



**Addendum to the Memorandum of Understanding of 3+1+1 Program Educational Cooperation Between  
The University of Central Missouri  
And  
Hengshui University**

This Addendum, effective as of the date of signature, is an extension of the Memorandum of Understanding of “3+1+1” Program Educational Cooperation between the University of Central Missouri and Hengshui University (hereinafter referred to as the "Parent Agreement"). It formalizes the transfer of specific Mathematics, Actuarial Science and Statistics, and Biology courses between Hengshui University (HSU) and the University of Central Missouri (UCM). This ensures a seamless transition for students pursuing a “3+1+1” pathway in the following majors:

- Mathematics, BS
- Actuarial Science and Statistics, BS
- Biology, BS

Additionally, this Addendum provides clarity on course equivalencies between the two institutions.

**I. Articulated Courses**

The following tables outline the approved course equivalencies between Hengshui University and the University of Central Missouri. These courses, once accepted as substitutions, will now be formally articulated for transfer credit from HSU to UCM.

**Actuarial Science and Statistics**

UCM Course Prefix/#	UCM Course Name	UCM Hrs	HSU Course #	HSU Course Name	HSU Hrs
<b>Major Required</b>					
ACST 2310	Statistics and Data Analysis	3	HQ166015H	Statistical Software Package	3
ACST 3311	Intro to Prob & Statistics	3	XB166005	Probability Theory	3
ACST 4312	Probability Models	3	TX166014	Mathematical Statistics Basics	3
ACST 4321	Regression Analysis	3	HB166008H	Applied Regression Analysis	2.5
ACST 4322	Time Series Models and Analysis	3	HB166009H	Applied Time Series Analysis	2.5
MATH 1040	Intro to the Math Sciences	1	HQ166004	An Introduction to Applied Statistics	1.5
MATH 1151	Calculus I	5	XB166008	Mathematical Analysis 1	6
MATH 1152	Calculus II	5	XB166009	Mathematical Analysis 2	6
MATH 2153	Calculus III	3	HQ166020H	Modeling Method and Application	3
MATH 2410	Discrete Mathematics	3	XB166010	Advanced Algebra 1	3.5
MATH 3710	Linear Algebra	3	XB166011	Advanced Algebra 2	3.5
CS 1100	Computer Programming I	3	HQ166010H	Fundamentals of Statistical Programming	2



Electives					
ACST 4335	Multivariate Statistical Analysis	3	HB166013H	Applied Multivariate Statistical Analysis	3
CS 4600	Database Theory and Applications	3	TX166007H	Database Technology	1.5
DSA 4620	Big Data Analysis	3	HQ166017H	Big Data Technology and Application	2.5
MATH 3151	Differential Equations	3	XB166007	Differential Equation	2

### Mathematics

UCM Course Prefix/#	UCM Course Name	UCM Hrs	HSU Course #	HSU Course Name	HSU Hrs
<b>Major Required</b>					
MATH 1040	Intro to the Math Sciences	1	MATH 1040	Security Education	2
MATH 1151	Calculus I	5	XJ161001M	Mathematical Analysis I	5
MATH 1152	Calculus II	5	XJ161002M	Mathematical Analysis II	8
MATH 2153	Calculus III	3			
MATH 2410	Discrete Mathematics	3	ZJ161003M	Discrete Mathematics	3
MATH 3151	Differential Equations	3	XJ161008M	Ordinary Differential Equations	3
MATH 3710	Linear Algebra	3	XJ161004M	Advanced Algebra	3
MATH 4710	Algebraic Structures	3	ZJ161001M	Modern Algebra	6
MATH 4711	Modern Algebra I	3			
ACST 3311	Intro to Prob & Statistics	3	XJ161007M	Probability Theory and Mathematical Statistics	3
ACST 4335 <i>Used as a substitution for: ACST 2310</i>	Multivariate Statistical Analysis	3	ZJ161011M	Multivariate Statistical Analysis	3
CS 1100	Computer Programming I	3	GB164001H M	Fundamentals of University Computer	3
<b>Electives</b>					
ACST 4910	Special Topics in Actuarial Science or Statistics: SP Numerical Analysis	3	ZJ161006M	Numerical Analysis	3
MATH 4171	Functions of a Complex Variable	3	ZJ161005M	Theory of Complex Functions	3
MATH 4910	Special Problems in Math: SP Math Modeling	3	ZJ161008SM	Mathematical Modeling	3
MATH 4910	Special Problems in Math: SP Optimztn & Optin Rerch	3	ZJ161007M	Operations Research and Optimization Algorithm	3
<b>Additional Electives</b>					
CS 1030	Python Programming I	3	ZJ161010M	Python Program Design	3

### Biology

UCM Course Prefix/#	UCM Course Name	UCM Hrs	HSU Course #	HSU Course Name	HSU Hrs
<b>Major Required</b>					
BIOL 1000	Biology seminar I	0.5	ZS191107S	Comprehensive Internship of Animals and Plants	2
BIOL 2000	Biology seminar II	0.5			
BIOL 3001	Biology seminar III	0.5			
BIOL 1500	General Biology I	3	HB191023	Molecular Biology	3
			HB191024S	Molecular Biology Experiment	0.5





BIOL 2020	General Ecology	3	HB191025H	Ecology	2.5
BIOL 2512	Cell Biology	3	HB191021	Cell Biology	3
			HB191022S	Cell Biology Experiment	1
BIOL 3511	Genetics	4	HB191019	Genetics	3
			HB191020S	Genetics Experiment	1
Math 1111	College Algebra	3	XB163005	Advanced Mathematics B1	3
CHEM 1131	General Chemistry I	5	XB191001	Basic Chemistry	3
			XB191002S	Basic Chemistry Experiment	1+ 0.5
CHEM 1132	General Chemistry II	5	XB191005	Biochemistry	3.5
			XB191006S	Biochemistry Experiment	1
Required Emphasis Area Courses					
BIOL 1111 <i>Emphasis Area: 1,2,3,4a,7,8</i>	Plant Biology	4	XB191003	Plant Morphology and Anatomy	1.5
			XB191004S	Plant Morphology and Anatomy Experiment	1+0.5
BIOL 1112 <i>Emphasis Area: 1, 2, 3, 4b, 7, 8</i>	Animal Biology	4	XB191009	General Zoology	3.5
			XB191010S	General Zoology Experiment	1
BIOL 3401 <i>Emphasis Area: 6</i>	Human Anatomy	3	HB191013	Human Histology and Anatomy	2
			HB191014S	Human Histology and Anatomy Experiment	0.5
BIOL 3402 <i>Emphasis Area: 6</i>	Animal Physiology	4	HB191017	Human and Animal Physiology	3
			HB191018S	Human and Animal Physiology Experiment	0.5
BIOL 3610 <i>Emphasis Area: 1,2, 3, 6, 8</i>	Microbiology	4	HB191011	Microbiology	2.5
			HB191012S	Microbiology Experiment	1+ 0.5
BIOL 3711 <i>Emphasis Area: 2, 3, 4a, 7</i>	Plant ID	4	XB191007	Plant Systematic Taxonomy	2
			XB191008S	Plant Systematic Taxonomy Experiment	1+ 0.5
BIOL 4411 <i>Emphasis Area: 4a</i>	Plant Physiology	4	HB191015	Plant Physiology	3
			HB191016S	Plant Physiology Experiment	1
BIOL 4013 <i>Emphasis Area: 1, 2, 3, 4, 5,</i>	Biostatistics	3	TX191005H	Biostatistics	1.5+0. 5

While the courses listed under specific emphasis areas are required for those tracks at UCM, they may also be applied as acceptable electives in other areas of the degree. This flexibility should not be misinterpreted as limiting the applicability of the courses to only one emphasis.

### Non-Science and Mathematical General Education Courses

UCM Course Prefix/#	UCM Course Name	UCM Hrs	HSU Course #	HSU Course Name	HSU Hrs
ENGL 1020	Composition I	3	GB251002M	College Writing and Reading I	3
ENGL 1030	Composition II	3	GB251002M	College Writing and Reading II	3
COMM 1000	Public Speaking	3	GB281008M	Comprehensive English	15
ART 1610	Web Languages	3	GX281023M	The Computer Web Language	3
LIS 1600	University Library and Research Skills	2	GX281018M	The Library Information Retrieval	3



MUS 1210 DANC 2100	Experiencing Music Dance Appreciation	3	GX281030 M GX281034 M	Experiencing Music Dance Appreciation	3
GNED1909 GNED1909	Literature Requirement	3	GX291022 M GX291027 M	The American Literature A Guide to World Famous Books	3
CHIN1701	Elementary Chinese I	3	GB131001M	College Chinese Language and Literature	3
PHYS 1101	College Physics I	4	GB281024M	College Physics and Experiments A	7
OR					
PHYS 1103	Introduction to the Sciences: Physics	3			
BIOL 1005	Intro to Environmental Science	3	TX191012H	Wetland Plant Resources	1+ 0.5
			TX191001H	Wetland Bird Resources	1
GNED1907	History Requirement (State Law Exam still Necessary)	3	GB281031M	Modern History of the World	3
ECON 1010	Macroeconomics	3	GX281020 M	Macroeconomics	3
ECON 1011	Microeconomics	3	GX281019 M	Microeconomics	3

## II. Course Transfer Guidelines

- **Eligibility for Transfer:** The courses listed in the tables above are eligible for transfer and may be applied toward graduation requirements in the corresponding UCM degree programs, provided students meet the grade requirements outlined in the UCM Catalog.
- **Credit Hour Conversion:** The credit hours for HSU courses will be transferred according to the credit hour value assigned by HSU, rather than the UCM equivalent.

## III. Course Review and Updates

This Addendum will be reviewed during the renewal process of the existing Parent Agreement to ensure that the listed courses continue to meet the necessary academic standards for transfer. Any proposed changes will require mutual agreement from both UCM and HSU.

**IV. Disputes:** Disputes will be handled in accordance with the dispute resolution procedures outlined in the Parent Agreement. If any disputes arise that are not explicitly covered under the Parent Agreement, both institutions will engage in good faith discussions to reach a resolution before escalating to formal procedures.

**V. Modification:** This Addendum may be modified only through written amendment, signed by authorized representatives of both institutions.

**VI. Validity:** This Addendum remains in effect for the duration of the Parent Agreement unless amended or terminated by mutual written consent.



**IN WITNESS WHEREOF**, the University of Central Missouri and Hengshui University have executed this Addendum to the Agreement as of the date of signature.

Signed on behalf of:  
University of Central Missouri

Roger Best  
Roger Best  
President

July 10, 2025 Date

Signed on behalf of:  
Hengshui University

Niu Zebin  
Niu Zebin  
Secretary of the University Party Committee



2025.6.5 Date