DARS IMPLEMENTATION

DARS-PCD-01A
February 12, 2010

Prepared by
Student Affairs
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DARS IMPLEMENTATION

1 PROPOSAL

This plan responds to UCLA’s budgetary shortfall and the need to meet service expectations of our students in terms of tools to assess progress and their ability to graduate “on time” by:

- Providing departments with critical data needed to support the Restructuring Initiative to assure that more students graduate in 4 years and, more generally, with close-to-the-minimum credits required for graduation by providing tools:
  - For comprehensive degree analysis, integrated course planning / course offerings, automatic course articulations and transfer course applicability.
  - For aligning department course offerings based upon an assessment of student demand and course study plans.
- Automating the Transfer Credit Articulation process and leveraging the capabilities of the new Student Records System to streamline the production of Degree Progress Reports for incoming students.
- Decreasing students’ dependency on counselors for routine evaluation of their progress.
  - Replace a limited staff-centric degree tracking application with a student-centric self-service suite of applications that offer comprehensive and accurate degree analyses.
  - Give students a self-serve capability to evaluate the impact of program changes.
- Removing the need for manual evaluation of the satisfaction of many General Education, University and program requirements.
- Enabling additional schools (i.e., beyond the College and Arts and Architecture) to use the system.

These are critical components for any practical implementation of initiatives to improve throughput to degree completion and to reduce credit hour requirements. The approach is to replace the current, functionally deficient, Degree Audit System (DAUD) with DARS, now officially known\(^1\) as redLantern’s u.achieve/u.direct/u.select software suite.

This system is in use by several hundred universities nationwide, including UCB, UCSD, UCM and UCSB. This demonstrates the wide acceptance of the system and its versatility in

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\(^1\) Originally developed at Miami University of Ohio, redLantern™ was established as the organization name (replacing DARS) for its expanding suite of products in the summer of 2008. In March 2009, the assets of Miami University’s redLantern operations were purchased by the owner of CollegeSource, Inc., and redLantern, LLC was formed. (Source: [http://www.redlanternu.com/about](http://www.redlanternu.com/about)).
meeting the needs of contemporary degree programs, and virtually guarantees availability of on-going support for the system.

To implement DARS requires a one-time allocation of $377,386; the on-going operation of the system will require $331,248 in permanent funding in addition to existing DARS permanent funding of $287,027, and annual contributions from the College of $132,000 and Student Affairs of $71,500.

2 BENEFITS

2.1 Support for Improving Throughput to Degree Completion

We have a significant gap in our ability to forecast demand so we can offer the right classes at the right time to allow more students to graduate “on time.” UCLA’s administrative systems track students’ past performance, but there is no system that contains information about their future plans, which is a critical need for such academic planning.

The DARS u.direct module, allows students and advisors to create and maintain a detailed term-by-term, multi-year academic path to graduation. Once plans are included in DARS (u.direct), departments have a tool to forecast demand for their courses and offer them so the students can take them at the right time in their academic career. (As is pointed out in § 2.3.1, DAUD’s degree progress report has only limited capabilities, which thwarts making reliable plans and causes students to miss requirements, the fulfillment of which may cause them to stay one or more quarters longer than they anticipated.)

Institutions using DARS have found that having this capability, coupled with a “best effort” promise of offering the courses needed to graduate, has enabled them to significantly reduce the number of students that stay longer than 4 years and/or take more units than required to graduate.

2.2 Automated Transfer Credit Articulation

The Admissions Office evaluates the academic record of applicants, incoming students as well as work performed at other institutions concurrent with their attendance at UCLA (e.g., classes taken elsewhere during the summer). Essentially, admissions officers must determine the equivalency between classes taken elsewhere (or other accomplishments or proficiencies) and what UCLA will accept in satisfaction of its specific requirements.

At present, Admissions Officers apply their knowledge to the admissions application and transcripts and then type their evaluation into the appropriate OASIS screens of the Student Records System. Because one can satisfy a requirement by a combination of courses taken at UCLA or elsewhere, this evaluation process must be repeated each time a student submits non-UCLA academic work for evaluation.
DARS can perform transfer credit articulation automatically from the courses entered from the application and transcript. DARS can then also post the results directly to the Student Records System.

2.3 Reduced Dependency on Counselors

The DAUD system provides counselors and students with limited tools to assess students’ degree progress. Changes in requirements since the implementation of DAUD have caused students in recent years to become more dependent on counselors. The capabilities missing in DAUD to support current requirements are discussed in § 2.4, Functionality to Support Current Requirements; this section primarily highlights new capabilities in DARS that will improve student service.

2.3.1 Degree Progress

Students assess their academic progress using the Degree Progress Report (DPR). Available to counselors through Counselor Desktop and OASIS and to students via URSA, the DPR is produced by DAUD. However, DAUD does not have the ability to process all majors nor all University or department requirements and cannot assess the interplay between the requirements among multiple majors and/or minors correctly (see § 3.1.3, Lagging Behind the Evolution in Academic Requirements (1995-2010), below).

Because of these limitations the DPR will only show a rough approximation of the actual degree progress and, in extreme cases, provides misleading information. Students who believe the DPR to be correct often don’t realize that they have not met all requirements until they file their petition to graduate. Thus, a correct degree progress report/degree audit is a key enabler of the initiative to improve student throughput. (See also § 2.1 above.)

With multi-major degrees (and often wide latitude in the choice of electives) students can only be sure that the courses they select will be effective toward their degree objectives by seeing a counselor. Only counselors have the ability (through OASIS and Counselor Desktop, not URSA) to run the multiple DAUD scenarios needed and have the skills to manually assess students’ progress current requirements.

DARS implementation would also enable students to obtain a DPR with the correct interpretation of all their academic work, as well as a list of courses appropriate to fulfilling the remaining requirements for their degree.

2.3.2 Change of Major/Minors/Schools and College

Students that wish to change majors, minors, schools/college during their stay at UCLA have no tool to assess how their already completed coursework will apply to the changed program. (A variation is deciding on a major for students that entered as “undeclared” majors.) Only counselors have the ability to analyze such changes.

Because DARS can assess the applicability of coursework to more than one degree objective on the fly, it will also allow students to obtain pro forma DPRs for a changed major, minor, school/college, thus being able to self-assess their prospects in a new academic direction.
(Final approval would still require a formal petition, since other factors may determine one’s ability to make a change.)

2.3.3 “Pro forma Articulation”
As noted above (§ 2.2) determining the applicability of courses taken outside of UCLA to a UCLA degree is not straightforward. Many students take classes elsewhere (e.g., summer) only to find that their work did not benefit them in satisfying their degree requirements. In a fair number of cases students discover this when they petition to be awarded a degree, often in the quarter before graduation. Such belated discoveries (along with not being able to get required classes) contribute to students needing more than 4 years to complete their degree.

The articulation data in DARS can be made available to students (including prospects) to assess the applicability of their non-UCLA coursework to their degree objective. This is particularly useful for students who intend to transfer to UCLA after taking permissible classes at local community colleges. Making this analysis available as a self-serve capability will help UCLA achieve the objective of graduating students with the minimum number of redundant units.

2.4 Functionality to Support Current Requirements
Accommodating changes in degree requirements has been a problem. Significant changes in requirements are contemplated as part of Challenge-45 and other undergraduate initiatives. The ability to implement these changes in DAUD remains to be evaluated, but past changes have been beyond what the system can accommodate.

As a result, new requirements were sometimes not implemented (the cause of misleading or wrong degree progress reports), or they were incorporated in such a way that, over time, the DAUD rules database became corrupted. The far more flexible design of DARS will allow these requirements to be included and to clean up the rules database, which has become nearly intractable. Specific voids to be filled are:

- DAUD does not have the ability to incorporate Senior or Major Residency requirements or to handle all University, General Education, and department requirements properly.
- The “upgrading” of some 4-unit courses to 5-unit causes problems for DAUD, not all of these can be addressed without redesign of the program.
- The School of Theater, Film and Television, which was originally a DAUD user, had to stop using the system, because they were not able to keep DAUD up to date with their degree requirements.
- The School of Engineering is already running its own version of DARS, because DAUD cannot accommodate their requirements. Since their students take courses outside the school, this requires converting non-school data to their system. They consider DARS capabilities sufficiently valuable to incur this extra work, but have committed to move to the University-wide implementation of DARS when it becomes available, removing the work of transferring data between the two systems.
• DAUD does not have the ability to process requirements for academic programs outside the College and the School of Arts and Architecture. Adding additional degree programs to DAUD, which has already been extensively patched to continue to be partially functional for its original sponsors, is not practical. Because of the far more flexible design of DARS, these could be added to the DARS database, weaning those departments from guru-dependent counseling and degree audits.

2.5 Availability of Maintenance Resources
DAUD was developed in-house, requiring UCLA to develop all modifications and all new capabilities in-house as well. This is a very expensive way to provide the capability. It is far more cost effective to spread that cost among users of a system that is supported by a professional organization. DARS is in use in several hundred institutions of higher education—UCB, UCSB, UCM and UCSD among them, as are USC and CSUN locally—and is well supported by a substantial vendor.

Further, because the system is in nation-wide use it is comparatively easier to get people with the skills to enter data into the system than for a highly complex, idiosyncratic in-house system, where we have, in essence, to train everyone who needs to work with the system or its database.

2.6 Long-Range Potential for Automated Degree Awarding
Implementation of DARS would allow us at some time in the future to further automate the degree awarding process. At present DAUD has been “certified” for seven majors, where the DAUD degree audit is accepted as authoritative. Some universities that have implemented DARS (e.g., USC) are able to certify all their degrees. The certification process is lengthy and the potential for cost reduction is undefined, although it is expected to result in an improved service to our academic departments and our students.

3 HISTORY OF THE PROJECT
3.1 The Institutional Processes of Counseling and Awarding Degrees
The University awards degrees upon the successful completion of a set of requirements that vary by the major (or majors) and, if appropriate, minor(s) selected by the student. Students may fulfill these requirements in various ways, dependent on their career interests as well as on academic work completed prior to entering the University or concurrently pursued at another institution.

Degree audit is the process of reconciling the corpus of a student’s academic achievement to the requirements as published in the UCLA catalog under which they were admitted. It is a critical quality assurance function, performed under the auspices of the Registrar’s Office.

As a practical matter, students draw upon the services of admissions officers and counselors (College, G.E., Departmental, as appropriate) to help them assure that their academic activities will lead to satisfactory progress toward their degree objectives.
3.1.1 The Manual Process
Until the late 1980s this process was performed entirely manually: Admissions Officers evaluated incoming students’ academic records (“transfer articulation”); General Education, College and Departmental Counselors would evaluate students’ progress; and the Registrar’s Office employed Degree Auditors to perform the final and authoritative validation upon which the University based its decision to award a degree.

The process required a highly skilled workforce to evaluate non-UCLA academic work, interpret departmental rules, and understand a myriad of exceptions and substitutions. Each counselor in the process chain would essentially have to start from scratch, since there was no practical way to share analytic work from one counselor to the next. Further, since degree progress analysis relied on the knowledge and skill of the counselor, results of the analysis were not always consistent among counselors -- hence the need for the Degree Auditors – and relying entirely on paper records and manual comparison, the process was highly error prone.

3.1.2 Automating the Requirements of the Late 1980s
UCLA attempted to address some of these difficulties by a home-grown degree audit system (DAUD). The system addressed the degree requirements for most of the students pursuing degrees in the College, the School of Arts and Architecture, and the School of Theater, Film and Television, as they existed in the 1980s.

The implementation of DAUD accomplished two major goals: it encapsulated the rules for the majority of major requirements in the affected units, and it enabled counselors to see all of a student’s academic accomplishment, whether completed at UCLA or elsewhere, as well as annotations made and/or actions taken during earlier counseling sessions.

The first version of DAUD covered an estimated 80% of degree requirements, but funds were not available to complete the system. Nonetheless the system proved to be a valuable tool in weathering the financial crisis of the early 1990s. It enabled the work load to be handled by fewer counselors, and over time it proved feasible to have graduate student workers perform many tasks and having the remaining highly skilled counselors attend to the most complex cases. Likewise, the Registrar’s Office has been able to reduce the number of degree auditors through attrition, and those remaining now have also grading duties in addition to degree audits.

3.1.3 Lagging Behind the Evolution in Academic Requirements (1995-2010)
Significant changes in the academic environment took place since DAUD was put into service: degrees with multiple majors, a proliferation of minors, significant changes to the GE requirements, etc. These created complex new business rules (e.g., the permissible overlap of courses among double majors and between majors and minors) that DAUD wasn’t designed to handle.

Permanent funding for 1 FTE was allocated to AIS to maintain DAUD, but accommodating these changes went well beyond routine system maintenance: it requires significant redesign of the DAUD logic. Thus, the academic needs started to outstrip the functionality of DAUD.
In 1999 the decision was made that rather than redesigning DAUD, Miami University’s DARS system should be licensed. It would accommodate the new academic requirements as well as provide the functionality planned for Phase II of DAUD that was never implemented.

At roughly the same time the project to rewrite the Student Records System (SRS) was initiated. It made sense to integrate the DARS with the new SRS. The decision was made to stop further work on upgrading DAUD and instead concentrate on converting to DARS. The plan was for College Information Systems to implement the (server based) DARS modules, while AIS and the Registrar’s Office would develop the (mainframe-based) SRS.

Both projects ran into serious problems, and although SRS is operational as of October 2009, the DARS implementation is only partially complete.

3.2 Transfer of Responsibility to Student Affairs

The current system was a joint project between the College of Letters and Science and Student Affairs in 1980s. At the time of conception it was designed to be decentralized and funded accordingly for encoding and maintaining of requirements. Initially, DAUD was used and supported by the College of Letters and Science, the school of Theater, Film and Television and the School of Arts and Architecture. Each school/college provided its own staff to encode requirements, maintain course lists, encode Substitutions and Exemptions and train their staff.

As the years progressed, several operational and programming staff with knowledge on how to encode requirements or modify the COBOL program itself left UCLA and the knowledge was lost. As a result, service requests to keep the system functioning properly have gone unresolved (See B-3, Summary of DAUD Functionality Issues) and the school of Theater, Film and Television has discontinued its use altogether. The School of Arts and Architecture staff currently rely on a single encoder with basic working knowledge of the system, who in turn relies heavily on the knowledge of the College of Letters and Science staff.

College Information Systems, now known as Undergraduate Education Information Technologies, has been considerably downsized and has shifted its focus from the College to Undergraduate Education applications and support. Transferring the responsibility for DARS (and the legacy DAUD) to the Registrar’s Office makes sense at this time and conforms to the setup in all other Universities. Degree auditing and tracking is a campus service and appropriately a function of the Registrar.

Centralization of staff in the Registrar’s Office and funding degree audit systems within Student Affairs will ensure that these campus-wide applications/services are funded and supported centrally, and usable by all interested schools and colleges, and eventually Graduate Division and Law School.

DARS will expand the capability to use automated degree progress tracking from two undergraduate programs to all undergraduate and graduate schools/colleges. Housing degree auditing in the Registrar Office is common practice at most campuses and since transfer course articulation is a function of Undergraduate Admissions, it makes functional and practical sense that DARS be housed and supported within Student Affairs at UCLA.
3.3  **Summary of Work to Date**

Although the following tasks have been accomplished or are in progress, significant development work still remains.

### 3.3.1  College of Letters and Science

- Catalog encoded for 08-09 and work has begun on 09-10 for the College of Letters and Science, the School of Arts and Architecture, the School of Theatre, Film and Television, the School of Nursing.
- Student Record infrastructure in DARS database completed.
- Articulation rules encoded for all 110 California Community Colleges for 07-08 and most have been updated for 08-09, several CSU and UC campus catalogues have also been initially coded but not validated.
- Integration/connectivity between DARS and SR2 underway.
- Prototype of a DAUD-type Degree Progress Report completed.

### 3.3.2  Henri Samuei School of Engineering and Applied Science

HSSEAS, utilizing the DARS project campus license, has deployed an older and limited version of DARS covering 9 majors for approximately 3,000 HSEAS students. Student-centric interactive audits are being beta tested with an anticipated deployment of web-based audit deliverables during Winter Quarter 2010.

Currently, automated articulations, integration with Student Records, URSA, or Counselor Desktop are not supported. In addition, this limited deployment does not deliver the required functionality to support u.direct, a critical component of degree planning nor u.select, the transfer course applicability module.

Recognizing the need for course planning, automated articulations, integration with Student Records and campus websites as well as transfer course applicability information, HSSEAS has committed to abandoning their limited DARS implementation in favor of moving to the institutional system when it becomes available.

### 4  **BUDGET**

#### 4.1  **Budget Carry-Forward**

The College has agreed to transfer current DARS funding in the amount of $287,027, annually. The College has agreed to transfer the salary and benefits dollars for 1 FTE to support DARS and DAUD services and Student Affairs has agreed to contribute salary and benefits for 1 FTE to support encoding of articulation rules (see Table 1 and Table 2 below).

#### 4.2  **Supplemental Budget Request**

Bringing the DARS system up, integration with our student systems, and completing the encoding of catalogs and transfer credit exceeds the funding available from College transfers
and sources internal to Student Affairs. Anticipated annual operating expense for the system also exceeds the available funding. Therefore, DARS implementation will require both one-time and permanent funding.

### Table 1 - Development (One-time) Funding Required

#### (04/01/2010 – 06/30/2011)

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<td>Admissions Encoder</td>
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<td>Registrar Encoder</td>
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<td>Programmer, Network, DBA (2 FTE)</td>
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<td>Management, Encoder, Legacy (Mgmt/Encoder)</td>
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<td><strong>Subtotal</strong></td>
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<td>u.direct purchase / first year license</td>
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<tr>
<td>u.select license</td>
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<td>Infrastructure</td>
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<td>Training</td>
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<td>Supplies and Administrative</td>
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<td><strong>Subtotal</strong></td>
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| Total Development Expense | **$ 1,128,313** |

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<td>College Transfer (09/10 Remaining)</td>
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<td>College Transfer (7/1/10 through 6/30/11)</td>
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<td>College Funding (Mgmt/Encoder)</td>
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<td>Student Affairs (UARS Encoder)</td>
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<td><strong>Subtotal</strong></td>
<td><strong>(750,927)</strong></td>
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| Development Funding Needed | **$ 377,386** |

### Table 2 - Recurring (Permanent Annual) Funding Required

#### (07/01/2011 and thereafter)

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<td>Management/Encoder</td>
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<td>u.direct license</td>
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<td>u.select license</td>
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<td>Infrastructure</td>
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<td>Training</td>
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<td>Supplies and Administrative</td>
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<td><strong>Subtotal</strong></td>
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| Total Recurring Expense | **$ 821,775** |

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<tr>
<td>College Funding (Mgmt/Encoder)</td>
<td>(132,000)</td>
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<td>Student Affairs (UARS Encoder)</td>
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<td><strong>Subtotal</strong></td>
<td><strong>(490,527)</strong></td>
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| Recurring Funding Needed | **$ 331,248** |
4.3 Alternatives Considered

4.3.1 Modification or Rewriting of DAUD
The alternative of modifying DAUD to deliver these capabilities is not considered feasible. The design of DAUD, while appropriate for the academic requirements of 1990, does not permit modeling of the requirements of 2010.

The alternative of redesigning and rewriting DAUD is costlier than licensing a commercial package. Further, the cost of system maintenance is shared by several hundred institutions instead of borne solely by UCLA. This enables UCLA to acquire and support a far more robust, versatile and better maintained capability than we could produce in-house, and at a lower total cost of ownership.

4.3.2 Outsourcing DARS to Another UC
The value of the DARS system is in the ability to integrate with Student Records. Although UCB, UCSD, UCM and UCSD, are also DARS users, outsourcing DARS to another UC is not practical (and likely not feasible). In any event it would increase the cost of development and ongoing maintenance.

Since licensing the suite of DARS applications is based on enrollment at each campus, there is no cost savings to be realized on licensing. With student records systems, courses, degree offerings and requirements, articulation agreements, and web applications unique to each campus, customized development and integration with respective systems at each campus would still be required. The increased complexity of a centralized deployment increases the cost of implementation and maintenance over a local implementation.

4.3.3 No Action
Adopting the “do nothing” alternative—not modifying DAUD and remaining dependent on manual labor for functionality not supported—would still require a significant overhaul of DAUD in the near future: the system will stop working for 2014 admits. The technical reason is similar to the “Y2K bug,” which required systems to be modified to continue working after December 31, 1999.

Further, although DAUD was designed for use by the College of Letters and Science, the schools of Arts and Architecture and Theater, Film and Television, it has been used by other schools as an informal tool for counseling. Program changes and proprietary coding knowledge required limit DAUD use to the College of Letters and Science and the school of Arts and Architecture. In addition, with the switch to the new Student Records System, only the College and A&A are supported; other users have lost the ability to use Degree Progress Reports for their students. (In the original plan DARS and the new Student Records System were to be implemented at the same time.)

This alternative will still incur significant cost and degrade the service level to our students.
5 SCHEDULE

April 1, 2010 – June 30, 2011 – Development
July 1, 2011 – Deployment in time for 2012 cohorts

5.1 Milestones

- Encoding 09/10 catalog
- Encoding 10/11 catalog
- Encoding 11/12 catalog
- Encoding 12/13 catalog
- Validation of program requirements
- Encoding articulation agreements for 09/10 and validation
- Encoding articulation agreements for 10/11 and validation
- Encoding articulation agreements for 11/12 and validation
- Validation of articulation rules for production release
- Integration with admitted student transfer application course data
- Integration with Student Records
- Integrated Web application for UARS
- HSSEAS migration to centralized application
- Deployment of production infrastructure
- Integration of new degree progress report with campus applications (MyUCLA, URSA, Counselor Desktop)
6 SIGNATURES

______________________________________________________________
Thomas Lifka, Associate Vice Chancellor Student Academic Services
______________________________________________________________
Julie Sina, Chief of Staff, College of Letters & Science Office of the Deans
______________________________________________________________
Janina Montero, Vice Chancellor of Student Affairs
______________________________________________________________
Judith Smith, Dean/Vice Provost for Undergraduate Education
APPENDIX A  LETTERS OF SUPPORT

A-1  Henri Samueli School of Engineering and Applied Science
     Associate Dean Richard D. Wesel, Office of Academic and Student Affairs

A-2  School of Arts and Architecture
     Director Merrilyn Pace, Office of Student Services
Regarding Degree Audit and Course Planning Software for UCLA

November 4, 2009

Dear CITI Committee Members:

I would like to describe the HSSEAS experience with the DARS (u.achieve) degree audit software to inform your decisions regarding whether, when, and at what level to begin funding a properly functioning campus-wide degree audit system. I would also like to point out the opportunities presented by the u.direct planning utility that is available as an add-on to u.achieve.

How does HSSEAS use u.achieve?

HSSEAS uses DARS (now called u.achieve) as our sole degree audit capability for students with a calendar year of 2005 or later. Our switch to u.achieve was necessary because curriculum changes (including a new technical breadth requirement and new general education requirements) were too complicated for our previous degree audit software to handle. In fact, u.achieve also handles double majors and minors, which our previous software did not.

At this point, the vast majority of our students are calendar year 2005 or later so that u.achieve is our primary degree audit system. As one would expect, we use u.achieve to check the degree progress of prospective degree candidates and to verify completion of degree requirements before notifying the registrar’s office that a student is ready for graduation.

We also use u.achieve as a primary tool for advising students on their curriculum choices. Counselors and students can clearly view graduation requirements and course options in u.achieve during advising meetings. The u.achieve audit automatically includes courses in progress and includes the ability to add planned courses to a degree audit to check if the planned courses will satisfy the remaining requirements. An important benefit of u.achieve is the ability our counselors have to provide specialized messages to audits for all students in a major that fit a particular profile of course and/or requirement completion.

Additionally, our student affairs office uses u.achieve to calculate GPAs, to monitor, explain, and enforce degree requirements, to track, update, and monitor petitions, to add majors and minors, and to check for duplication of credit.

Using u.achieve we can instantaneously implement changes to degree requirements based on updates from appropriate departmental and FEC representatives. This capability is critical both for avoiding confusion about policy changes and for reducing the need for petitions as a work-around implementation of policy changes.

We have a group of student beta testers using u.achieve independently to view their current audit online at their convenience and to use the interactive audit web site to enter planned courses and see whether their planned courses will lead to graduation. We plan to give all students this access within the next two months.

What is the effort level required to implement and maintain u.achieve at HSSEAS?

Currently, we have two people who spend part of their time on u.achieve encoding. One person is a degree auditor trained also in u.achieve encoding. The second person is an IT professional trained in u.achieve encoding and programming. The term “encoding” is used to describe the process of entering degree requirements into the u.achieve system. My best estimate is that their time currently adds up to about 0.5 FTE of annual effort. This is a maintenance effort level rather than initial implementation. Because degree requirements are constantly changing, new encoding work is always appearing.
What are HSSEAS future plans regarding u.achieve and u.direct?

HSSEAS is now fully committed to the u.achieve product. Our legacy system cannot handle students with calendar years 2005 and later, and u.achieve is working very well for us.

We also plan to extend our capabilities by adding the u.direct utility, which greatly enhances the planning capability of both students and departments. In u.achieve (our current system), a student “plans” a course by adding it to a list of courses that will be taken at some point. In contrast, the additional u.direct utility allows students to indicate the specific quarter during which they will take each of their planned courses. To facilitate this, departments need to provide information about when courses will likely be offered and also create “roadmaps”, which are detailed quarter-by-quarter suggested course plans for each major and option.

We feel that the planning capability provided by u.direct is an essential tool for students to plan for and accomplish timely graduation in the context of available course offerings. In fact, our current students, coming of age with the internet, expect to have such web-based capabilities.

HSSEAS departments have long sought accurate answers to questions such as “what will be the demand for course X in winter as opposed to spring?” and “What would be the impact of offering course Y only twice a year instead of three times a year?” The planning enhancements of u.direct would help our departments by giving them, for the first time, detailed information about what the students are actually planning to take in future quarters.

Extracting the full benefit of the u.direct utility requires significant effort for departments to create roadmaps which lay out explicit paths to graduation and also to make good-faith statements (although not iron-clad guarantees) about future course offerings. Students also need to have some incentive (such as a registration priority) to stick to their planned courses.

However, if this work is done and u.direct is successfully implemented, students will gain an important tool for navigating an efficient path to graduation in the context of course offerings that, in the context of budget realities, cannot be unlimited. Furthermore, departments will gain a much clearer understanding of the demand profile for their courses that should allow them to deploy their resources with significantly greater efficiency so as to provide the most benefit to our students.

Summary

HSSEAS is currently using u.achieve, and it is working well for us. It takes us about 0.5 annual FTE to maintain our u.achieve system. We plan to add the u.direct utility to enhance the planning capability of both our students and our departments.

Based on the HSSEAS experience with u.achieve, the proposed staffing level of six FTE does not seem unreasonable. I believe that implementation of u.achieve campus-wide is the only reasonable path at this point, and I believe that it should happen as soon as possible. Sooner or later this expense must be borne. The legacy degree audit system provides only limited functionality at this point. Delaying u.achieve delays the benefits and efficiencies that a properly functioning degree audit capability will provide to the campus. Delay also incurs a significant risk of having no degree audit capability at all for a significant portion of the campus as the legacy system begins to fail.

I hope you find this letter helpful. Please feel free to contact me to discuss these issues in more detail.

Warm Regards,

Richard D. Wesel
Associate Dean, Office of Academic & Student Affairs
The counseling staff of the Office of Student Services strongly supports the implementation of NDARS. We believe the need for a sophisticated, comprehensive, upgraded degree audit system for all undergraduate and graduate students is long overdue. The Academic and Professional Degree Audit and Advising System Report (1998) and the recent degree audit overview submitted to the Office of Planning and Budget (May 2009) describes, in both general and specific terms, why a new degree audit system is essential for UCLA. As such, there is no need to further extol its virtues. Instead, I will identify the key components of the new system that will benefit the School of the Arts and Architecture. These benefits will affect students, staff and faculty advisors, as well as the School’s executive administration.

Graduate Students:
- First-time ever automated degree tracking for ten master’s programs across six departments
- Timely documentation of when course work and other specific degree requirements are satisfied
- Identifies remaining requirements
- Facilitates program planning

Undergraduate Students:
- Improved degree tracking of university, school, and major requirements for six bachelor of arts programs, including seven concentrations and six emphases/commitments within certain majors and concentrations
- Improved documentation and application of transfer work
- Ability to program and track more than one major, minor, concentration
- Ability to perform timely study-list audits rather than post-term audits
- Ability to “read” and apply courses accurately
- Short and long term degree program planning for current and prospective students
- Interface with community college articulation programs

Advising (Student Services, faculty, and departmental counselors):
- A reliable, comprehensive document that allows advisors to more effectively advise students from the point of matriculation to graduation
- Automated update of revised degree requirements for each major, minor, concentration, etc., including the application of course overlap limitations
- Efficient application of exemptions and/or substitutions for university, school, and major requirements; allow for language to more accurately describe the reason for an exemption and/or substitution
- Allow for detailed customization of majors, concentrations, emphases/commitments
- Data collection and follow-up reports
- Automated degree candidate reports; possibility of automated degree certification

Administration:
- Data collection
- Availability of accurate and timely data reports
- Short term and long term student enrollment and course planning
- The above three bullet points are critical to short term and long term resource and budget planning

Merrilynn Pace, Director
Office of Student Services
October 22, 2009
APPENDIX B  USE AND LIMITATIONS OF DAUD

Due to the complexity and unique design of DAUD, only two schools/colleges have the expert knowledge in encoding requirements and staff availability to use DAUD. There is no single entity responsible for expanding the current system’s use or features to incorporate the needs of other schools.

The Henri Samueli School of Engineering and Applied Science, which developed its own home-grown system at the same time DAUD was developed, is attempting to use DARS for their school without the DARS integration currently under development.

Decentralization of degree auditing programs duplicates effort, wastes scarce resources, and leads to a lack of uniform business practices and limited integration with Student Records. Centralizing degree audit is the preferred option for developing and maintaining a uniform process and supporting a service that should be campus-wide.

B-1  Current DAUD User Profile

- Undergraduate Students
  - College of Letters & Science
  - School of the Arts and Architecture
- Division of Undergraduate Education
  - College Academic Counseling
  - Honors
  - Academic Advancement Program
  - Orientation
  - Center for Community Partnerships
  - Academics in the Commons
  - Scholarship Resource Center
  - Undergraduate Resource Center
  - Athletics
- School of Arts & Architecture Staff & Counselors
- College Department Staff & Counselors
- Registrar Office
- Undergraduate Admissions
- ROTC

B-2  Current Usage

Even with its limited capabilities, the Degree Progress Report (DPR) function on URSA is one of the heaviest used (right after Enrollment Add/Drop functions). Students are requesting in excess of 500,000 DAUD audits a year and staff use is estimated to be approaching 200,000 audits annually.

UARS reviews and enters nearly 100,000 transfer courses yearly into the Student Records mainframe to support degree audit processing, enrollment and transcript printing. Before the
advent of DAUD all transfer work was recorded manually on paper and audits were performed by hand by College and department counselors and staff, degree auditors, and staff tracking various degree progress components. The cost and time savings to staff from automating the degree checking process has played a significant role in minimizing the impact to our ability to provide counseling services during past staffing reductions and will play a critical role in the future as staff turnover and attrition occur. DAUD has also played a significant role in reducing the impact of loss of legacy knowledge in departments as staff have left the University.

2008/09 Usage Statistics

- URSA (Student Access) 532,404
- PROG (OASIS) (Staff Access) 119,544
- Counselor Desktop (Staff Access) 44,160 yearly
- Transfer Course Articulations 94,931
- Substitutions processed: 233,803
- Exemptions processed: 72,561

(The DAUD database now contains data on the 1,898,620 courses added since 1999.)

B-3 Summary of DAUD Functionality Issues

- System is unable to enforce course overlap tracking rules for minors.
- System is unable to enforce course overlap tracking rules for double majors.
- Transfer Course Articulation is done manually. Source data is unavailable to counselors and staff who need source school course information for proper evaluation of transfer work and applicability of requirements.
- System is not flexible enough to encode increasingly complex major, minor and concentration/specialization requirements.
- DAUD encoding knowledge is specialized, complex and limited to one person on campus
- Many changing requirements are “hard-coded” in COBOL logic requiring AIS programming staff to manage changes.
- Very limited ability to extract useful knowledge:
  - course planner
  - completed degree information
  - course-specific information
- Substitutions and exemptions management is decentralized, labor intensive and difficult to learn.
Substitutions and Exemptions are requirement-based -- requiring duplication of work when requirements change or a student changes their major(s), minors(s), concentrations(s), specialization(s).

Requirement-based encoding requires duplication of effort when changing majors, rules, and/or terms.

Complex requirements are not possible to encode in current system.

System is unable to attach student-centric messages to encoding components.

There are multiple degree tracking programs in use on campus and some schools have no access to tracking due to lack of knowledgeable staff.

Graduate and professional schools are excluded from current DAUD system.

Encoding is decentralized requiring dedicated staff to manage DAUD system; thereby excluding schools use of system for undergraduate population:

- School of Theater, Film & Television
- School of Nursing

System is unable to track auxiliary programs (College Honors, NCAA, etc.).

System is unable to integrate with campus web applications.

System is unable to encode significant components of a degree:

- senior residency
- major residency
- concurrent enrollment enforcement
- course unit maximum rules
- course limit rules
- multiple identical course entries
- Latin Honors eligibility
- complex major and minor rules:
  - tracking completion of preparation for major by 135 units
  - simplifying General Education minimum unit completion

System has little or no user, programming, or on-line documentation.