



# Transfer Articulation Review and Analysis

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## Introduction

Baccalaureate completion is an important measure for institutions awarding transfer degrees, as it demonstrates our efficacy in a variety of areas. If a student graduates with a transfer degree from SLCC and goes on to succeed at a four-year institution, this is good evidence that our faculty are effectively preparing students, our coursework is rigorous, our programs are well-designed, and our support staff are well integrated. All these factors align when we adequately prepare students for the next step in their educational goals. To better understand the transfer experience for our graduates who go on to attend college at the University of Utah, we have examined this phenomenon from several angles.

This paper examines the transfer structure between SLCC and its primary transfer partner, the UU. We review recent changes to articulation agreements between the two institutions and provide a transfer analysis of a student's path from an SLCC Associate's degree in a pre-major through a UU Bachelor's degree in the same discipline. We find that while the process of transfer between Salt Lake Community College (SLCC) and the University of Utah (UU) is improving, transfer and transfer articulation continue to be significant hurdles for students.

### A note on terminology

Phrases like “seamless articulation,” “fully articulating,” and “guaranteed junior status” that pepper articulation agreements and our conversations are subjective and even sometimes misleading. Throughout this paper, we will refer to the concept of “junior status.” This is the goal and expectation for a student transferring to a four-year institution after completing an associate's degree (i.e., that their academic progress will be equivalent to having completed the sophomore year). No standard definition for junior status exists. We define it for our purposes in terms of credits remaining in the overall bachelor's degree. When a student has 50% or fewer credits remaining at the transfer institution, we consider that student to possess junior status.

At the University of Utah, the minimum required credits for graduation is 122. While most SLCC credits transfer, often very few apply to major requirements and there are additional UU graduation requirements impossible to fulfill at SLCC. Indeed, many SLCC credits simply go into a growing elective pile, and SLCC transfer students end up with more credits than are necessary for a bachelor's degree.

#### **Defining “Junior Status”**

When a student has 50% or fewer credits remaining at the transfer institution.

## Articulation review

Since the last SLCC report on transfer articulation in December 2016 titled [Overprescribed Programs](#), faculty members and administrators at SLCC and UU have worked to improve articulation. This good faith effort to create strong connections in the absence of a statewide articulation movement has had several successes: eleven

programs have reached new, signed agreements, and an additional ten have reached informal agreements or have begun initial conversations (see Appendices A and B).

In general, the new agreements expand the number of courses that articulate from SLCC programs to UU majors, allowing students to bring more credits with them and apply them directly toward their major. This means students are closer to attaining junior status immediately after transfer. However, as we will observe in the transfer analysis discussion to follow, none of these agreements allows students to enter UU with junior status. This suggests that, while transfer articulation has been recognized as a significant issue, and progress has been made, we nevertheless may require a system-wide solution. Bilateral, program-level agreements seem to be insufficient at this point.

## Transfer analysis

This review has surfaced two important challenges. First, we don't seem to follow a consistent process for developing, approving, and systematizing articulation agreements. Second, the nuance from program to program makes a consistent approach to measuring articulation difficult. Because each program has its own unique characteristics and requirements, any overall measure is somewhat misleading. We suggest the development of templates to be used (it may already be developed) for program approval and review that more clearly lays out course and program articulations.

We began with an accounting of existing transfer pathways between specific programs. The analysis focuses on AS-to-BS pathways within majors. The SLCC general studies degree is excluded because it lacks direct corollary at the UU.<sup>1</sup> We then compared UU major requirements with SLCC program requirements, relying on information available in the institutions' respective general catalogs, articulation agreements, and the SLCC-UU transfer guide. This analysis is forcibly done at the course level because we have not established "program articulation." While generally all SLCC courses articulate in the sense that credits can be applied toward overall credit requirements, the lack program-level articulation, requires students (and this analysis) to compare programs course-by-course to assess articulation. This introduces significant challenges in subjectivity, access to information, and human error. The programs at the two institutions, while nominally the same, often have different coursework requirements, and obtaining an AS in a particular field does not necessarily reduce the burden of coursework in that field once a student matriculates at UU.

In addition to the complications arising from course-based rather than program-based articulation, UU has graduation requirements to which SLCC graduates do not have access. These include BA language, upper-division writing/communication, upper-division quantitative-intensive (both general and BS-specific), and 40-credit upper-division minimum requirements. Because SLCC only offers lower-division courses, SLCC graduates are limited in the amount of this coursework they may complete in their first two years. Additionally, SLCC AA programs require only five credits of a foreign

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<sup>1</sup> While some could argue that University Studies is a direct parallel of General Studies, the two programs are used much differently between the two institutions. Additionally, SLCC is beginning to phase out General Studies as it developed better articulation through its SLCC Pathways initiative.

language (equivalent to one semester), so students seeking a BA at the University of Utah credential will need at least three additional semesters of a foreign language (twelve credit hours). If, however, a student acquires an AS in history, English, or religious studies, they will not have been subject to this language requirement, and will need to complete the full 16 credits hours at UU, since BS degrees are not conferred in these areas.

What appeared a first blush to be a straightforward accounting of transfer pathways turned out to be incredibly complex, with multiple difficult to account for variables. More than anything, this exercise illuminates the difficulties and frustrations students inevitably encounter when they attempt to transfer.

### **The Structure of a Degree**

A bachelor's degree has three general components: (1) general education, (2) major/program requirements, and (3) unrestricted (general) electives and/or minor requirements. Each component has lower and upper division requirements and an effective articulation process will account for all three areas.

General Education account for roughly 30% (39 credits) of a bachelor's degree and 55% (34 credits) of an associate's degree. At UU, the bachelor's degree requires 27 general education credits that can be completed at the lower division and an additional twelve upper-division general education requirements. SLCC requires 34 general education credits for a transfer associate's degree (all lower division). This means that seven general education credits at SLCC will move from the general education requirements to the unrestricted (general) elective component upon transfer. One could argue that SLCC general education is overprescribed (or that the UU general education is underprescribed). General education, however, represents our one example of program articulation. Students who earn the associate's degree transfer general education as a block regardless of which course was taken for the specific general education requirement. This may represent a model we could seek to apply in a major or program context. Programs could require "lower-division designations" instead of courses which clarify the expected learning outcomes to be ready for upper division work. Associate degrees could then fulfill those designations in different but equally rigorous ways as the transfer institution.

Major requirement account for roughly 50% (59 credits) of a bachelor's degree and 45% (27 credits) of an associate's degree. But it must be noted that major requirements vary widely across the different programs (30% for religious studies and 70% in education). Also, the "major" requirements in degrees may be fairly unstructured (as in requiring any course with a certain prefix). The alignment of major requirements was the primary focus of the Overprescribed Programs analysis from December 2016. That study found that due to a lack of lower-division major requirements at the UU, SLCC students would, on average, be taking lower-division courses that do not count towards major requirements for the bachelor's degree. Improving this alignment has been the primary focus of articulation work over the past couple of years.

Lastly, both associate and bachelor's degrees have an unrestricted or "general" elective component. These unstructured requirements mean the students fills in the rest of the

number of required credits for the degree with whatever they want. Unrestricted credits account for roughly 20% (24 credits) of a bachelor's degree and less than 1% (2 credits) of an associate's degree. As in the major requirements, the size of the unrestricted credit component varies widely. The bachelor degrees can vary from 0 credit (education) to 41 credits in writing and rhetoric studies. Most SLCC associate degrees do not allow for unrestricted credits.<sup>2</sup> Of those that do, it varies from 1 credit in business to 15 credits in political science. Universities often suggest that students use this empty space to complete a minor or "double major."

### Minors and double majors

SLCC rarely considers the impact of an overprescribed associate's degree on a student's opportunity for minors or double majors. As the average minor consists of eighteen credits meaning that students in many majors can pick up a minor (using the 24 unrestricted credits) without exceeding the 122 credit threshold. The question becomes how to account for this advantage in a transfer analysis. SLCC graduates in many associate programs will fill up the unrestricted credits with "required" courses for the AS which do not transfer into the BS major. This effectively penalizes the student because they lose the flexibility of earning a minor within the 122 credits. This analysis thus includes the average minor credit hours (18) into the accounting for any program with at least 21 unrestricted electives.

### Upper-division course requirements

The University of Utah requires a minimum of 40 credits of upper-division coursework (3000-level and above). SLCC cannot offer upper-division courses, so all of these credits must be completed at UU. Adding this additional layer of complexity to the analysis has surprising consequences.

We found that program articulation is somewhat distinct from overall articulation, and students can choose to maximize their credits in one or the other, but not both simultaneously. The reason for this is the combination of the flexibility in the number of lower-division courses required by majors at the UU and the firm 40-credit hour minimum upper-division requirement. On average, UU bachelor programs require a minimum of 15 lower-division credits, and maximum of 25. If a student chooses to *minimize* the number of lower-division credits they take, they are closer to completing requirements for their overall BS/BA. Conversely, if a student chooses to *maximize* their lower-division credits, they are typically closer to completing their major requirements. On average, students who choose to maximize their lower-division credits end up taking one additional course, presumably an upper-division elective.

The average student cannot be expected to understand this distinction, and to strategize based on their own circumstances. This made the analysis particularly difficult to carry out, since it was impossible to guess what a typical student might do, presented with these options. Thus, we elected to utilize the mean (arithmetic average) when considering the impact of minimum or maximum lower-division courses.

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<sup>2</sup> The main exception would be the general studies degree which is nearly entirely unrestricted credits. But this degree is not included in the analysis here.

## The Analysis

We looked at 24 UU majors which had direct corollaries at SLCC. We compared the three different components of the degree (general education, major/program requirements, and unrestricted credits) for alignment across associate to bachelor degrees. The table below lays out the results by degree. The crux of the analysis are the last three columns. It depicts that percent of credits remaining within the program (major), in the bachelor degree generally (included gen ed and unrestricted credits), and whether the SLCC program qualifies as awarding junior status.

## Findings

### Major/Program credits

On average, students who obtain an AS and wish to complete the associated BS at UU will still have 79% of their major to finish (or alternatively, AS will constitute roughly 21% of the major requirements). This is not altogether surprising, since we may expect the bulk of major coursework is to be completed in the last two years of study. An important outstanding question is to determine what is the appropriate amount of major's coursework that should be completed at the lower-division.

Transfer students still must complete the majority of their major credits. There are five majors in which 90% or more of required coursework remains. Students pursuing arts and humanities degrees have a longer road ahead of them than those in STEM fields or the social sciences, though there are exceptions.

### All Credits and Junior Status

As mentioned above, junior status is achieved when the AS graduate has 50% or fewer credits remaining at the transfer institution. The last two columns on the table below depict this result by program. Only one major (physics) out of twenty-four confers junior status upon transfer, though geography, communications, and sociology are close (52%, 53%, and 54% of credits remaining, respectively). On average students who obtain an AS will still have 60% of total credits required to complete all three components of the bachelor's degree.

A full description of the analysis and definitions of the different terms is available in the appendix



SLCC AS Programs (AA where noted)	Credits from SLCC	Credits Remaining	Total Earned for		Extra Credits (above 122)	Semesters to Complete after	Percent of Credits Remaining		Junior Status
			BS/BA	Total Required			Program Credits	All Credits	
Physics	62	60	122	122	0	4	62%	49%	Y
Geography*	64	64	128	122	6	5	65%	52%	N
Communications*	61	65	126	122	4	4	82%	53%	N
Sociology*	61	66	127	122	5	5	72%	54%	N
Political Science*	61	67	128	122	6	4	67%	55%	N
Writing AS - Writing & Rhetoric Studies BS*	61	68	129	122	7	4	89%	55%	N
Business	61	69	130	122	8	5	76%	57%	N
Psychology*	62	70	132	122	10	5	75%	57%	N
Business AS to FCS BS (Financial Planning)*	61	71	132	122	10	4	82%	58%	N
Math*	62	72	134	122	12	5	56%	59%	N
Chemistry	65	72	137	122	15	5	74%	59%	N
Economics*	62	72	134	122	12	5	88%	59%	N
Biology	62	77	139	128	17	6	67%	60%	N
FHS*	63	74	137	122	15	5	67%	60%	N
History AA/BA*	62	76	138	122	16	4	64%	62%	N
English AA/BA*	61	76	137	122	15	4	83%	62%	N
Humanities - Religious Studies AA/BA*	62	76	138	122	16	4	100%	62%	N
Architecture	61	77	138	122	16	6	79%	63%	N
Humanities - Philosophy AA/BA*	62	77	139	122	17	4	97%	63%	N
Education	61	87	148	134	26	6	79%	65%	N
CSIS	68	88	156	134	34	6	80%	66%	N
Animation*	63	81	144	122	22	6	100%	66%	N
Social Work*	62	85	147	122	25	6	90%	70%	N
Music BMus	65	97	162	128	40	7	96%	76%	N
Average	62	74	137	124	15	5	79%	60%	

\*includes 18 credits for minor program of study

## Conclusion

It appears that the degree programs between the two institutions are not optimally aligned for student transfer. The presumption that you can complete the first two years by completing the associate degree is largely inaccurate.

Aside from that basic finding, this analysis also demonstrates the difficulty students experience in navigating this process. We hope that it sparks further conversations about the need for improving transfer articulation.

## Appendix A: Signed articulation agreements

Program	Notes
<p>Economics AS to Economics BS (2017-10-06)</p> <p>Effective as of: August 1, 2018</p>	<p>SLCC students will receive credit for ECON 3640 (a required 3000-level course) as well as a 3000-level elective if they successfully:</p> <ul style="list-style-type: none"> <li>○ Complete an Economics capstone course (ECON 2800), required for AS</li> <li>○ Complete Math 1050 (College Algebra) and MGT 2040 (Statistics for Applied Science), required for an AS</li> <li>○ Complete an AS in Economics</li> <li>○ Declare an Economics major at UU</li> </ul> <p>The following required courses currently articulate:</p> <ul style="list-style-type: none"> <li>○ ECON 2010 (Principles of Microeconomics) to ECON 2010 (Principles of Microeconomics)</li> <li>○ ECON 2020 (Principles of Macroeconomics) to ECON 2020 (Principles of Macroeconomics)</li> <li>○ BUS 1100 (Applied Business Math) or MATH 1210 (Calculus I) to ECON 3620 (Mathematics for Economists)</li> <li>○ MATH 1050 (College Algebra), MATH 2040 (Statistics for Applied Science), and ECON 2800 (Economics of Globalization, Inequality and Sustainability) with a grade of B- or better and an AS in Economics to ECON 3640 (Probability and Statistical Inference for Economists) and one 3000-level ECON elective</li> </ul> <p>Additionally, a scholarship of up to \$1,000 available to SLCC transfer students.</p>
<p>Education A.S. to Teacher Education Common Core (2018-03-22)</p> <p>Effective as of: May 1, 2018</p>	<p>UU renumbered six courses from the 3000- to 2000-level. SLCC courses offered as electives by the Education department will articulate to courses required by UU's Elementary Education, Special Education, Educational Psychology, or Educational Leadership and Policy departments.</p> <ul style="list-style-type: none"> <li>○ EDU 1010 (Orientation to Education) to EDU 1010 (Orientation to Education)</li> <li>○ EDU 2010 (Introduction to Special Education) to SPED 2010 (Human Exceptionality)</li> <li>○ EDU 2011 (Inclusive Education) to SPED 2011 (Inclusive EC &amp; EL)</li> <li>○ EDU 2150 (Introduction to Multicultural Education) to ECS 2150 (Introduction to Multicultural Education)</li> <li>○ EDU 2030 (Research/Inquiry in Education) to ED PS 2030 (Research &amp; Inquiry in Education)</li> <li>○ EDU 2110 (Ed Psych Learning &amp; Literacy) to ED PS 2110 (Learning, Literacy, &amp; Development)</li> <li>○ EDU 2140 (Using Technology in the Classroom) to ED PS 2140 (Using Technology in Diverse Classrooms)</li> <li>○ EDU 2410 (Educational Law &amp; Policy) to ELP 2410 (Educational Law and Policy for Classroom Teachers)</li> </ul>
<p>Family &amp; Human Studies AS to Family, Community, and Human Development BS (2018-25-07)</p> <p>Effective as of: August 1, 2018</p>	<p>A new agreement articulates an additional required course between the two programs, bringing the total number of articulated courses to eight. These courses include:</p> <ul style="list-style-type: none"> <li>○ FHS 1500 (Lifespan Development) to FCS 1500 (Lifespan Human Development)</li> <li>○ FHS 2640 (Home, School, and Community Relations) to FCS 2180 (Family, School, and Community Relations)</li> <li>○ FHS 2400 (Marriage and Family Relations) to FCS 2400 (Modern Family: A Life Course Perspective)</li> <li>○ FHS 2570 (Growth and Development of Children 6-12) to FCS 2600 (Middle Childhood: The School Years)</li> <li>○ FHS 2600 (Introduction to Early Childhood Education) to FCS 2600 (Introduction to Early Childhood Education)</li> <li>○ FHS 2610 (Child Guidance) to FHS 2610 (Understanding Children's Behavior)</li> <li>○ FHS 2620 (Creative Learning) to FCS 2640 (Integrated Curriculum Methods)</li> </ul>

<p>Finance and Credit AAS/Business AS to Family, Community &amp; Human Development BS – Financial Planning emphasis (2018-01-30)</p>	<p>The FCS department at UU will use the SLCC AAS in Finance and Credit or the AS in Business to clear the following requirements for FCHD Financial Planning emphasis:</p> <ol style="list-style-type: none"> <li>1) The 3-credit hour major elective requirement</li> <li>2) The 12-credit hours allied requirement</li> </ol> <p>Further, students who pass both FIN 1050 (Personal Finance) and FIN 2200 (Personal Financial Planning) with a C- or better will have fulfilled this major's FCS 3500 (Financial Skills for Life) requirement. Students completing this requirement are also eligible to sit for the Certified Financial Planner exam, after completing the full 6-course education requirement.</p>
<p>Geographic Sciences AS to Geography BS (2018-03-30)</p> <p>Effective as of: May 1, 2018</p>	<p>Six courses already offered by SLCC will now articulate directly to five courses offered by UU, including two lower-division courses equivalent to one upper-division course.</p> <ul style="list-style-type: none"> <li>○ GEOG 1000 (Physical Geography) <b>to</b> GEOG 1000 (Earth Environments and Global Change)</li> <li>○ GEOG 1180 (Geo-Programming in Python) <b>to</b> GEOG 1180 (Introduction to Geo-Programming)</li> <li>○ GEOG 1300 (World Regional Geography) <b>to</b> GEOG 1300 (World Regional Geography)</li> <li>○ GEOG 1400 (Human Geography) <b>to</b> GEOG 1400 (Human Geography)</li> <li>○ GEOG 2100 (Cartographic Principles) and GEOG 2500 (Introduction to Geographic Information Systems) <b>to</b> GEOG 3100 (Introduction to Geographic Information Science and Cartography)</li> </ul>
<p>Political Science AS to Political Science BS (2018-08-01)</p> <p>Effective as of: August 1, 2018</p>	<p>Previously, SLCC students were required to take POLS 1100 and 2300, and select six elective credits from a list, only half of which articulated. This has been modified such that currently, students are only required to take POLS 1100, and students may select six credits from a list of three courses (POLS 2100, 2200, or 2300), all of which articulate. Currently, the following courses articulate:</p> <ul style="list-style-type: none"> <li>○ POLS 1100 (US Government &amp; Politics) <b>to</b> POLS 1100 (US Government &amp; Politics)</li> <li>○ POLS 2100 (Introduction to International Politics) <b>to</b> POLS 2100 (Introduction to International Relations)</li> <li>○ POLS 2200 (Introduction to Comparative Politics) <b>to</b> POLS 2200 (Introduction Comparative Politics)</li> <li>○ POLS 2300 (Political Ideologies) <b>to</b> POLS 2300 (Introduction to Political Theory)</li> <li>○ POLS 2700 (Introduction to Public Administration) <b>to</b> POLS 2700 (Introduction to Public Administration)</li> </ul>
<p>Psychology AS to Psychology BS (2018-07-16)</p> <p>Effective as of: August 1, 2018</p>	<p>The UU Psychology department renumbered 3410 (Social Psychology) and 3711 (Brain and Behavior) to the 2000-level. Both now articulate with courses taught at SLCC.</p> <p>Currently, the following courses articulate:</p> <ul style="list-style-type: none"> <li>○ PSY 1010 (General Psychology) <b>to</b> PSY 1010 (General Psychology)</li> <li>○ PSY 2010 (Psy as a Science &amp; Profession) <b>to</b> PSY 2010 (Orientation to Psy as a Science &amp; Profession)</li> <li>○ PSY 2500 (Social Psychology) <b>to</b> PSY 2500 (Social Psychology)</li> <li>○ PSY 2710 (Brain and Behavior) <b>to</b> PSY 2710 (Brain and Behavior)</li> </ul> <p>In addition, five elective courses articulate: PSY 1100, 1210, 2000, 2300, 2370.</p>
<p>Sociology AS to Sociology BS (2018-08-01)</p> <p>Effective as of: August 1, 2018</p>	<p>Previously, only two 2000-level courses were required by the UU Sociology BS major (SOC 1010 and 2015), only one of which was offered by SLCC. The UU Sociology department renumbered five courses from the 3000-level to lower-division. Simultaneously, SLCC developed the SOC 2015 course, which articulates to UU's program. Currently, the following required courses articulate:</p> <ul style="list-style-type: none"> <li>○ SOC 1010 (Introduction to Sociology) <b>to</b> SOC 1010 (Introduction to Sociology)</li> <li>○ SOC 2015 (Doing Sociology) <b>to</b> SOC 1015/2015 (Doing Sociology)</li> <li>○ SOC 1020 (Social Problems) <b>to</b> SOC 1020 (Social Problems)</li> <li>○ SOC 2600 (Marriage and Family) <b>to</b> SOC 2600 (Families in Society)</li> <li>○ SOC 2630 (Race and Ethnicity) <b>to</b> SOC 2630 (Ethnic Minorities in America)</li> </ul> <p>Additionally, three elective courses articulate: SOC 1900, 2400, and 2680.</p>

<p>Writing Studies AS to Writing and Rhetoric Studies BS</p>	<p>The new AS transfer program developed by SLCC and UU seamlessly articulates, and SLCC graduates with an AS in this field are guaranteed junior standing upon transfer to UU with a declared major of Writing and Rhetoric Studies.</p>
<p>Effective as of: February 8, 2018</p>	<p>This is a new A.S. transfer program collaboratively designed for seamless transfer to UU Writing &amp; Rhetoric Studies B.S. degree. Students who complete the A.S. degree at SLCC meet all of the lower-division course requirements and, once accepted at UU, start in junior status to complete remaining upper-division degree and university required course work.</p>
	<p>The UU also agreed to two course-specific articulation agreements where a lower-division course completed as required in the SLCC A.S. degree are equivalent to upper-division required courses at UU:</p>
	<ul style="list-style-type: none"> <li>○ ENGL 2040 (Introduction to Writing Studies) <b>to</b> WRTG 3870 (Writing as Social Practice)</li> <li>○ ENGL 2310 (Digital Writing) <b>to</b> WRTG 3875 (Rhetorics and Theories)</li> </ul>
	<p>Through SLCC's University Partnerships program, the UU teaches select upper-division courses at SLCC where students may connect to the program. Three courses taught by UU at SLCC in Summer 2018 were:</p>
	<ul style="list-style-type: none"> <li>○ WRTG 3020: Write 4U   applies to 15 credits of required upper-division courses in WRTG</li> <li>○ WRTG 3030: Writing Across Locations   applies to 15 cr of required upper-division courses in WRTG</li> <li>○ WRTG 3870: Writing as Social Practice   required course (for students who didn't complete ENGL 2040 in SLCC degree)</li> </ul>
<p>Business AS to Operations Management BS</p>	<p>This agreement provides admission as a "matriculated, upper division student." The student must maintain a 3.3 GPA and complete two of the following elective courses as part of their AS:</p>
<p>Signed April 25, 2018</p>	<ul style="list-style-type: none"> <li>• MGT 2120 – Data Visualization Techniques</li> <li>• MFT 2130 - Survey of Business Analytics/ Business Intelligence</li> <li>• MGT 1020 - Distribution Systems</li> </ul>
	<p>Student must meet "program specific admission and graduation criteria" as detailed in the academic catalogs. They are also encouraged to seek out advising to ensure proper course sequencing.</p>
<p>Business AS to Information Systems BS</p>	<p>This agreement provides admission as a "matriculated, upper division student." The student must maintain a 3.3 GPA. Student must also complete the following two elective courses with a B or higher as part of their AS:</p>
<p>Signed April 26, 2018</p>	<ul style="list-style-type: none"> <li>• CSIS 1420 – Object-oriented Programming</li> <li>• CSIS 1050 – Fundamentals of Database Design and Processing</li> </ul>
	<p>Student must meet "program specific admission and graduation criteria" as detailed in the academic catalogs. They are also encouraged to seek out advising to ensure proper course sequencing.</p>

## Appendix B: Articulation agreements needing documentation

Program	Notes
Geology AS to Geoscience BS	Scheduled for implementation by Fall 2019, the proposal outlines better course alignment at both institutions with the goal of awarding SLCC graduates junior standing upon transfer to UU. The proposed courses include: <ul style="list-style-type: none"> <li>○ GEO 1110/1115 (Physical Geology) to GEO 1110/1115 (Introduction to Earth Systems)</li> <li>○ GEO 1220/1225 (Historical Geology) to GEO 1100 (Evolving Earth)</li> <li>○ GEO 2350 (Field Studies) to GEO 2500 (Wasatch in the Field)</li> </ul>
Communication Studies to AS Communication BS	UU re-designated COMM 3505 (Introduction to Media Business and Ethics) as COMM 1500, which articulates with SLCC's COMM 1500 (Introduction to Mass Communications).
Humanities AS to Philosophy BS	Preliminary agreement has been reached that will raise the number of SLCC courses that may count towards a BS from 1 to 4. These courses will only transfer <i>within the major</i> and will not satisfy PHIL requirements for other degree programs at UU. Official articulation agreements for the courses are still being developed.
Music AS to Music BS	The articulation agreement has been drafted, but the respective parties have not yet signed the document. The agreement outlines fourteen courses which articulate directly. <ul style="list-style-type: none"> <li>○ MUSC 1010 (Introduction to Music) to MUSC 1010 (Introduction to Music)</li> <li>○ MUSC 1100 (Introduction to Music Theory) to MUSC 1100 (Elements of Music)</li> <li>○ MUSC 1110 (Music Theory I) to MUSC (Music Theory I)</li> <li>○ MUSC 1120 (Music Theory II) to MUSC (Music Theory II)</li> <li>○ MUSC 1130 (Sight Singing/Ear Training I) to MUSC 1130 (Musicianship I)</li> <li>○ MUSC 1140 (Sight Singing/Ear Training II) to MUSC 1140 (Musicianship II)</li> <li>○ MUSC 1150 (Group Piano I) to MUSC 1150 (Keyboard I)</li> <li>○ MUSC 1160 (Group Piano II) to MUSC 1160 (Keyboard II)</li> <li>○ MUSC 2110 (Music Theory III) to MUSC 2110 (Music Theory III)</li> <li>○ MUSC 2130 (Sight Singing/Ear Training III) to MUSC 2130 (Musicianship III)</li> <li>○ MUSC 2140 (Sight Singing/Ear Training IV) to MUSC 2140 (Musicianship IV)</li> <li>○ MUSC 2150 (Group Piano III) to MUSC 2150 (Keyboard III)</li> <li>○ MUSC 2160 (Group Piano IV) to MUSC 2160 (Keyboard IV)</li> </ul> <p style="text-align: center;">MUSC 2350 (Conducting Fundamentals) to MUSC 2350 (Conducting)</p>
Discussions Started (continuing work through the 2018-19 year)	
Program	Notes
Architecture AS to Architectural Studies BS	Added ARCH 2990 to match an additional course requirement of UU's architecture program. UU is making significant changes to their program and have included SLCC's architecture program in these conversations. The AD of the SLCC program anticipates further changes and better alignment in the future.
Business AS to Business Administration BS	Plans to begin restructuring offerings in the coming academic year to create more opportunities for articulation.
Computer Science and Information Systems AS to Computer Science BS	Plans are in the works to submit significant changes for the upcoming academic year.
English AS to English BS	Discussions are underway on how to improve the transfer situation for courses at the 2000-level.
Environmental Science and Sustainability CP to Environmental and Sustainability Studies BS	Discussions are in the earliest stages.
School of Science, Math and Engineering (SME) AS programs to corollary BA programs	SME is working with colleagues at UU under an NSF grant to refine articulation

# Appendix C: Transfer analysis

Program	SLCC credits				Upper-division BS requirements				Upper-division BS QI requirements				BA Language requirement				Program Requirements				Minor hours				UU credits				Program Requirements - Lower Division		Program Requirements - Upper Division		Upper division electives		Unrestricted electives		Total	
	Gen Ed Requirements	Program Requirements	Unrestricted electives	Total	Gen Ed Requirements	Upper-division BS requirements	Upper-division BS QI requirements	BA Language requirement	Program Requirements	Minor hours	Unrestricted Electives	Unrestricted electives	Total	Program Requirements - Lower Division	Program Requirements - Upper Division	Upper division electives	Unrestricted electives	Total	Program Requirements - Lower Division	Program Requirements - Upper Division	Upper division electives	Unrestricted electives	Total	Program Requirements - Lower Division	Program Requirements - Upper Division	Upper division electives	Unrestricted electives	Total	Program Requirements - Lower Division	Program Requirements - Upper Division	Upper division electives	Unrestricted electives	Total					
Physics	31	31	62	62	27	6	6	6	68	18	15	15	122	39	29	29	0	15	122	39	29	0	15	122	39	29	0	15	122	39	29	0	15	122				
Biology	31	31	62	62	27	6	6	6	72	11	11	11	122	49	23	17	0	128	49	23	17	0	128	49	23	17	0	128	49	23	17	0	128					
Chemistry	31	34	65	65	27	6	6	6	81	0	2	2	122	45	36	0	2	122	45	36	0	2	122	45	36	0	2	122	45	36	0	2	122					
Writing AS - Writing & Rhetoric Studies BS	34	27	61	61	27	6	6	6	42	18	41	23	122	4	37.5	0	23	122	4	37.5	0	23	122	4	37.5	0	23	122	4	37.5	0	23	122					
FHS	34	29	63	63	27	6	6	6	46	18	37	19	122	18.5	27.5	12.5	6.5	122	18.5	27.5	12.5	6.5	122	18.5	27.5	12.5	6.5	122	18.5	27.5	12.5	6.5	122					
Math	31	31	62	62	27	6	6	6	62	18	31	13	122	24.5	27.5	12.5	0.5	122	24.5	27.5	12.5	0.5	122	24.5	27.5	12.5	0.5	122	24.5	27.5	12.5	0.5	122					
Geography	34	30	64	64	27	6	6	6	62	18	31	13	122	18	34	0	13	122	18	34	0	13	122	18	34	0	13	122	18	34	0	13	122					
Education	34	27	61	61	27	6	6	6	95	0	0	0	134	30.5	64.5	0	0	134	30.5	64.5	0	0	134	30.5	64.5	0	0	134	30.5	64.5	0	0	134					
Psychology	34	28	62	62	27	6	6	6	53	18	30	12	122	19	40	0	12	122	19	40	0	12	122	19	40	0	12	122	19	40	0	12	122					
Business	34	26	60	60	27	6	6	6	76	0	8	8	122	21.5	53.5	8	8	122	21.5	53.5	8	8	122	21.5	53.5	8	8	122	21.5	53.5	8	8	122					
Sociology	34	27	61	61	27	6	6	6	49	18	34	16	122	13.5	35.5	0	16	122	13.5	35.5	0	16	122	13.5	35.5	0	16	122	13.5	35.5	0	16	122					
Architecture	31	28	59	59	27	6	6	6	82	0	1	1	122	26.5	55.5	0	1	122	26.5	55.5	0	1	122	26.5	55.5	0	1	122	26.5	55.5	0	1	122					
Business AS to FCS BS (Financial Planning)	34	27	61	61	27	6	6	6	50	18	33	15	122	9	41	0	15	122	9	41	0	15	122	9	41	0	15	122	9	41	0	15	122					
History AA/BA	44	18	62	62	27	6	6	6	42	18	35	17	122	15	27	13	4	122	15	27	13	4	122	15	27	13	4	122	15	27	13	4	122					
English AA/BA	34	24	58	58	27	6	6	6	36	18	41	23	122	6	30	10	13	122	6	30	10	13	122	6	30	10	13	122	6	30	10	13	122					
CSIS	34	34	68	68	27	6	6	6	95	0	0	0	134	36.5	58.5	0	0	134	36.5	58.5	0	0	134	36.5	58.5	0	0	134	36.5	58.5	0	0	134					
Economics	34	28	62	62	27	6	6	6	48	18	35	17	122	6	42	0	17	122	6	42	0	17	122	6	42	0	17	122	6	42	0	17	122					
Communications	34	21	55	55	27	6	6	6	42	18	41	23	122	7.5	34.5	0	23	122	7.5	34.5	0	23	122	7.5	34.5	0	23	122	7.5	34.5	0	23	122					
Political Science	34	12	46	46	27	6	6	6	45	18	38	20	122	15	30	0	20	122	15	30	0	20	122	15	30	0	20	122	15	30	0	20	122					
Social Work	34	28	62	62	27	6	6	6	51	18	22	4	122	10	51	0	4	122	10	51	0	4	122	10	51	0	4	122	10	51	0	4	122					
Music BMus	34	31	65	65	27	6	6	6	89	0	0	0	138	41	48	0	0	138	41	48	0	0	138	41	48	0	0	138	41	48	0	0	138					
Humanities - Philosophy AA/BA	39	20	59	59	27	6	6	6	48	18	29	11	122	1.5	46.5	0	11	122	1.5	46.5	0	11	122	1.5	46.5	0	11	122	1.5	46.5	0	11	122					
Animation	34	29	63	63	27	6	6	6	51	18	32	14	122	22	29	0	14	122	22	29	0	14	122	22	29	0	14	122	22	29	0	14	122					
Humanities - Religious Studies AA/BA	39	20	59	59	27	6	6	6	48	18	44	26	122	0	33	7	19	122	0	33	7	19	122	0	33	7	19	122	0	33	7	19	122					
Average																																						

  

Program	Credits articulating from SLCC to UU				Remaining credits at UU												Total credits			Percent of credits remaining	
	Articulated Ed Credits (AS @ SLCC)	Gen Ed Credits (AS @ SLCC)	Articulated Major Credits (AS/AA @ SLCC)	Unrestricted electives	Gen Ed Requirements	Upper-division BS requirements	Upper-division BS QI requirements	BA Language requirement	Lower-division remaining	Upper division remaining	Minor hours	Remaining Upper division electives	Remaining Unrestricted electives	Remaining Unrestricted Electives	Total Remaining Credits	Total credits earned after AS & BS	Credits over 122 Minimum	seminesters needed	Program Credits	All Credits	
Physics	27	26	9	62	0	6	6	6	0	13	29	0	6	6	60	122	0	4	62%	69%	
Biology	27	24	11	62	0	6	6	6	0	25	23	17	0	0	77	129	17	6	67%	60%	
Chemistry	27	21	17	65	0	6	6	6	0	24	36	0	0	0	72	137	15	5	74%	59%	
Writing AS - Writing & Rhetoric Studies BS	6	28	61	0	6	6	6	0	0	38	18	0	0	0	68	129	7	4	67%	60%	
FHS	27	15	21	63	0	6	6	6	0	4	28	18	0	0	74	137	15	5	67%	60%	
Math	27	23	12	62	0	6	6	6	0	2	28	18	13	0	72	134	12	5	66%	59%	
Geography	27	23	14	64	0	6	6	6	0	34	18	0	0	6	78	128	6	5	65%	52%	
Education	27	20	14	61	0	6	6	6	0	11	65	0	0	0	87	148	26	6	75%	65%	
Psychology	27	19	16	62	0	6	6	6	0	40	18	0	0	0	70	132	10	5	75%	57%	
Business	27	18	16	61	0	6	6	6	0	4	54	0	0	0	69	130	8	5	76%	57%	
Sociology	27	18	16	61	0	6	6	6	0	36	18	0	0	0	66	127	5	5	72%	54%	
Architecture	27	17	17	61	0	6	6	6	0	10	56	0	0	0	77	138	16	9	79%	63%	
Business AS to FCS BS (Financial Planning)	27	15	19	61	0	6	6	6	0	0	41	18	0	0	71	132	10	4	62%	58%	
History BA	27	15	20	62	0	6	6	6	0	12	0	27	18	0	76	138	16	4	64%	62%	
English BA	27	12	22	61	0	6	6	6	0	12	0	30	18	10	76	137	15	4	83%	62%	
CSIS	27	19	22	68	0	6	6	6	0	18	59	18	0	0	88	156	34	6	80%	66%	
Economics	27	9	26	62	0	6	6	6	0	0	42	18	0	0	72	134	12	5	88%	59%	
Communications	27	9	25	61	0	6	6	6	0	0	35	18	0	0	65	126	4	4	82%	53%	
Political Science	27	21	13	61	0	6	6	6	0	0	30	18	0	7	67	128	6	4	67%	55%	
Social Work	27	6	29	62	0	6	6	6	0	4	51	18	0	0	85	147	25	6	90%	70%	
Music BMus	27	4	34	65	0	6	6	6	0	37	48	0	0	0	97	162	40	7	96%	76%	
Humanities - Philosophy	27	3	32	62	0	6	6	6	0	12	0	47	18	0	83	145	23	4	97%	68%	
Animation	27	0	35	63	0	6	6	6	0	22	29	18	0	0	81	144	22	6	100%	65%	
Humanities - Religious Studies BA	27	0	35	62	0	6	6	6	0	12	0	33	18	7	76	138	16	4	100%	62%	
Average		14		62					7	39				1	75	137	15	5	79%	60%	

## Appendix D: Transfer analysis definitions

### SLCC Credits

This section details the requirements for students seeking an Associate of Science credential at Salt Lake Community College. Information in this section is drawn from the SLCC General Catalog.

### General Education Requirements

All students seeking an AS degree are required to complete a minimum of 34 credits of general education courses, including English, Mathematics, American Institutions, and studies in a variety of subject areas. The Physics, Biology, Chemistry, Mathematics, and Architecture programs allow students to count one of their program-specific courses toward the general education credits, so students in these programs only need to complete 31 credits.

### Program Requirements

Each AS program requires a students to successfully complete core courses and several electives. This column details the minimum credit hours required to complete the AS in each area.

### Unrestricted Electives

Some programs do not mandate a full raft of courses to complete the minimum credits required graduate from SLCC. Thus, students are unrestricted in their choice of electives. This column shows the remaining electives to be completed.

### Total

This column shows the minimum credit hours students must complete in order to earn an AS in a given program. All students seeking an AS degree must earn a minimum of 61 credit hours, though some program require more.

### UU Credits

This section details the requirements for students seeking a Bachelor of Science or Bachelor of Arts credential at the University of Utah. Information in this section is drawn from the University of Utah General Catalog.

### General Education Requirements

Students seeking a bachelor's degree are required to complete a variety of lower-division general education courses, equaling a minimum of 27 credit hours. While SLCC requires 34, general education transfers as a block. The remaining seven credits can be applied toward the 122-credit minimum for graduation.

### Upper-Division Bachelor's Requirements

In addition, students must complete at least one course designated as upper-division writing (CW) and one course designated as upper-division international (IR). Together, this is a minimum of six credits. Note: the University of Utah also requires an upper-division diversity course, but articulation agreements between our two institutions mean our diversity credit can be applied toward this requirement.



### **Upper-Division Bachelor of Science QI Requirements**

Students seeking a Bachelor of Science must also complete at least six credits of upper-division quantitative-intensive (QI) courses.

### **Bachelor of Arts Language Requirement**

Students seeking a Bachelor of Arts must demonstrate intermediate fluency in a foreign language, the equivalent of two years, or sixteen credits.

### **Program Requirements – Lower Division**

Each major program requires students to successfully complete core courses and several electives. This column details the minimum lower-division credit hours required to complete a BS/BA in each major. These are the credits that can be articulated from coursework completed at SLCC.

### **Program Requirements – Upper Division**

This column details the upper-division credits a student must complete in order to obtain a Bachelor's degree.

### **Minor Hours**

Because a number of majors at the University of Utah do not mandate enough courses to complete the minimum credit hours required to graduate, we hypothesize students are encouraged to pursue a minor. While many program are credit-intensive, with only a few credits left over after completing the requirements, some majors are quite short. In English and Religious Studies, for example, a student could have as many as 34 electives remaining, nearly enough to complete an additional major. The only reason for this, from our perspective, is to give students the opportunity to develop a second specialty.

The average minor is eighteen credit hours in length. We inserted minor hours for each program in which, without a minor, unrestricted electives would be at least 21.

### **Upper-Division Electives**

The University of Utah requires students to complete at least 40 credit hours of upper-division coursework. This column shows how many more upper-division credits students in each program will need to complete, after accounting for the credits accumulated through both general and program-specific upper-division requirements.

### **Unrestricted Electives**

This column shows the elective credit hours remaining, after all major, minor (if applicable), and upper-division requirements have been completed. These electives may be either upper- or lower-division, and within or outside the major.

### **Total**

This column details the total minimum credits students must complete in order to earn and BS/BA in a given program.

### **Credits Articulating from SLCC to UU**

This section details the credits that directly articulate from the SLCC Associate's degree to the University of Utah Bachelor's degree. Data are drawn from the General Catalogs from

both institutions, as well as articulation agreements between the institutions, and the SLCC-University of Utah transfer guide.

### **Articulated General Education Credits (AS @ SLCC)**

General education transfers as a block across all USHE institutions. Thus, a student who completes an AS at SLCC can expect all lower-level general education credits to transfer. However, because SLCC requires three additional courses (ENGL 1010, Lifelong Wellness, and Communication) to graduate with an AS, only 27 of these credits are applied toward General Education, and the remainder can be applied toward lower-division electives.

### **Articulated Major Credits (AS @ SLCC)**

The figures in this field are drawn from an analysis utilizing available transfer and articulation information from General Catalogs and transfer guides. Credit hours are considered to articulate if the course 1) is required by the SLCC AS program, 2) is required by the corresponding UU BS/BA program, and 3) articulates directly. Our criteria are defined at the program level, rather than the course level.

For example, if an elective course is offered at SLCC (but not required to complete the AS), and it is required by UU, we do not count those hours as articulating. This occurs in the Physics program, in which students who complete an AS will see 26 of their 31 program credits articulate. However, SLCC offers significantly more physics courses than required by our program. It is technically possible for a student seeking a BS in Physics at the U to complete an additional nine credits at SLCC. While taking these courses at SLCC might be a savvy move for an observant and financially-motivated student, it is unreasonable to expect the average student to do so. We have performed this analysis with the average student in mind.

### **Credits toward Unrestricted Electives**

The credits accumulated at SLCC that do not articulate directly into the BS/BA do, however, go toward the overall minimum credit requirements. This column details how many credits AS graduates have leftover in each program they may apply toward the UU minimum of 122.

### **Total Minimum Articulated Credits**

This column shows the total number of credits that articulate to the University of Utah.

### **Remaining Credits at UU**

This columns in this section show the calculations of how many credits remain to be completed in each area.

### **General Education Requirements**

Because all general education courses articulate, all students who complete an AS will zero-out this requirement.

### **Upper-Division Bachelor's Requirements**

Students with an AS will still need to complete all upper-division courses.

### **Upper-Division Bachelor of Science QI Requirements**

Students with an AS will still need to complete all upper-division courses.

### **Bachelor of Arts Language Requirement**

Because none of the AS programs include a language requirement, students who choose to pursue a BA must complete the equivalent of two years of a foreign language.

### **Lower-Division Remaining**

This column is calculated by subtracting the SLCC credits that articulate from the UU lower-division major requirements. It shows the remaining lower-division credits required to complete a BS/BA in each major.

### **Upper-Division Remaining**

In the majority of cases, SLCC credits cannot be applied at the upper-division (though there are some exceptions). Thus,

### **Minor Hours**

This column shows the additional credit hours necessary to complete a minor. SLCC does not systematically encourage students seek a secondary specialty. Thus, in order to graduate with the same credentials as a native University of Utah student, the average transfer student will have to complete an additional 18 credit hours toward a minor.

### **Remaining Upper Division Electives**

This column shows the number of upper-division elective credits remaining in order to meet the 40 credit hour minimum threshold for graduation from the University of Utah. The vast majority of programs do not require any additional upper-division credit hours after accounting for the upper-division requirements for each major; the exceptions are in History and Religious Studies.

### **Remaining Unrestricted Electives**

This column shows the number of unrestricted elective credits remaining in order to meet the 122 credit hour minimum threshold for graduation from the University of Utah. The vast majority of programs do not require any additional credit hours after accounting for SLCC credits that transfer, plus the credits from the major and the minor (where applicable); Physics and Mathematics majors will still need to complete additional credits.

### **Total Remaining Credits**

This column is calculated by summing each column in this section, and gives the total number of credits remaining to be completed after an SLCC graduate transfers to the University of Utah.

### **Total Credits**

This section gives a summary of total credits, and some context around how much time an SLCC graduate might expect to spend at the University of Utah.

### **Total Credits Earned after AS and BS/BA**

This column is calculated by adding the total minimum credits earned at SLCC to the total remaining credits to be completed at UU. It is the minimum credits a student will accumulate after completing an AS at SLCC and a BS/BA in the corresponding major at the U.

### **Credits over 122 Minimum**

The number of credits over UU's 122-credit hour minimum graduation requirement an SLCC graduate can expect to complete in attaining a bachelor's degree.

### **Additional Semesters Needed to Complete BS/BA After AS**

The number of semesters required at the U to complete a bachelor's degree after earning an AS at SLCC, assuming a full schedule of fifteen credit hours per semester. This column is calculated by dividing total remaining credits by fifteen, and rounding up to the next whole number.

### **Percent of Credits Remaining**

This section details the proportion of total and program credits remaining to be completed at the University of Utah.

### **Program Credits**

This column shows the percent of program credits remaining to be completed at the University of Utah in order to earn a BS/BA in each major. It is calculated by dividing the Major Credits Remaining (Remaining Credits at UU section) by Program Requirements (UU Credits section).

### **All Credits**

This column shows the percent of total credits remaining to be completed at the University of Utah in order to earn a BS/BA in each major. It is calculated by dividing the Total Credits Remaining (Remaining Credits at UU section) by Total Required Credits (UU Credits section).