

FINAL DRAFT

PENNSYLVANIA STATEWIDE PROGRAM-TO-PROGRAM ARTICULATION AGREEMENT IN GEOGRAPHY

I. INTRODUCTION

In accordance with Article XX-C of the Public School Code of 1949, institutions participating in Pennsylvania's statewide college credit transfer system agree to the following policies governing the transfer of credit earned at a participating associate degree-granting institution into a parallel bachelor degree program at a participating institution.

Specifically, this Agreement ensures that a student who successfully completes an Associate of Arts (AA) or Associate of Science (AS) degree in Geography, or any AA or AS degree that incorporates the required competencies, at a participating institution in Pennsylvania can transfer the full degree, its credits and coursework, into a parallel bachelor degree program at a participating college or university with full junior standing.

Full junior-standing will be granted to students transferring a completed AA or AS degree into a parallel bachelor degree program at a participating institution provided that the student has successfully completed:

- a minimum of 60 college-level credits;
- all of the required competencies identified in this agreement;
- a minimum of six (6) college-level credits in Geography; and
- At least 24 credits of foundation-level coursework from the Transfer Credit Framework, including English Composition and College Algebra or higher math.

See Appendix A: Major Requirements for Program-to-Program Articulation in Geography.

Students meeting these criteria will be considered by participating bachelor degree-granting institutions to possess the content area knowledge and academic skills necessary for transfer with junior standing into a parallel bachelor degree program in Geography.

II. OVERVIEW

Geography is an integrated discipline which uses a spatial perspective to interpret and analyze both physical and human characteristics on the Earth, and determine the why behind the spatial patterns and processes. Geographers use maps, graphs, verbal descriptions, mathematical models, and Geographic Information Systems to describe, model, explain and predict how things are arranged in space, and how humans interact with this environment.

Geography degree programs vary, allowing students to focus on the general discipline, or a specific sub-discipline or application such as: Planning, GIS, Environmental Studies, Geographic Education, or International or Regional Studies. No accrediting body provides guidelines for Geography degrees, and the discipline lacks a common curricular foundation. This presents a challenge to coordinating curricula across a large number of independent institutions of higher education.

While there are not common prescribed courses, there are a number of broad subject areas that a student should be exposed to in order to be successful in advanced coursework in Geography. According to the National Geography Education Standards developed by the National Council for Geographic Education (NCGE) and the Association of American Geographers (AAG) a student should be exposed to both natural (physical) and cultural (human) processes patterning the earth's surface, as well as regionalization and map use within a liberal arts curriculum, in order to succeed in advanced study (<https://netforum.avectra.com/eWeb/DynamicPage.aspx?Site=Test One&WebCode=GeographyStandards>). The

standards are somewhat general in nature and are specified for geography education at all levels. This articulation agreement proposes a general structure, based on these guidelines, that provides a common baseline to allow students at associate degree-granting institutions covered by this agreement to transfer their associate degree to the participating bachelor degree-granting institutions. At the same time, this model provides bachelor degree-granting institutions the flexibility to identify the remaining requirements for the parallel degree programs offered at their institutions.

The most advancement in developing competency-based standards in geographic education at the university level has been in the area of geospatial technologies. In 2005, the U.S. Department of Labor recognized geospatial technologies as one of 14 existing or emerging industries that are being transformed by technology and innovation and adding a substantial number of jobs to the U.S. economy. (U.S. Department of Labor, 2005.) In response, there is a competency-based effort that is underway in identifying core competencies in geospatial technology education (UCGIS). The U.S. Department of Labor recently released a Geospatial Technology Competency Model which can serve as a guide for curriculum development and education (www.careeronestop.org/competencymodel/).

By completing an associate's degree that contains **a minimum of six (6) college-level credits in Geography as defined in this Agreement, in combination with a minimum of 24 credits of foundation-level coursework from the Transfer Credit Framework** (see Appendix B), students will possess the knowledge, skills and abilities required to enter a parallel bachelor degree program as a junior at a participating institution.

III. **REQUIRED Major-Specific Content**

Under this Agreement, a fully transferable associate degree in Geography must include at least six (6) college-level credits that incorporate all of the competencies identified in **at least two of the three broad content areas**:

1. **Physical Geography**
2. **Cultural Geography**
3. **World Regions or sub-regions**

The competencies required in each Major Content Areas are outlined below. Students should complete at least six credits from at least two of the three content areas.

1. **Physical Geography**

Students should have a demonstrated understanding of the basic concepts and ideas in geography:

- Competency 1: Concepts of scale, region, location, distance, distribution & diffusion.*
- Competency 2: Spatial analytic processes and decision making.*
- Competency 3: Geographic visualization and imagination.*
- Competency 4: Thematic map interpretation.*
- Competency 5: Locational map use.*
- Competency 6: Basic history of geography as a discipline.*

In addition, students should have demonstrated understanding of the *natural* processes that have created patterns on the earth's surface and how those processes affect and are affected by humans. The minimum competencies in this content area are:

- Competency 7: Topographic map interpretation.*
- Competency 8: Spatial patterns of tectonic and gradational geomorphological processes.*
- Competency 9: Spatial patterns of hydrological processes.*
- Competency 10: Spatial patterns of atmospheric & climatological processes.*
- Competency 11: Spatial patterns of ecological processes including soils and vegetation.*
- Competency 12: Natural resources & limitations for sustainability.*

2. Cultural Geography

Students should have a demonstrated understanding of the basic concepts and ideas in geography:

- Competency 1: Concepts of scale, region, location, distance, distribution & diffusion.*
- Competency 2: Spatial analytic processes and decision making.*
- Competency 3: Geographic visualization and imagination.*
- Competency 4: Thematic map interpretation.*
- Competency 5: Locational map use.*
- Competency 6: Basic history of geography as a discipline.*

In addition, students should have demonstrated understanding of the *cultural* processes that have created patterns on the earth's surface and how these *cultural* processes affect and are affected by their landscapes. The minimum competencies in this content area are:

- Competency 7: Spatial patterns of cultural identity, migration, diffusion and change.*
- Competency 8: Folk, linguistic and religious building of landscapes.*
- Competency 9: Types of political boundaries.*
- Competency 10: Effects of and effects on regional accessibility.*
- Competency 11: Spatial patterns of economic activities and land uses.*
- Competency 12: Location selection methods for business.*
- Competency 13: Spatial pattern of economic development.*
- Competency 14: Spatial pattern of demographic processes.*
- Competency 15: Examples of sustainable and unsustainable human/environment interactions.*

3. World Regional Geography

Students should have a demonstrated understanding of the basic concepts and ideas in geography:

- Competency 1: Concepts of scale, region, location, distance, distribution & diffusion.*
- Competency 2: Spatial analytic processes and decision making.*
- Competency 3: Geographic visualization and imagination.*
- Competency 4: Thematic map interpretation.*
- Competency 5: Locational map use.*
- Competency 6: Basic history of geography as a discipline.*

Students should have demonstrated knowledge of the spatial patterns of physical and cultural landscapes and regionalization, the major landforms, climates, biomes, cultures, cities and land uses. The minimum competencies in this content area are:

- Competency 7: Regional patterns of mineral and biological resources*
- Competency 8: Regional patterns of human impacts on the natural environment*
- Competency 9: Regional patterns of agriculture, manufacturing and other economic activities.*
- Competency 10: Effects of and effects on regional accessibility.*
- Competency 11: Regional patterns of human population growth, decline and migration*
- Competency 12: Regional patterns of economic development.*
- Competency 13: Regional patterns of urban development.*
- Competency 14: regional patterns of religious, linguistic and ethnic identity.*
- Competency 15: The effects of mobility and communication on regional characteristics.*

This Agreement acknowledges that an institution may offer an associate degree that includes more than the minimum six credits; 9 credits may be necessary to fulfill the competencies depending on the course structures. Depending upon how an institution chooses to deliver the major-specific content competencies, it could embed required competencies in Geography as a Discipline in a 4-credit lab course in Physical Geography, across two 3-credit courses or even through a stand-alone course in Geospatial Technologies. The specific course structure is not important. Making sure that upon completion of the associate's degree, the student has achieved the competencies included in this agreement and is prepared to enter advanced coursework as a junior in the parallel major at a participating bachelor-degree institution, is the only interest of this agreement.

IV. **RECOMMENDED Major-Specific Content Areas**

In addition to the required major competencies listed above, students transferring into a bachelor degree program in Geography would also benefit from acquiring competencies in Geographic Information Systems (GIS).

Geographic Information Systems

GIS is one of a set of geospatial technologies that is central to the study of spatial phenomena. GIS is used in nearly every sub-area of geography. Competencies acquired in the study of GIS at a foundation level make it possible to pursue advanced study of GIS and to apply GIS in a subject area.

Students should have demonstrated knowledge of and skill in the use of GIS. The minimum competencies in this recommended content area are:

- Competency 1: History and components of GIS.*
- Competency 2: Geographic and attribute data types, formats, dimensions & characteristics.*
- Competency 3: Common data sources, reliability and uses.*
- Competency 4: Geographic coordinate systems and geo-coding methods.*
- Competency 5: Basic map components and layout.*
- Competency 6: Selection by attribute.*

The student may have knowledge in the following areas:

- Competency 7: Incorporating Remotely Sensed and GPS data.*
- Competency 8: Selection by location.*
- Competency 9: Vector analysis methods.*
- Competency 10: Raster analysis methods.*
- Competency 11: Publication of map and text reports.*

Students will not be penalized for not completing competencies in this area of study, though exposure to the fundamental elements of GIS would greatly benefit a student transferring at the junior level.

V. **REQUIRED Coursework Out of the Discipline**

All of the participating institutions require students to earn credits outside of their major area of study. This coursework is often referred to as the General Education Curriculum or Distributive Requirements. In order to provide a seamless transition and to ensure that transferring students have the requisite content knowledge to pursue advanced-level instruction in Geography, the articulated associate's degree must include coursework from several broad areas of study outside of Geography.

Therefore, in addition to the Required Major-Specific Content, the articulated associate must also include:

- **A minimum of 24 credits from the Transfer Credit Framework to include**
 - **at least three (3) credits in English Composition from Category 1**
 - **at least three (3) credits from Category 2**
 - **at least three (3) credits of College Algebra or higher mathematics from Category 3.**
 - **at least three (3) credits from Category 4**
 - **at least three (3) credits from Category 5**
 - **at least three (3) credits from Category 6**
 - **at least six (6) additional credits in any combination selected from Categories 4, 5 or 6 in accordance with the recommended Framework category criteria.**

Transfer Credit Framework

The Commonwealth's statewide college credit transfer system includes an advising tool called the "Transfer Credit Framework". The Framework allows students to seamlessly transfer up to 30 credits of foundation level coursework from one participating institution to another and have those credits count towards graduation.

The Framework consists of six categories which include courses in English, public speaking, math, science, art, humanities, history and the behavioral and social sciences. To fully benefit from the

Framework, students are advised to select a range of courses from all six categories as designated in the Transfer Credit Framework Policy noted in Appendix B.

Credit requirements are presented as a range since actual credit number may vary by specific course and institution. Students are advised not to exceed the credit number indicated in each Framework Category. See Appendix B: Transfer Credit Framework.

Some Framework courses are more relevant to the field of Geography than others. Students should work with an academic advisor to select the best options for their major and transfer institution. See *Section VI. Recommended Coursework Outside of the Discipline* and *Appendix A: Program-to-Program Articulation Model in Geography* for a list of recommended Framework courses.

English Composition

Competency in English composition and research are necessary for any geographer to be successful. American Geographers must be able to use and produce spatial descriptions of the earth, as well as be able to use and produce verbal descriptions of spatial patterns on the earth. Because of the location of study and the volume of Geographic publications in English, students entering advanced level coursework in Geography must be able to conduct research and compose English prose.

The following competencies have been identified as essential for comparable preparation in this area:

- Competency 1: Instruction in the writing process.*
- Competency 2: Opportunity to write and revise original works.*
- Competency 3: Application of principles of effective writing in print and digital media formats.*
- Competency 4: Instruction in what constitutes plagiarism and application of strategies to avoid it.*
- Competency 5: Ability to select, integrate, evaluate, and cite secondary sources correctly.*
- Competency 6: Proofread effectively.*

Students will meet this requirement by completing English Composition from Category 1 of the Transfer Credit Framework. See Table 1 and Appendix B.

College Algebra

Physical Geography, Economic Geography and GIS require basic mathematical problem solving and modeling skills. Math is the language of science, including the social sciences.

Many phenomena in the world have an underlying structure which follows basic algebraic rules. One of these structures is the vector space; linear algebra is the area of mathematics that has been developed to model phenomena that satisfy this structure. Competencies acquired in the successful study of college algebra not only make it possible to study and understand the development of vector space models, but also provide the foundation for the study of more advanced algebraic structures.

The following competencies in College Algebra have been identified as essential for comparable preparation in content area:

- Competency 1: Factoring.*
- Competency 2: Algebraic fractions.*
- Competency 3: Radicals and complex numbers.*
- Competency 4: Pythagorean theorem and distance.*
- Competency 5: Function notation and graphing.*
- Competency 6: Systems of linear and quadratic equations.*
- Competency 7: Fractional exponents.*
- Competency 8: Logarithmic functions.*
- Competency 9: Word problem applications.*

Students will meet this requirement by completing College Algebra or higher math from Category 3 of the Transfer Credit Framework. See Table 1 and Appendix B.

NOTE: "Foundations of Mathematics" will not fulfill this requirement. The course does not include the problem solving and modeling necessary for advanced-level coursework in Geography.

Table 1: REQUIRED Framework Courses for Geography Majors

Framework Category	Framework Allows Students to Take...	Geography Majors Are Required to Take <u>at Least 24 Credits</u> as Follows...
Category 1	3-4 credits	At least 3 cr. English Composition
Category 2	3-4 credits	At least 3 cr. in any subject area
Category 3*	Min. 3-4 credits; Max. 6-8 credits	At least 3 cr. College Algebra or higher math*
Category 4*	Min. 3-4 credits; Max. 6-8 credits	At least 3 cr. in any subject area*
Category 5*	Min. 3-4 credits; Max. 6-8 credits	At least 3 cr. any subject area*
Category 6*	Min. 3-4 credits; Max. 6-8 credits	At least 3 cr. in any subject area*

*At least six (6) additional credits in any combination selected from Categories 4, 5 or 6 in accordance with the recommended Framework category criteria.

VI. RECOMMENDED Coursework Outside of the Discipline

As stated previously, some Framework courses are more relevant to the field of Geography than others. Below is a list of recommended courses for each Framework category.

Except for English Composition and College Algebra (or a higher math), the courses listed in the table below are not required as part of the major or to meet the requirements of this agreement. Recommended Framework courses should be regarded as suggestions intended to enhance a student's academic frame of reference as a Geography major. See Table 2 and Appendix B.

Students should work with an academic advisor to select the best options for their major and their transfer institution. Students will not be penalized for not completing recommended coursework prior to transferring.

Table 2: RECOMMENDED Framework Courses for Geography Majors

Framework Category	Framework Allows Students to Take...*	Geography Majors Are RECOMMENDED to Take...
Category 1	3-4 credits	1. At least 3 cr. English Composition* [REQUIRED]
Category 2	3-4 credits	1. Public Speaking
Category 3	Min. 3-4 credits; Max. 6-8 credits	1. At least 3 cr. College Algebra or higher math* [REQUIRED]
Category 4	Min. 3-4 credits; Max. 6-8 credits	1. At least 3 cr. of approved coursework* [REQUIRED] 2. An additional 3-4 cr. of approved coursework in a discipline that is different from the first course <i>(i.e., one Biology course and one Chemistry course, one Chemistry course and one Physics course, etc.)</i>
Category 5	Min. 3-4 credits; Max. 6-8 credits	1. At least 3 cr. of approved coursework* [REQUIRED] 2. An additional 3-4 cr. of approved coursework in a discipline that is different from the first course <i>(i.e., one Psychology course and one Sociology course, one Political Science course and one Economics course, etc.)</i>
Category 6	Min. 3-4 credits; Max. 6-8 credits	1. At least 3 cr. of approved coursework* [REQUIRED] 2. An additional 3-4 cr. of approved coursework NOTE: Students planning to transfer into a parallel Bachelor of Arts degree program are encouraged to use foreign language courses to meet the Category 6 requirements. If students chose a foreign language other than French, Spanish, or German, they should first determine the availability of these courses at the institution to which they wish to transfer.

*This course is REQUIRED in the articulated associate degree. See Section V. REQUIRED Coursework Outside of the Discipline.

Note: Geography is currently not listed as an option in the Transfer Credit Framework. The Program Articulation Committee drafting this agreement encourages the Transfer Articulation Oversight Committee (TAOC) to include foundation-level Geography coursework in the Framework. This would enable students in Geography programs to easily transfer credits among the institutions.

VII. REFERENCES

National Council for Geographic Education, *Geography for Life* National Geography Standards. <https://netforum.avectra.com/eWeb/DynamicPage.aspx?Site=TestOne&WebCode=GeographyStandards> accessed October 31, 2011.

U.S. Department of Labor, 2005, Geospatial Technology Competency Model <http://www.careeronestop.org/competencymodel/pyramid.aspx?GEO=Y> accessed October 31, 2011.

University Consortium for Geographic Information Science's (UCGIS) *Body of Knowledge*; GeoSpatial Workforce Development Center's (GeoWDC) *Geospatial Technologies Competency Model*; Geospatial Information and Technology Association (GITA)/Association of American Geographers (AAG) study, *Defining and Communicating Geospatial Industry Workforce Demand, Phase I Report Recommendations*, and existing DACUMS.

APPENDIX A: Program-to-Program Articulation Model in Geography

Major-Specific Content & Competencies	
REQUIRED	RECOMMENDED
<p>The articulated associate degree must include <u>at least 6 credits from two of the three Major Content Areas:</u></p> <ol style="list-style-type: none"> 1. Physical Geography 2. Cultural Geography 3. World Regional Geography 	<p>In addition to the 6 cr. of Required Major-Specific Content and Competencies, the articulated degree <u>may</u> include:</p> <ol style="list-style-type: none"> 1. Foundation level coursework in Geographic Information Systems (GIS)
Minimum 6 credits	
Coursework Outside of the Discipline	
REQUIRED	RECOMMENDED
<p>The articulated associate degree must include <u>a minimum of 24 credits</u> from the Transfer Credit Framework as follows:</p> <ul style="list-style-type: none"> • Category 1 – at least 3 cr. in English Composition • Category 2 – at least 3 cr. credits • Category 3 – at least 3 cr. of College Algebra or higher mathematics • Category 4 – at least 3 cr. • Category 5 – at least 3 cr. • Category 6 – at least 3 cr. • Categories 4, 5 or 6 – at least 6 cr. of additional coursework selected in accordance with the Framework category criteria. 	<p>It is recommended that the articulated associate degree include at least 30 credits from the Transfer Credit Framework as follows:</p> <ul style="list-style-type: none"> • Category 1 – at least 3 cr. in English Composition [REQUIRED] • Category 2 – Public Speaking • Category 3 – At least 3 cr. College Algebra or higher math [REQUIRED] • Category 4 <ul style="list-style-type: none"> ○ At least 3 cr. of approved coursework [REQUIRED] ○ An additional 3-4 cr. of approved coursework in a discipline that is different from the first course • Category 5 <ul style="list-style-type: none"> ○ At least 3 cr. of approved coursework [REQUIRED] ○ An additional 3-4 cr. of approved coursework in a discipline that is different from the first course • Category 6 <ul style="list-style-type: none"> ○ At least 3 cr. of approved coursework [REQUIRED] ○ An additional 3-4 cr. of approved coursework [Students planning to transfer into a parallel Bachelor of Arts degree program are encouraged to use foreign language courses to meet the Category 6 requirements. If students chose a foreign language other than French, Spanish, or German, they should first determine the availability of these courses at the institution to which they wish to transfer.]
Minimum 24 credits	

Appendix B: Transfer Credit Framework

Students who successfully complete courses from the categories below may transfer those credits toward the graduation requirements of nearly any major offered by the participating institutions. Please be aware that certain majors may have specific requirements prescribed by external agencies. Students should work with an advisor to select appropriate courses as they relate to the major.

Category 1 (3-4 credits total)	Category 2 (3-4 credits total)	Category 3 (min. 3-4 credits; max. 6-8 credits)	Category 4 Must include lab (min. 3-4 credits; max. 6-8 credits)	Category 5 (min. 3-4 credits; max. 6-8 credits)	Category 6 (min. 3-4 credits; max. 6-8 credits)
English Composition	Public Speaking	Foundations of Mathematics	General Chemistry I (majors & non-majors courses)	General Psychology	Introduction to Music
		College Algebra	General Chemistry II (majors & non-majors courses)	Introduction to Sociology	Introduction to Philosophy
		Elementary Statistics	General Biology I (majors & non-majors courses)	American National Government	Elementary Spanish I
		Precalculus	General Biology II (majors & non-majors courses)	Educational Psychology	Elementary Spanish II
		Calculus I	General Physics I (non-calculus)	History of Western Civilization II	Painting I
			General Physics II (non-calculus)	Principles of Macroeconomics	Elementary French I
			Anatomy & Physiology I	Principles of Microeconomics	Elementary French II
			Anatomy & Physiology II	U.S. History I	Drawing I
			Introduction to Astronomy	U.S. History II	Ethics
				History of Western Civilization I	Introduction to Art
				Contemporary Social Problems	German I
				Introduction to Anthropology	German II
				Human Growth & Development	Introduction to Literature (may also be known as Introduction to Poetry, Interpreting Literature, Reading Literature, Theses in Literature, Topics in Literature, Current Themes in Literature)
				Child Psychology	Survey of American Literature
					Literature of the Western World
			World Literature		
			American Literature		
			Survey of English Literature		
			Introduction to Theatre		

ADDENDUM

GENERAL STATEWIDE PROGRAM-TO-PROGRAM ARTICULATION in PENNSYLVANIA

WHEREAS, the General Assembly of the Commonwealth of Pennsylvania enacted Act 114 of 2006, which added to the Public School Code of 1949, Article XX-C entitled “Transfers of Credits Between Institutions of Higher Education” (referred to in this Agreement as the “Statewide Transfer System”);

WHEREAS, Act 114 of 2006 requires all community colleges in Pennsylvania and Pennsylvania State System of Higher Education (PASSHE) universities to participate in the Statewide Transfer System;

WHEREAS, Act 114 of 2006 permits independent and state-related institutions of higher education in Pennsylvania, as each is defined in Article XX-C, to elect to participate in the Statewide Transfer System;

WHEREAS, the General Assembly of the Commonwealth of Pennsylvania enacted Act 50 of 2009, which requires institutions participating in the Statewide Transfer System to accept the transfer of Associate of Arts and Associate Science degrees into parallel baccalaureate programs and recognize all competencies attained within the associate degree program;

WHEREAS, Act 50 of 2009 defines an Associate of Arts (AA) or Associate of Science (AS) degree containing a minimum of 60 college-level credits and designed primarily for transfer to a baccalaureate institution;

WHEREAS, Act 50 of 2009 requires the Transfer Articulation Oversight Committee (TAOC), as established in section 2004-C of the Public School Code of 1949, to identify Associate of Arts and Associate of Science degree programs for transfer with full junior standing into parallel baccalaureate degrees annually; and,

WHEREAS, Act 50 of 2009 requires members of the Transfer Articulation Oversight Committee established in section 2004-C of the Public School Code of 1949, to identify modifications that may be required in existing associate or baccalaureate degrees to satisfy external accreditation or licensure requirement;

All Institutions participating in the Statewide Transfer System enter into this Articulation Agreement and mutually agree as follows:

1. The statewide program-to-program articulation agreement ensures that students who complete an AA or AS degree from a participating institution will have their coursework and credits transfer into a parallel baccalaureate program with full junior standing and without the need for course-by-course equivalency.
2. Students are subject to the admissions and transfer credit policies of the participating institutions. The admissions and transfer credit policies for all of the institutions participating in Pennsylvania’s college credit transfer system can be found at www.PAcollegetransfer.com.
3. The AA or AS degree must include a minimum of 60 college-level credits designed and acceptable for transfer, not including developmental or remedial courses or career, technical or applied courses.
4. The transfer of coursework with a grade less than a C (2.0 on a 4.0 scale) in the AA or AS will be consistent with the policies of native students at the participating college or university.
5. Students and institutional personnel will be able to find out which institutions offer articulated programs by accessing a searchable database located at www.PAcollegetransfer.com. PDE will maintain this database through program information provided to TAOC by the individual participating institutions.
6. **Responsibilities of Associate Degree Institutions**
 - a. The AA or AS degree leading to a parallel bachelor degree will include the minimum number of credits and competencies of major-specific coursework as defined by the Agreement.
 - b. Any remaining AA or AS degree requirements will be accepted from arts and sciences electives designed and acceptable for transfer, not including developmental, remedial, career, technical or applied courses.

- c. By awarding the AA or AS, the Associate Degree Institution is validating that the student has met the competency requirements outlined in the Agreement.

7. Responsibilities of Bachelor Degree Institutions

- a. The Bachelor Degree Institution will recognize all competencies attained within the AA or AS degree and accept a transfer student who has earned the associate degree with full junior standing into a parallel baccalaureate degree program.
- b. All decisions made with respect to the transfer process shall be based on the principle of equivalence of expectations and requirements for native and transfer students.
- c. A transfer student's admission into the parallel baccalaureate degree will be subject to the Bachelor Degree Institution's specific requirements for admission to that major and be consistent with such requirements for native students.

8. Agreement Revision and Assessment

- a. Once a statewide program-to-program articulation agreement has been approved by TAOC, no amendments to the agreement can be offered by any party within the initial six (6) months of the agreement. After that time, a TAOC member with a proposed amendment to an approved agreement should submit the change to PDE.

Amendments that are offered as clarifying or technical but do not alter the substantive portions or intent of the agreement must be forwarded to TAOC. TAOC representatives will have at least thirty (30) days to review, comment and approve or deny the proposed amendments.

Amendments that seek to alter the substantive nature or intent of the agreement in any part must be forwarded to the appropriate PAC for review and consideration. The PAC will then make a recommendation to the TAOC, and TAOC shall approve or deny the proposed amendments.¹

- b. PDE and TAOC will exercise responsibility for monitoring the effectiveness of the Agreement and its implementation.
- c. PDE shall collect data annually from the participating institutions that will enable the Department and TAOC to assess the effectiveness of the implementation of the Agreement in fostering a seamless transfer process and the academic success of transfer students at the senior institutions.

9. Transfer Appeal Process

- a. In accordance with Pennsylvania's Statewide Transfer System, each Bachelor Degree Institution shall have a procedure through which a transfer student can appeal a decision that he/she believes is not consistent with this Agreement.
- b. The Transfer Appeal Process shall be published, at minimum, in the institution's catalog and posted to the Commonwealth's official website of the Statewide Transfer System, www.PAcollegetransfer.com.

10. Institutional Resolution of Disputes

- a. In the event that an Associate Degree Institution considers the decision of a Bachelor Degree Institution to be inconsistent with this Agreement, the Associate Degree Institution shall consult directly with the Bachelor Degree Institution and attempt to resolve the matter.
- b. If the institutions are unable to resolve the issue, the Associate Degree Institution may submit their concern to PDE for consideration by the TAOC Dispute Resolution Committee. The Dispute Resolution Subcommittee will act according to the policies and procedures developed by TAOC as part of the Statewide Transfer System. The determination made by the Dispute Resolution Subcommittee will be binding upon the parties.

¹ Approved by TAOC and added to agreement on August 18, 2011.

11. **Implementation Date and Applicability**

Having fulfilled the requirements outlined in the Program-to-Program Articulation Agreement, students transferring with an AA or AS degree from a participating institution will be considered by the receiving baccalaureate degree institution to have received adequate preparation in the field of study at the foundation level and therefore eligible to transfer as a junior into advanced major coursework.

Participating institutions will enact the Agreement in accordance to the timeline outlined by the TAOC, but no later Fall 2013.²

Continuation of the agreement remains in effect until such time as all cooperating institutions of the Statewide Transfer System formally approve any revisions.

GLOSSARY OF TERMS

Articulation: The aligning of curriculum between institutions of higher education to ensure the efficient and effective movement of students among those institutions.

Associate of Arts (AA) and Associate of Science (AS) Degree: A degree consisting of at least 60 college-level credits and designed for transfer into a baccalaureate degree program.

Foundation Coursework: Courses at a level of comprehension usually associated with freshman and sophomore students and typically offered during the first half of a baccalaureate degree program. Such coursework typically does not have course prerequisites.

Native Student: A student who entered a given college or university without first matriculating at another college.

Parallel Baccalaureate Degree: A bachelor degree program in a comparable field of study and with similar foundation-level major-specific competencies as an associate degree program.

Receiving Institution: The college or university where a transfer student plans to enroll and to apply previously earned credit toward a degree program.

Transfer Credit: The credit granted by a college or university for college-level courses or other academic work completed at another institution.

Transfer Student: A student who enters a participating college or university after earning college-level credit at another college or university.

Transfer: The process by which a student moves from one postsecondary institution to another. Also refers to the mechanics of credit, course and curriculum exchange between institutions.

Advanced Coursework: Courses with advanced depth of content knowledge in the field of study and carry the expectation of more complex competencies identified in the expected student learning outcomes is referred to as advanced coursework. These courses often have prerequisites and are usually beyond the "Introduction to..." or "Foundation of..." level.

² Agreements approved by TAOC prior to August 31, 2011 must be implemented by the institutions by Fall 2012. Agreements approved by TAOC after August 31, 2011 but before May 1, 2012 must be implemented by the institutions by Fall 2013.

TAOC 2ND Draft Feedback to GEOGRAPHY PAC
December 12, 2011

Submitted by	TAOC Institution	Comments:	Was this comment previously considered by the PAC? If so, how it was addressed?	Reply to TAOC from the PAC
Ray O'Brien	Bucks County Community College	<p>I would definitely be inclined to vote in favor of this agreement. After teaching college geography for 40 years, I've evolved a more detailed and personal definition of the subject matter than is stated on pages 1-2, but I do concur with the general definition and overview. More particularly, I would agree with the need to include geography in the "Transfer Credit Framework" (page 5). Nor do I see any real problem with "required out of discipline coursework" – this closely mirrors our core and study area requirements here at Bucks. Although we don't have a Geography program per se, we would appear to meet the criteria of most of what would be required for a "fully transferable associate degree in geography" as itemized on pages 1-4. The required minimum of 9 credit hours is satisfied by our 3 credit course offerings: World Geography (GEOG 110), Geography of U.S. & Canada ((GEOG 105), and Environmental Studies (GEOG 130). We also have a Geography of Bucks County (GEOG 115) which includes fieldwork; while presently in abeyance, it will be taught in the near future (when I complete work on the manuscript revision for the course text). We don't offer Physical or Cultural Geography, but the "required competencies" in these "content areas" are for the most part embedded in the regional and environmental course offerings. The recommendation that geography students acquire a competency in GIS (geospatial technologies) is a good one; as of now we don't have such a course at Bucks, but our department (Social and Behavioral Sciences) has discussed the possibility of adding it as a supplement to our Geography and Historic Preservation programs.</p>	No.	This comment requires no action as it proposes no changes.

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Edward Gurtis	Luzerne County Community College	I am the Dept. Chair here at LCCC of the Health, Physical Education and Exercise Sciences. I am quite concerned that a Physical Education requirement is not included in any of the categories for required transfer for General Education requirements. With the growing epidemic of obesity and sedentary lifestyles, I am perplexed as to why a physical education requirement would not be included. Most if not all of the 4-year state colleges require at least 2, if not in some cases, 3 credits of a health, physical education or wellness requirement. As community colleges and state public academic institutions, I feel that we should be providing not only a well-rounded cognitive academic experience but also a well-rounded and informed physically educated individual as well. I feel that a physical education requirement should be included in the transfer agreements.	No.	<p>This comment requires no action as this agreement does not constitute a Bachelor’s degree program and covers only that course material that is specific to transfer as a junior in Geography.</p> <p>The only Community College in the Commonwealth that offers a transferable degree in Geography under this agreement already requires at least 2 credit hours of health or wellness courses.</p>
Jan Smith	Shippensburg University of Pennsylvania	<p>--Several members of my dept. and I agree we would like to see a bit of a different version of the definition of geography on page one, something like: “Geography is the discipline which uses a spatial perspective to analyze both physical and human characteristics of the Earth determining the why behind spatial patterns and processes. Geographers use maps, graphs, verbal descriptions, mathematical models, and Geographic Information Systems to describe, model, explain and predict how things are arranged in space, and how humans interact with the environment.”</p> <p>--Also, a few members of my dept. made suggestions of courses that geography majors should be recommended to take or consider taking (such as public speaking and foreign languages).</p> <p>-p. 4 I think is just a typo should read “Remotely Sensed”.</p>	No.	The definition of Geography was edited and Public Speaking was shifted to Recommended Out-of-Discipline.

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Henry Lawrence	Edinboro University of Pennsylvania	<p>1. In the Recommended Major-Specific Content Areas it says students would benefit from competencies in at least ONE of the following areas, and then lists only one, GIS. Is there another content area? If not, shouldn't the statement be reworded to say simply that students would benefit from competency in GIS?</p> <p>2. The Articulation Agreement says that students need to have "Algebra or higher mathematics," but in the section Required Out of the Discipline Coursework it lists specific competencies in English Composition and Mathematics. The English competencies look fine, but the Math competencies are based on a student taking a course in Linear Algebra. Linear Algebra is an advanced course (Math 275 at EUP). Eigentheory and Linear Transformations are a little much to ask of geography majors, unless they plan to become professional cartographers. I think a more appropriate course is College Algebra (Math 105 at EUP). Content for College Algebra (from its catalog description) includes "linear equations, complex numbers, functions and their graphs, linear and quadratic inequalities, absolute value inequalities, systems of equations, exponential and logarithmic functions."</p>	Yes.	The draft was edited to make these corrections.