Policies for ASSIST Data Extracts
ASSIST Board of Directors
July 9, 2002

I. Background

The Articulation System Stimulating Interinstitutional Student Transfer (ASSIST) is a computerized information system used to collect, manage, and disseminate course articulation information. ASSIST operates at all California Community College (CCC), California State University (CSU), and University of California (UC) campuses. ASSIST is California's official repository for course articulation information as endorsed by the California Education Roundtable. As such, all CSU and UC campuses agree to honor all information presented through ASSIST according to local university admission and academic policies.

ASSIST is funded by the California Legislature and overseen by an intersegmental Board of Directors with representatives from all three California public higher education systems. Administrative responsibility for ASSIST is vested with the University of California and daily operations, software development, and support are provided by the ASSIST Coordination Site located in Irvine.

CCC, CSU, and UC campus staff are responsible for entering and updating the majority of the information in the ASSIST database. Colleges and universities regularly provide updated information on transferable and articulated courses, and universities regularly provide updated information on articulation agreements between pairs of institutions. All of this information is stored in the ASSIST databases and is presented to students, faculty, staff, and others over the Internet via the Web ASSIST software application available at *www.assist.org*.

CCC, CSU, and UC campuses have worked with the Coordination Site to develop the presentation formats for information in ASSIST. The ASSIST software manages the presentation of information to ensure that course articulation is presented using agreed upon formats and accurately represents the intent of the colleges and universities.

Many colleges and universities have local information systems that can benefit from the course information available through ASSIST. For example, some universities have developed degree audit systems that can evaluate courses taken at other institutions by using course articulation data. In order to reduce redundant data entry, raw data can be extracted from ASSIST and loaded into campus information systems. The ASSIST Coordination Site has worked with colleges and universities to define specifications for these data extracts. The ASSIST Data Extract Specifications provide the information college and university technical staff require to load ASSIST data extracts into local information systems. These specifications are located on line at:
        http://assist.org/pdf/assist/artic_data_extr_spec_mar02.pdf

There two types of ASSIST data extracts. 1) Community College transferable course list extracts provide data on all UC transferable CCC courses, CSU transferable CCC courses, CCC courses qualified for IGETC, and CCC courses qualified for CSU GE Certification. 2) University course-to-course articulation extracts provide data on courses that are articulated between a university and a college.

The ASSIST course-to-course articulation data extracts do not include all of the information stored in the ASSIST database. There is a great amount of additional information needed to support accurate presentation of articulation information. This information is stored as data in the ASSIST database and codified in the ASSIST software. The data extracts include only those data elements that universities and the Coordination Site have agreed upon that can be used for various types of other data processing. Appendix A provides a sample comparison of an original articulation agreement with the corresponding data extract. The ASSIST data extracts are not intended to provide the data needed to support an alternative way of presenting articulation information in ASSIST. ASSIST is the only recognized presentation system for this information, and the ASSIST presentation format is the only agreed upon format.

Due to concerns that arise from the incomplete nature of the data in the course-to-course articulation data extracts these extracts are intended only for use by universities as receiving institutions.

If presentation of ASSIST information in a context outside of the ASSIST web site is desired, there is a different way to achieve this functionality. The ASSIST web site was designed so that it can be used to generate an accurate presentation of articulation information that is acceptable for use in other information systems (rather than using the ASSIST data extracts). The ASSIST Coordination Site can provide more details on this topic.

II. Policy

The following policy regarding the ASSIST data extracts has been formally adopted by the ASSIST Board of Directors.

Use of ASSIST and the ASSIST data extracts is intended for and limited to the California Community College system ("CCC"), the California State University system ("CSU"), and the University of California system ("UC"). Any interested CCC, CSU, or UC campus is authorized to use the Community College transferable course list data extracts for its own use or computer systems. Campuses do not have the authority to "pass through" extracts to outside vendors unless used exclusively for the campus. Since articulation agreements are binding and the course-to-course articulation data extracts do not contain all of the information used in agreements, only CSU and UC campuses are authorized to use the course-to-course articulation data extracts.

The ASSIST data extracts are not to be used to present articulation agreements for use in advising students. CSU and UC campuses should carefully examine system features that use ASSIST data extracts and consider the potential for misrepresenting articulation. If presentation of ASSIST information is desired, another facility should be used rather that the ASSIST data extracts. Campuses assume full responsibility for potential misrepresentations of articulation based on the ASSIST data extracts.

While corporations, organizations, or other entities might create commercial products designed to work with ASSIST data, they are not authorized to sell or distribute ASSIST data, utilize or market information obtained through ASSIST, or use the ASSIST name in any way which suggests, directly or indirectly, that ASSIST, CCC, CSU, or UC endorses, approves, or recommends such products. No corporation, organization, or entity may use ASSIST or ASSIST data extracts in any way unless said corporation, organization, or entity has been authorized in writing to do so by an authorized representative of the respective CCC, CSU, or UC system, and then only for purposes of developing and/or supporting a local information system at a campus of the respective system.

APPENDIX A

Sample Comparison of Official Articulation to Data Extracts

The following example demonstrates the difference between an official articulation agreement presented through ASSIST and the same information as raw data in an ASSIST Articulation Data Extract.

This example is for the UC Berkeley articulation agreement with College of San Mateo for Computer Science in 01-02. First, the original, two page articulation agreement is presented. Note the textual information at the beginning of the agreement with recommendations for prospective transfer students. For the first four instances of articulation, note that there are additional comments that provide more specific information regarding the coursework required at Berkeley.

Next, the raw data for this same major is presented as it would be included in a data extract. The "ASSIST Articulation Data Extract Specifications" are needed in order to fully decode the raw data. However, none of the textual information referenced above is included in the extract. Instances of articulation that contain both course references and contain textual information are included in the extracts and there is a flag that indicates (with a Y) that there is text in the original articulation (although the text is not included in the extract). Most of the instances in this example fall into this category. Additionally, instances of articulation that do not contain any course references are not included in the extracts. This means that all of the admissions and advice information is not included.

If the data from this extract were used to advise a student (instead of the original agreement), key information would not be included that may be important for a seamless transition.

From: **College of San Mateo** |To: **UC Berkeley**
                                          |
Semester |01-03 General Catalog Semester
==
            ====Computer Science, Lower Division B.A. Requirements====
College Admission Requirements for Transfer Students:

This major is offered by the College of Letters and Science (L&S). You must
complete either: (1) the L&S Essential Skills Requirements (Reading &
Composition, Foreign Language, and Quantitative Reasoning) or (2) IGETC **by the
end of the spring term that precedes fall enrollment at Berkeley.**

In addition, you must prepare to undertake upper division courses in your
intended major. **Complete as many lower division major requirements as possible
before transfer (see below).** In general, strength of academic preparation and
grade point average above are the primary selection criteria for admission.

For more information:
UC Berkeley General Catalog (in print or on the web at: www.berkeley.edu).

Advice regarding courses in computer science:

The computer science department at Berkeley recognizes the fact that courses
comparable to Berkeley's computer science 61A-61B-61C series are difficult to
find at most community colleges. With few exceptions, transfer students must
take CS 61A and CS 61C during their first semester/s at Berkeley.

To be competitive for admission purposes, the department advises prospective
transfer students to take UC-transferable courses in 1) data structures--even
if not officially comparable to Berkeley's CS 61B, 2) Java (preferred) or C++,
and 3) assembly language/machine structures.

The entire computer science 61 series is also offered during the Berkeley
summer session. The department recommends that, when possible, students take
these courses during the summer sessions prior to transfer.

FOR ADDITIONAL INFORMATION ON THE COMPUTER SCIENCE MAJOR:
Computer Science Advising Office
University of California, Berkeley
EECS CS Division
377 Soda Hall #1776
Berkeley, CA 94720-1776
(510) 642-7214, bhtower@cs.berkeley.edu
(510) 642-1390, naelwong1@cs.berkeley.edu
http://buffy.eecs.berkeley.edu/Advising/CS/Peer/

NO COURSE ARTICULATED |COMPSCI 61A   The Structure and   (4)
                                      | Interpretation of
                                      | Computer Programs
Any course/s approved as comparable to COMPSCI 61A must include assignments
involving functional programming, object-oriented programming, and study of
a LISP interpreter.

From: **College of San Mateo** |To: **UC Berkeley**
===
Computer Science, Lower Division B.A. Requirements (continued)
```
CIS 286  &  Programming Methods II:   (3)|COMPSCI 61B   Data Structures    (4)
            Java                         |
CIS 287     Open Computer Lab        (1)|
   OR                                    |
CIS 350  &  Fundamentals of Data     (3)|
            Structures                   |
CIS 351     Open Computer Lab        (1)|
```
Any course/s approved as comparable to COMPSCI 61B must include coverage of
hashing, heaps, and priority queues. A score of 4 or 5 on the Computer Science
AB AP test taken in May 1999 or later satisfies the COMPSCI 61B requirement.
                                                                     05/02/02

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Recommended, but not comparable:       |COMPSCI 61C   Machine Structures  (3)
CIS 290 &  Computer Architecture     (3)|
CIS 291    Open Computer Lab         (1)|
```
Any course/s approved as comparable to COMPSCI 61C must require students to
write an interrupt handler and include treatment of caches and virtual
memory. COMPSCI 61C requires knowledge of C or C++.   11/15/96

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NO COURSE ARTICULATED                  |EL ENG 42   Introduction to     (3)
                                       |            Electronics for
                                       |            Computer Science
```
Students should take an introductory course in electronics. Once at Berkeley,
your electronics courses will be evaluated.

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MATH 251    Calculus with Analytic   (5)|MATH 1A    Calculus              (4)
            Geometry I                  |                        07/28/94
```

```
MATH 252    Calculus with Analytic   (5)|MATH 1B    Calculus              (4)
            Geometry II                 |                        07/28/94
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MATH 270 &  Linear Algebra           (3)|MATH 54    Linear Algebra and    (4)
MATH 275    Ordinary Differential    (3)|           Differential Equations
            Equations                   |                        07/28/94
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MATH 268    Discrete Mathematics     (4)|MATH 55    Discrete Mathematics  (4)
                                        |                        05/15/01
```

The course/s cited above have been officially accepted by this major and
approved by both a Berkeley advisor/faculty member and Berkeley's articulation
officer.

The following text is the section of the raw data from the articulation data extract that corresponds to the UC Berkeley, College of San Mateo, 01-02, Computer Science articulation agreement on the previous pages:

```
004833~004070~200110~CS-AB~3~LINE~Y~101~1~200210~S~Y~~~~~~~S~N~COMPSCI~61A~The Structure and
Interpretation of Computer Programs~4.00~4.00~N~Y
004833~004070~200110~CS-AB~4~LINE~Y~102~1~200210~S~N~CIS~286~Programming Methods II:
Java~3.00~3.00~A~S~N~ COMPSCI~61B~Data Structures~4.00~4.00~N~Y
004833~004070~200110~CS-AB~4~LINE~Y~102~2~200210~S~N~CIS~287~Open Computer Lab~1.00~1.00~O~S~N~~~~~~~Y
004833~004070~200110~CS-AB~4~LINE~Y~102~3~200210~S~N~CIS~350~Fundamentals of Data
Structures~3.00~3.00~A~S~N~ ~~~~~~Y
004833~004070~200110~CS-AB~4~LINE~Y~102~4~200210~S~N~CIS~351~Open Computer Lab~1.00~1.00~N~S~N~~~~~~~Y
004833~004070~200110~CS-AB~5~LINE~Y~103~1~200210~S~Y~~~~~~~S~N~COMPSCI~61C~Machine
Structures~3.00~3.00~N~Y
004833~004070~200110~CS-AB~5~LINE~Y~103~2~200210~S~N~CIS~290~Computer
Architecture~3.00~3.00~A~S~N~~~~~~~Y
004833~004070~200110~CS-AB~5~LINE~Y~103~3~200210~S~N~CIS~291~Open Computer Lab~1.00~1.00~N~S~N~~~~~~~Y
004833~004070~200110~CS-AB~6~LINE~Y~137~1~200210~S~Y~~~~~~~S~N~EL ENG~42~Introduction to Electronics for
Computer Science~3.00~3.00~N~Y
004833~004070~200110~CS-AB~7~LINE~Y~310~1~200210~S~N~MATH~251~Calculus with Analytic Geometry
I~5.00~5.00~N~S~N~ MATH~1A~Calculus~4.00~4.00~N~N
004833~004070~200110~CS-AB~8~LINE~Y~311~1~200210~S~N~MATH~252~Calculus with Analytic Geometry
II~5.00~5.00~N~S~ N~MATH~1B~Calculus~4.00~4.00~N~N
004833~004070~200110~CS-AB~10~LINE~Y~321~1~200210~S~N~MATH~270~Linear
Algebra~3.00~3.00~A~S~N~MATH~54~Linear Algebra and Differential Equations~4.00~4.00~N~N
004833~004070~200110~CS-AB~10~LINE~Y~321~2~200210~S~N~MATH~275~Ordinary Differential
Equations~3.00~3.00~N~S~N ~~~~~~~N
004833~004070~200110~CS-AB~11~LINE~Y~324~1~200210~S~N~MATH~268~Discrete
Mathematics~4.00~4.00~N~S~N~MATH~55~ Discrete Mathematics~4.00~4.00~N~N
```