency-tool">https://admissions.temple.edu/transfer-equivalency-tool</a>





If the suggested classes are successfully completed at College of Southern Maryland and an Associate of Science in Engineering degree is awarded, the remaining four semesters for the **Bachelor of Science in Mechanical Engineering** are as follows:

Fifth Semester		Credits	
	Intellectual Heritage I: The Good Life		
GenEd <sup>Note a, Note b</sup>	OR	3	
	Intellectual Heritage II: The Common Good	Ŭ	
ENGR 3571	Classical and Statistical Thermodynamics	3	
ECE 2112	Electrical Devices & Systems I	3	
ECE 2113	Electrical Devices & Systems I Lab	1	
ENGR 3201	Material Science for Engineers	3	
MEE 2305	Instrumentation and Data Acquisition Lab	1	
Free Elective		3	
	Semester Total:	17	
Sixth Semester			
ENGR 3553	Mechanics of Fluids	3	
MEE 3506	Fluid Mechanics Laboratory	1	
MEE 3301	Machine Theory and Design	3	
MEE 3011	Analysis & Computation of Linear Systems	3	
ENGR 2196	Technical Communication	3	
MEE 3305	Materials Laboratory	1	
ENGR 4169	Engineering Seminar	1	
	Semester Total:	15	
Seventh Semester			
ENGR 4177	Senior Design Project I for Mechanical Engineering	2	
MEE 4572	Heat and Mass Transfer	3	
MEE 3117	Computer-Aided Mechanical Design	3	
MEE XXXX	Mechanical Engineering Technical Elective #1	3	
MEE XXXX	Mechanical Engineering Technical Elective #2	3	
Free Elective		3	
	Semester Total:	17	
Eighth Semester			
ENGR 4296	Senior Design Project II.	3	
MEE 4422/MEE4405	Mechanical Vibrations/ Vibrations Laboratory		
OR	OR		
MEE 4571/ MEE 4506	Advanced Thermodynamics and Combustion/ Energy Conversion	4	
	Laboratory		
MEE XXXX	Mechanical Engineering Technical Elective #4	3	
ENGR 3001	Engineering Economics	3	
	Semester Total:	13	
Credits transferred as part of the A.S. in Engineering at CSM:			
Remaining B.S. in Mechanical Engineering Requirements to complete at Temple:			
	Total Credits for the B.S. in Mechanical Engineering	128	

#### Notes:

- a.) Students who transfer with an A.S. in Engineering from the College of Southern Maryland require certification that five (5) social science and/or humanities classes have been completed for students to transfer as GenEd-to-GenEd; students who are not certified as GenEd-to-GenEd will be required to complete Temple's 45+ General Education requirements. If course recommendations at College of Southern Maryland are followed, then students will have the remaining GenEd areas to satisfy for the 45+ General Education program upon transfer to Temple: Intellectual Heritage I: The Good Life or Intellectual Heritage II: The Common Good (choose one). Students who do not take the recommended courses at College of Southern Maryland may require additional time to degree completion.
- b.) To earn the B.S. in Mechanical Engineering degree, a student must complete a minimum of 128 credits. Students who transfer with an A.S. in Engineering from the College of Southern Maryland and are certified as completing five (5) social science and/or humanities classes will transfer as GenEd-to-GenEd and will be required to take a Free Elective instead of Intellectual Heritage I: The Good Life or Intellectual Heritage II: The Common Good.

CSM A.S. in Engineering to Temple B.S. in Mechanical Engineering (Effective Fall 2021)

Page 6 of 7





- c.) Students can complete courses in these General Education areas prior to transferring to Temple. For more information about how selected courses might transfer to Temple University, refer to Temple University's Transfer Equivalency Tool: <a href="https://admissions.temple.edu/apply/transfer-students/transfer-equivalency-tool">https://admissions.temple.edu/apply/transfer-students/transfer-equivalency-tool</a>)
- d.) Inquiries specific to the Temple's Mechanical Engineering program or specific course requirements can be directed to Shawn Fagan, College of Engineering Assistant Dean of Undergraduate Affairs, <a href="mailto:sfagan@temple.edu">sfagan@temple.edu</a>.
- e.) Temple University requires that all undergraduate degree candidates complete 45 hours of the last 60 hours of the degree or program as matriculated students at Temple University. If a matriculated student previously took Temple courses on a non-matriculated basis, those courses are counted towards this requirement.
- f.) Per Temple's Transfer Policy for <u>Permission to Complete a Course at Another Institution after Matriculation</u>, students who transfer 60 credits or more cannot receive permission to transfer additional course work after matriculation.