Academic Advisement Assessment
for The University of California, Santa Cruz

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Section 1. Executive Summary

Ocean Bright Consulting (OBC) was requested by HighPoint Technology Solutions to assist The University of California, Santa Cruz (UCSC) by performing an assessment of the PeopleSoft Academic Advisement (AA) configuration and related business processes.

The following objectives for this effort were agreed upon by UCSC and OBC.
1. Review UCSC PeopleSoft Configuration.
2. Facilitate discussion sessions to review business processes and system configuration.
3. Provide recommendations and findings in writing.

The primary coordinators of the AA Assessment for UCSC were:
- Kalin McGraw, Associate Registrar – Curriculum Management
- Don Moonshine, Curriculum Management Project Manager

OBC/HighPoint was represented by Zia Jones, Senior Consultant.

A generic agenda (below) was shared with UCSC and was the basis for zoom discovery discussions. For each topic/session, the UCSC coordinators of the engagement determined the participants appropriate to their organization.

Campus Overview
- o Organizational Structure
- o Business Process for System Changes/Modifications
- o Bundle Update Processes (Retrofitting/Testing)

External Credit
- o Build & Maintenance of Automated Rules for Course & Test Credit
- o Entry/Loading of Transcript information
- o Evaluation & Posting of Course & Test Credit

Curriculum/Catalog Updates
- o New major/minor approval & implementation procedures
- o Catalog updates (new courses, course changes, changes in major/minor requirements)
- o Associated business processes for Academic Advisement updates

Graduation Processing
- o Process flow from the time the student applies for graduation through awarding of degrees
- o Practices related to Exceptions/Substitutions

Academic Advisement Configuration Review & Discussion
- o Review of configuration options/maintenance conventions
- o Use of reporting tables, batch processes
- o Discussion regarding issues/bugs/opportunities for improvements

The purpose of this document is to document the observations and recommendations from the discussions and related research.

Section 2. General

Background

UCSC has fallen behind on maintenance for the AA report due to insufficient staffing levels. However, even when the report was kept up to date, UCSC has never relied on it as the official record of degree requirements used to evaluate candidates for graduation. There has been a great deal of frustration and resistance from some academic departments surrounding the perceived accuracy of the report and the level of effort required to maintain it. The AA report is widely trusted for General Education (GE) requirements, but usage varies for majors and minors. Some departments use it successfully to monitor students' progress toward degree requirements, while others do not use it at all.

UCSC would like to implement more advanced planning tools for students which depend upon an accurate degree audit as a starting point. UCSC is interested in understanding how they can better position the AA report to support these planning tools and other institutional goals.

Institutional Commitment to the Academic Advisement (AA) report

While the UCSC Registrar's Office is investing in resources to maintain the AA report, the report reflects the combination of a great deal of information also maintained outside the Registrar's direct control. All the following variables can impact the results of the AA report and give users the perception that the report is inaccurate:
- Academic Major/Minor Requirements
- Course offerings in the UCSC catalog
- University Requirements and Policies (General Education, Total Units, GPA, PE, Course Repeats)
- Student's declared Major/Minor and Catalog Year(s)
- Student's UCSC course history
- Transfer Credit Evaluations
- AP and Other Test Credit
- Exceptions and Substitutions that have been approved for the Student

If the AA report were considered the official record of degree requirements and status, UCSC would experience the following benefits:
- Eliminate time spent assigning and updating graduation checklists for major clearance
- Reduce time departments spend cross-checking information on paper forms, the AA report, the transcript and the course catalog for each individual graduate
- Reduce confusion and conflicts between students, advisors, evaluators and the Registrar's Office
- Increase the accuracy and timeliness of information provided to students

To achieve these goals, the responsibility for the integrity of the report information must be shared across all organizations that impact the accuracy of the data. The current perception is largely that the AA report and any related concerns are the Registrar's Office responsibility. It is recommended that a communication plan – starting with senior management – address distributing ownership across all groups that participate in the process:
- Office of the Registrar
  - Defines and manages practices for student records maintenance to ensure accuracy and consistency.
  - Owns the configuration of the report and ensuring congruence with the course catalog.

- o Should communicate changes or issues related to the AA report so that the various user constituencies develop confidence in the stability and quality of the report.
- o Is responsible for providing timely and accurate transfer credit articulation, including transcripts submitted for advanced standing.
- o May play a role in the timely entry of substitutions. Although this office is not responsible for the data entry they still help to define the process and any guidelines around what types of exceptions colleges should or should not enter.
- o Shares in the responsibility to communicate the message to students that the AA report is the official record and minimize disparaging statements when speaking with students.
- o Works with other constituencies to set timelines that align to the goal of a complete and accurate AA report.
- Admissions
  - o Evaluates and posts Transfer and Test Credit to student records.
  - o Works with faculty to define articulation agreements.
  - o Maintains automated rules to speed processing of Transfer and Test Credit.
  - o Defines and communicates timelines and expectations for external credit to other stakeholders.
- Colleges and Academic Departments
  - o Define degree requirements and share responsibility for confirming that curriculum changes are correctly represented in the catalog and in the AA report (and that any amendments are reflected in both).
  - o Share in the responsibility to maintain accurate articulation rules by coordinating with Admissions on curriculum changes.
  - o Should report questions or concerns regarding the report to the Registrar's Office, or other offices as appropriate, rather than disregard the AA report.
  - o Should report questions or concerns regarding transfer or test credit articulation to Admissions to prevent recurring issues.
  - o Have to share in the responsibility to communicate the message to students that the AA report is the official record and minimize disparaging statements when speaking with students.
  - o Will need to commit to enter (or submit) approved substitutions at the time they are identified (rather than when the student applies to graduate) so that they are reflected in the AA report.

Academic Planning Tools

UCSC has identified the need to assist students in plotting their path to graduation. The AA report is a valuable tool to communicate what a student's requirements are and which are satisfied. But the AA report does not provide all the information a student needs to plan their schedule for a single quarter, much less their entire program. Gaps include:

- Which requirements should be completed first to satisfy prerequisites?
- Which course selections may satisfy more than one requirement?
- In which quarter(s) is the course scheduled (or typically offered)?

UCSC has expressed interest in adopting an academic planning software product. Any planning tool will need to work hand-in-hand with the AA report. If the AA report is not reliable then student course plans most likely will not be either. As an example, if substitutions are not identified or transfer credit not articulated, a planning tool would direct students to enroll in classes they do not need.

UCSC currently uses Google sheets to develop academic plans for students and templates for each major or minor. This approach requires a great deal of manual effort to customize the plan for each student to include only their remaining requirements. In addition, mining this data to plan course demand or identify students needing intervention is difficult, if at all possible. However, the work that UCSC has done to define the recommended template will be an important input when a third-party product is adopted.

Increase Communication and Transparency

To increase the trust in the AA report, UCSC should review current interdepartmental communication channels to determine how to increase communication with advisors and other stakeholders. Understanding the AA report and resolving issues requires departments and faculty to understand the report itself, UCSC policies and the business processes that impact report results.

In some cases, UCSC noted that improvements have been made to address pain points, but these improvements were not well understood within the advising community. For example, exceptions are no longer "lost" when a student moves from a proposed to declared major, but some advisors are still reluctant to enter exceptions because they are unaware of this improvement.

UCSC has FAQ pages for staff & students about the AA report but these pages were last updated in 2017. A review and update of these pages, annually at a minimum, is recommended to ensure that they are enhanced as changes or new questions are identified.

Since UCSC currently has a backlog wherein not all major requirements have been configured in the AA report, it would be helpful to publish to the advising community a listing of plans that are/are not up to date and the planned schedule for addressing the backlog.

Training advisors on AA report information and practices is an ongoing challenge as personnel (and institutional practices and policies) are ever-changing. Some regular participation in advisor staff meetings or training events is recommended to provide updates or reminders about AA report concerns. UCSC may be able to leverage those departments that use the AA report to act as ambassadors and share their best practices as well.

An additional way that UCSC can improve communication with AA report stakeholders is a formalized mechanism of tracking support requests. Currently these requests are sent to a generic email account that can be accessed by AA maintenance team members. This approach makes it challenging for both the AA maintenance team and end users to track status and quantify responsiveness.

Some institutions leverage the IT support system (ServiceNow® at UCSC) and create categories for AA support – not all IT departments are open to this approach. UCSC may also be able to leverage the relatively new EAB Navigate software to track requests for assistance/review of issues that relate to specific students. A more formalized tracking system will benefit the AA maintenance team as well as end users in several ways:
- End users can view the status of their requests and know they are not lost.
- AA maintenance team can assign issues to individual team members, ensuring that multiple people are not unknowingly working on the same issue.
- Issues can be re-routed to other departments if the root cause is not actually a problem in AA configuration (but still tracked until resolved).

- AA maintenance team can report on the number of issues reported, redirected and resolved. This information can demonstrate value to end users.
- The system can be a source of information for updating training documentation and FAQs.
- Students can receive notification when an issue impacting their individual AA report has been resolved.

Given the significant questions that arose regarding external credit in the AA Assessment discovery sessions. Any automated tracking tool should also include the Admissions Office and the ability to request assistance related to external credit. In many cases, users are not able to distinguish AA report problems from external credit questions. It would be beneficial to have one system for reporting both types of issues.

Other Key Findings

Overall the UCSC AA staff has a good understanding of report function and maintenance principles. In terms of report maintenance, UCSC's main challenge will be training new staff and clearing the existing backlog (more on these topics in Section 6).

In addition, there are two related business processes impacting UCSC's ability to use the AA report. These are Transfer Credit evaluation (discussed in Section 3) and Curriculum / Catalog Updates (detailed in Section 4). To a lesser degree, some areas of improvement regarding Student Records Maintenances were identified and are noted in Section 5.

Detailed observations and recommendations regarding practices that impede the perception and usage of the AA report are discussed in the sections that follow.

Section 3. External Credit

External Credit was identified as a major pain point for UCSC. Inaccurate or delayed evaluation of external credit creates frustration for advisors and students throughout the student life cycle:
- Students enrolling into courses they do not need and extending their timeline to graduation.
- Student frustration if they are unable to enroll in class when prerequisites are not automatically met by external courses.
- Increased workload for advisors assisting students with registration, prerequisite clearance and AA report exceptions.
- Lost confidence in the AA report because of missing or incorrect external credit.
- Confusing and uncertainty for students due to incomplete or conflicting information from various sources.

Listed below are several areas UCSC can review to increase efficiencies around External Credit.

Other Credit / Prerequisites

Inherent in the timeline of the admissions and matriculation business cycle is a timing issue impacting external credit. UCSC's general timeline is as follows:
- June 1 - Deadline applicants to accept admission for the Fall Quarter
- June – New student orientations session begin
- July 1 – Deadline for applicants to submit Transcripts
- Early July – New students are matriculated

- Early- to Mid-July - AP Test scores are available
- Late July – New students register for classes
- September 1 - UCSC goal to have credit evaluated

The above schedule is typical for most institutions. OBC does not recommend any changes to the above timeline as the critical inputs (transcripts and test scores) are largely outside of UCSC's control. However, a couple items of note are challenging:

- When orientation sessions begin, UCSC may not have even received a student's final transcript.
- When registration begins, it is unlikely that a student's evaluation will be complete meaning students may not be able to enroll in courses where their external credit satisfies the prerequisite.

UCSC has developed a modification using the PeopleSoft Other Credit component to address this timing issue. Advisors can enter coursework into Other Credit ***to satisfy prerequisites in the first quarter*** based upon anticipated external credit. This Other Credit is limited in its application:

- The Other Credit does not appear on the transcript.
- The Other Credit does not satisfy any requirements on the AA report.

These limitations on Other Credit are appropriate since it is based upon a preliminary unofficial evaluation of the student's academic history.

Without the UCSC Other Credit modification, the alternatives for addressing first quarter prerequisites are:

- Do not enforce prerequisites for transfer (or all) students in their first quarter (using either a student group or system modification). This approach is likely to be considered unacceptable by UCSC faculty.
- Require students to use permission numbers to enroll before transfer credit is posted. This tactic is more onerous for both students and faculty as permission is specific to a single class section, not all sections of a course.

UCSC's Other Credit modification provides a streamlined mechanism for addressing the issue while maintaining academic integrity. As such, it is a superior approach for UCSC versus the two above alternatives.

Rein in Reliance on Other Credit

Unfortunately, Other Credit has turned into a shadow system for Advisors to maintain their own external credit evaluation which was not the original intent for this business process. This evolution in the use of this feature has several drawbacks for UCSC:

1. Advisors are spending considerable time entering and reviewing these "shadow" evaluations.
2. Advisors have created "gentlemen's agreements" as to what courses can/cannot be entered for prerequisite clearance by different departments. These agreements are difficult to communicate and enforce.
3. Students receive conflicting information regarding evaluation from their advisor versus their official evaluation.
4. Students are likely to be confused by the disconnect between registration prerequisites and their AA report which indicates requirements are still unsatisfied.

One reason for the development of this shadow system is that it is a response to inefficiencies and inaccuracies in other areas (discussed later in this report). To the extent that UCSC makes improvements

to the Transfer Credit business process, over time Advisors may feel less of a need to maintain their own evaluations. However, UCSC may want to consider some mechanisms to discourage use of Other Credit in this way such as:

- Additional training and communication about the purpose of Other Credit (to facilitate first quarter registration).
- Limit the number of courses/units that can be posted in Other Credit. There should not be any need for a full transcript evaluation. An advisor should have an idea as to which courses impact first quarter registration – likely less than 10 courses. For Fall 2020, over 1,000 students had more than 10 courses posted to other credit – the highest being a student with credit posted for 48 courses.
- Create a batch process to un-post Other Credit after the end of add/drop/swap for a student's first quarter. While this approach will cause some pain in the initial phases, it will force advisors to work with the Admissions Office to ensure the official evaluation is accurate and complete.

Transfer Credit Evaluation

Implement Electronic Transcript Processing

UCSC currently expends resources in entering students' incoming coursework into PeopleSoft, sometimes multiple times. Streamlining this initial step in Transfer Credit Evaluation would benefit UCSC in several ways:

1. Automated interfaces can reduce the chance for errors that can result from manual data entry.
2. Students may be able to be evaluated more quickly.
3. UCSC may be able to divert resources to other areas of the transfer credit process that need attention.

Options for automating this process include:

- Implementing an Imaging System (such as OnBase) with the capability to interpret transcript data and transmit course information to PeopleSoft. In this case, OBC recommends the approach where both EDI and paper/PDF transcripts are loaded into the Imaging system so that only one interface to PeopleSoft is needed.
- Load coursework entered by the student in UC Shared Review. PeopleSoft has the delivered capability for students to enter their own transfer courses in self-service to obtain a preliminary evaluation. UCSC could piggyback on this feature and load self-reported courses from UC Shared Review into this table (PS_SS_TRCR_EDUC). In this way courses would be available for Admissions staff to copy over to the student's official transcript record, rather than re-enter (see screenshot below).

One note of caution: A common challenge during the transition from manual to automated transcript processing is the handling of student information where the data sources are mixed. If the format of the

automated data load does not match manually entered data, existing courses can get re-loaded as duplicates on the student's record. UCSC should thoroughly test these scenarios and ensure that appropriate safeguards are in place.

Minimize Duplicative Evaluations

Before the end of their first quarter a student's credit may be evaluated multiple times, including:
- Prior to admission to determine if they meet UC eligibility requirements;
- Prior to admission to determine if they are qualified for their intended major;
- Prior to their first registration to identify Other Credit needed to enroll in classes;
- Prior to the start of their first quarter once transcripts are received (official evaluation).

UCSC should review whether it is possible to retain information from these disparate evaluations to speed or inform the official evaluation that is applied to the student. Some PeopleSoft features that may be useful in this regard are:
- Contingent Credit – This feature is typically used for articulations that require portfolio review or audition before credit is granted. However, UCSC may be able to leverage this feature (using a modification) to stage transfer credit pending receipt of official transcripts. Assuming the course and grade on the transcript match the unofficial evaluation (during admission or orientation), evaluations could simple "Accept" and apply the courses.
- Completed Credit – PeopleSoft allows the evaluation of credit prior to matriculation, it just cannot be posted to the official record (and the transcript) until applicants are matriculated. Until matriculation, the credit is marked with a status of "Completed," meaning evaluation is complete but not posted. UCSC may want to accelerate the evaluation timeline to utilize this status so that credit is ready to be posted when students are matriculated (and official transcripts have been received). Many institutions utilize custom processes to update credit from "Completed" to "Posted" in batch. OBC may be able to identify institutions willing to share modifications on this front.

Match Courses to Grades and Units

UCSC practice is to separate the units awarded for transfer credit from the course content and grade. For example, below is an articulation of SOC 1 from Cabrillo College to UCSC.

2013 SPR	SOC 1	3.00	A	SOCY 1		TRN	A
				TRCR XFER	4.500	TRN	T

The 4.5 units are associated with elective credit and a "T" grade (not included in GPA) while the SOCY 1 course credit has 0 units but indicates that an A grade was earned.

This convention is confusing for students and advisors and also impacts the AA report's ability to provide meaningful information. Most significantly, the AA report cannot calculate accurate major qualification Grade Point Averages (GPA) or major GPA for degree honors because of this convention.

In addition, this convention requires more resources in both individual student evaluation and automated rule maintenance as the data entry is nearly doubled for each articulation to enter two (or more) courses instead of one.

It is recommended that UCSC revisit this practice and associate courses with units and grades in a single articulated course wherever possible. It is possible to configure transfer credit grading such that grades are not included in the student's official GPA on the transcript but are still available to the AA report for specific GPA calculations. In making this change, UCSC will need to adapt business practices not only for individual student evaluation but also in the building of automated rules. UCSC should investigate whether an automated script or batch data load can be used to update existing rules to speed the transition.

For more information on configuring courses that can satisfy multiple degree requirements, see the "Consider Course Attributes" section under Academic Advisement Configuration.

Review Screening Majors

Some transfer students enter UCSC via screening majors. In these cases, students must satisfy specific requirements for admission to the major. UCSC should consider assigning these students to student groups that can be leveraged in the advisement report. Rather than require a course-by-course articulation, the student group could be used to indicate that all major qualification requirements have been satisfied. Similarly, student groups can be used in prerequisite configuration to allow these students to enroll in higher-level courses.

Revisit IGETC Certification Procedures

Students who enter UCSC with an Intersegmental General Education Transfer Curriculum (IGETC) certification have completed all lower-division General Education (GE) requirements. The certification is reflected in their transfer credit using a specific pseudo course (TRCR IGETC) that is used in the AA report to satisfy all lower division requirements.

UCSC's GE pattern differs significantly from the IGETC requirements. For students who come close to completing an IGETC certification prior to transferring to UCSC, most of the GE courses completed elsewhere will not apply toward UCSC GE requirements.

To address this gap, UCSC Admissions provides an alternative for students who have a limited number of unfulfilled IGETC requirements. UCSC Admissions works with the student(s) to identify UCSC courses that can satisfy their remaining IGETC requirements. Once a student completes the UCSC courses, they notify Admissions who update the student's record to indicate that IGETC is complete.

Once IGETC is completed, the AA report indicates that all lower-division GE requirements are satisfied. However, while the student is completing the final courses at UCSC, the AA report does not reflect the in-progress certification nor the courses required to complete it. The documentation for the IGETC agreement is not available to advisors, only Admissions. This informal arrangement can lead to:
- Inaccurate or inconsistent advising regarding students' GE obligations.
- Reduced trust in the AA report.

UCSC should review this business process to determine if these agreements can be codified in a way that would reflect on the AA report. Options include:
1. Create a new pseudo course indicating an In Progress IGETC and use the presence of this course to provide messaging on the AA report to display in lieu of UCSC GE Requirements. This approach would indicate that the IGETC is In Progress but would not indicate which areas or courses the student needs to complete.

2. Identify the UCSC courses that can satisfy each of the IGETC Areas and create UCSC requirements that can be used on an exception basis to track each item to completion for specific students. This approach would require UCSC to identify an owner who would approve courses for each IGETC Area and work with the AA maintenance team to update the requirements annually.

Consider Batch Posting

Once automated transfer credit rules are stabilized (see the following pages), UCSC may be able to gain efficiencies by posting credit to students in batch. Posting credit sooner would allow UCSC to reduce reliance on the "Other Credit" process. Unfortunately, the batch processes delivered by PeopleSoft for this purpose are incomplete and require a lot of manual intervention. Many institutions have developed custom processes to post and update transfer credit models based upon custom queries / population selection. OBC may be able to identify institutions willing to share these processes.

Review Advisement Report During Evaluation

UCSC transfer credit evaluators do not always view the advisement report upon completing the evaluation. It is recommended as a best practice that the report is run and validated at that time to ensure that requirements are satisfied as the evaluator intended. This preliminary review can catch data entry errors up front as well as identify any issues in the configuration of the advisement report.

A preliminary review will add to the time spent on each student's evaluation. At a minimum, it can take 5 minutes per student to run the report and confirm the information is correct. It can take as much as 20-30 minutes if there are issues that require correction. UCSC Admissions resources are not currently allocated with extra bandwidth to perform this assessment. It is unclear whether additional resources are needed or if a shifting of priorities might free up enough evaluator time to perform this task.

Automated Transfer Credit Rules

Determine Schedule and Priority for Updates
California Community Colleges (CCCs)
Prior to 2017, UCSC had an automated process to load articulation rules for California Community Colleges (CCCs) using extracts from ASSIST, California's statewide articulation system. Beginning in 2017, due to transition to a new ASSIST system, the data extracts were no longer available. As a result, the only mechanism available to UCSC since 2017 has been manual data entry which has created a significant backlog.

Given the number of CCCs and the hundreds (and sometimes thousands) of transferable courses they each offer, most California institutions find that without a significant investment in additional resources, it is not feasible to manually update all course articulations in PeopleSoft for all courses for all CCCs in ASSIST. In addition, even if they had the resources, for some CCCs or courses the volume does not justify the time required to create and maintain the articulations. A person will spend more time building & maintaining the automated rules than evaluators would spend manually articulating the courses when a single student submits a transcript. Therefore, it is recommended that UCSC determine a means of defining the scope & priority of automated rules to be maintained in PeopleSoft.

A key input for this prioritization exercise is an understanding of the estimated time required to create or update course articulations versus the time required to manually evaluate a student's transcript.

> Example: Suppose it takes 5 minutes to manually research & articulate a course and it takes 1 hour to research and build rules for the course. The course would have to be transferred into the UCSC campus 12 times to be worth creating a rule. [Note: Not necessarily 12 times in a single admit term but over time it would need to "pay off"]

Simple queries can provide helpful information on historical transfer volumes such as number of students transferring from each CC and the number of times a given CC course has been articulated to UCSC.

For each institution, based upon their student volumes and staff resources, the recommended scope and prioritization will differ. Following are some options to consider:
- Identify Top Feeder CCs: Maintain all articulation rules annually for a given subset of CCCs.
- Maintain only General Education / University-wide articulation information for CCCs with low volumes of students entering the campus (no direct course articulations).
- Focus on gateway courses (key prerequisites needed for enrollment), do not maintain direct course articulations for other UCSC courses.
- For schools which are not top feeders, consider updating articulation information every 2 years, rather than annually. [Reduced risk given the lag between catalog data appearing in ASSIST and the time transcripts are received and articulated]
- Prioritize the courses for which articulation will be maintained in PeopleSoft based upon the number of students who have taken/transferred that course. Do not create rules in PeopleSoft for all courses, even for top feeders, determine the volume required for the manual effort to articulate to exceed the time it would take to create and maintain the rules. This approach can be challenging to communicate to evaluators and advisors.

In addition to creating new rules, annual maintenance to ensure the accuracy of existing rules is also important. UCSC should consider the following annual maintenance practices:
- Review and update any articulation rules that map to an inactive UCSC course (identify a new UCSC course or update the rule to award elective credit only).
- Review ASSIST General Education certified courses and add newly certified courses.

The ASSIST strategic plan indicates an intent to deliver extracts again by the end of the 2021-22 fiscal year. To the extent that extracts are available in that timeframe, UCSC may again be able to develop automated tools to load the PeopleSoft articulation tables. In this interim period, UCSC's goal should be to identify what level of automated rules can be built and maintained and how to communicate expectations to evaluators so they understand when and why some credit must be reviewed manually (for now).

Additional Partner Schools
While ASSIST is a valuable resource, it is only a data source for CCCs and does not include information for private institutions, California public universities nor out-of-state institutions. UCSC has begun to implement the Transfer Evaluation System (TES®) from CollegeSource to address this population. As with CCCs, it is recommended that UCSC analyze the volume of students and courses from non-CCCs to determine where maintaining automated rules in PeopleSoft would be of benefit.

To the extent that UCSC articulates a large volume of credit from non-CCCs, an automated process to load rules from TES® into PeopleSoft could be a significant time savings by reducing the workload to maintain rules and thereby speeding up the evaluation process. Since TES® is new for UCSC, UCSC is currently focused on building up the rule database in that system. Development of an automated interface to PeopleSoft may be premature now but may be beneficial once UCSC's adoption of TES® is more established.

When UCSC has data files, a system modification is not required to load new rules in batch. The PeopleSoft File Parser feature can load rules from excel spreadsheets or text files. Some institutions augment File Parser configuration with custom logic to validate or update the data but as delivered it can load data from files into PeopleSoft tables.

Use Requirement Designations

UCSC may want to consider an enhancement that would allow Admissions to specify requirement designations with the Transfer Credit articulation rules. This feature is especially helpful in associating transfer coursework to GE areas. In many cases, the GE area for which a course is certified at the community college does not match the GE certification for the articulated equivalent at UCSC. Using the requirement designation in addition to the course ID allows the campus to maintain the GE certification independent of the direct course articulation. Currently UCSC addresses this issue by assigning 0-credit courses to satisfy GE. This practice is time-consuming for evaluation and confusing to advisors and students.

Below is an example of how the rule maintenance page might look with the option to assign a requirement designation:

This modification would entail 3 components:
- Update Transfer Subject Area page (pictured above) to add the ability to assign Requirement Designations in articulation rules.
- Update the delivered code that applies articulation rules to students to include the Requirement Designation.
- Update batch processes that post transfer credit, if applicable, to include Requirement Designations.

OBC may be able to identify institutions willing to share this modification.

Review articulation rules that are not one-to-one

It is important for sequences with multiple incoming courses to ensure that a passing grade is required for all incoming courses. Otherwise, the articulation engine would combine one failed course with a successfully completed course on a student's transcript and give the student the credit at UCSC for completing the series.

Note that the grade point parameter must be set for each incoming course individually.

The below SQL will identify any multi-course articulation where minimum grade points are less than a D- (0.70 Grade Points) – UCSC may want to set a different minimum standard. If the volume to update is too large to handle manually, a similar SQL statement can be developed to automatically update the rules.

```
SELECT A.INSTITUTION, A.TRNSFR_SRC_ID, A.COMP_SUBJECT_AREA,
TO_CHAR(A.EFFDT,'YYYY-MM-DD'), A.TRNSFR_EQVLNCY_CMP, A.DESCR, A.INP_CRSE_CNT,
B.SCHOOL_SUBJECT, B.SCHOOL_CRSE_NBR, B.GRADE_PTS_MIN
 FROM PS_TRNSFR_COMP A, PS_TRNSFR_FROM B
 WHERE A.INP_CRSE_CNT > 1
   AND A.INSTITUTION = B.INSTITUTION
   AND A.TRNSFR_SRC_ID = B.TRNSFR_SRC_ID
   AND A.COMP_SUBJECT_AREA = B.COMP_SUBJECT_AREA
   AND A.TRNSFR_EQVLNCY_CMP = B.TRNSFR_EQVLNCY_CMP
   AND B.EFFDT = A.EFFDT
   AND B.GRADE_PTS_MIN < .7;
```

UCSC currently has 630 rules that should be updated to resolve this issue.

Consider Wildcard Rules

Wildcards can be created in Transfer Subject Area to indicate that all courses in the subject (or a given number range) are transferable for elective credit. The Subject field cannot be populated with a wildcard (wildcard rules must be replicated for each subject in the community colleges catalog). The pound sign (#) is the wildcard character and it can be used in two ways:
- Enter only the pound sign (#) in the Catalog Number field – any course with the matching subject will be articulated.
- Prefix the pound sign with one or more numbers to specific a range of numbers (e.g. 1## will apply to courses numbered 100 through 199)

WARNINGS:

- It is important that the wildcard rule be assigned the last priority (e.g. 900) so that all more specific rules are applied first.
- If a transferring college has non-baccalaureate (remedial) level courses with the same subject, it is important that they be excluded from the wildcard rule. Some methods for excluding non-transferable courses:
  - o Do not enter or load remedial coursework into External Education (the transfer credit rules therefore do not need to specifically exclude it).
  - o Limit the number range of the Wildcard rules to match the college's baccalaureate level numbering scheme.
  - o Create a higher-priority wildcard rule that rejects known remedial courses or remedial course numbering ranges.

Update Description Fields

Within the PeopleSoft Transfer Subject Area page, it can be challenging to navigate between the many articulation rows for a given subject to find the rule for a particular course. Also, there can be multiple articulation rules for a single incoming course if the course has changed over time. It is difficult to determine the applicable date range by looking at the transfer subject are page as the dates are hidden under the "Incoming Course Information" link.

It is recommended that UCSC use the description field to alleviate these two issues.

- Adding Date information to the Description field on this page to make it easier to differentiate between multiple rows for a single course.
- Including the Course Number information in the Description allows users to use the "Find" link at the top of the grid to jump the desired row.

Example:

A one-time SQL script can be written to make these updates in bulk to existing articulation rules.

Test Credit

Test Credit appeared to be a lesser concern than course transfer credit but UCSC does have an opportunity to improve efficiency in this area.

Streamline Processing of Related Exam Scores

PeopleSoft's delivered test score evaluation engine has a significant deficiency that is problematic for many institutions in that each test score is evaluated independently. UCSC has several test score rules that result in different evaluations when a student has taken multiple related exams. For example:
- AP Art, Studio – Student may receive 8 units for 2-D Design, 3-D Design or Drawing but may not receive more than 8 units in total.
- AP English - Student may receive 8 units for Language and Composition or Literature and Composition but may not receive more than 8 units in total.

Options for addressing this issue are:
- Develop QA reports that identify students with related exam scores that require manual adjustments (e.g. students with more than 8 units of AP Art Studio credit).
- Develop a modification to evaluate test score combinations.

In the Fall 2020 cohort, over 3,600 UCSC students received test credit with an average of 21 units per student. Using the above test rules as examples reveals that at least half of the test credit population is impacted by this issue such that an automated solution would be of significant benefit.
- 30 students submitted multiple AP Art Scores
- 1,778 students submitted multiple AP English Scores

Section 4.   Curriculum / Catalog Updates

In recent years, UCSC has made improvements in their curriculum and catalog business processes that benefit the AA report:

- Transition to Smart Catalog software has improved visibility into the approval process and allows the degree audit team to review proposed curriculum changes.
- Publication has moved from August/September to June so that the updated catalog is available when students attend Orientation.

However, there are still elements of this process that conflict with the goal of providing students and advisors with a reliable and timely AA report.

Review Timelines for Catalog Publication

If the AA report is to be the official record of degree requirements, it must be available and up to date when new students register for their first quarter. When the AA report is not accurate at Orientation, the first message students receive is that it is not a trusted resource. It is very difficult to overcome that initial perception and train students to rely on the AA report to understand their progress toward graduation.

UCSC's current timeline does not allow for AA requirements to be complete and up to date at Orientation.

- May – Registration begins for Continuing Students
- June – Catalog Published
- June – Orientation Sessions begin
- July – New Student Registration begins
- Ongoing – Revisions and additions to the Course Catalog

In this timeline there is literally no time allotted for maintenance of degree requirements in the AA report prior to Orientation and minimal time before Registration.

While it would be optimal for the AA report updates to be complete before orientation, it is critical that students and advisors have this information before registration. This timeline is especially important for Transfer Students as they have a shorter timeline to graduation.

The audience for a new catalog publication is largely considered to be new students since they will be subject to the new degree requirements. However, since the catalog also contains information on new or revised courses, it should be published prior to release of the Schedule of Classes for continuing student registration so that students and advisors have access to correct course information for the upcoming year.

UCSC's practice of updating the PeopleSoft course catalog with new or changed course information outside of the annual publication cycle presents a challenge for advising. These course changes may impact current or past degree requirements. Smart Catalog highlights the impacts of a course change but it is unclear whether departments are required to review and address these impacts during mid-year revisions. In addition, this practice requires continuous revision of AA report configuration which can be confusing for end users. The need for continuous revisions puts a strain on AA maintenance resources which has contributed to the current backlog at UCSC. At its core, continuous catalog changes increase likelihood of discrepancies between the AA report and the catalog and diminish trust in the AA report as

an accurate resource. It is recommended that UCSC consider more stringent deadlines for submission and revision of course catalog information.

Representation in Curriculum Approval Process

At UCSC, the AA maintenance process is often delayed due to a need to solicit clarifications on catalog language from Academic Departments. In addition to consuming AA maintenance resources, these clarifications may result in the perception that the AA report differs from the published catalog due to varying interpretations of catalog requirements.

In some cases, the administrative implementation of the curriculum can be streamlined through minimal changes to design or language in the description of a program or course. When these questions or comments are not voiced until after publication, changes cannot be made until the next catalog cycle resulting in a greater burden on both the faculty as well as administrative personnel (and sometimes students).

It is recommended that AA maintenance staff have an opportunity to review and request clarification of catalog language prior to program or course approval to ensure that any questions or concerns are understood during the timeframe when they can be proactively addressed. Given the limited timeframe for AA maintenance to occur before registration at UCSC, any activities that can occur prior to catalog publication would help to speed up the annual maintenance timeline.

Course Catalog Effective Dates

It is recommended that all rows in the Course Catalog have a row dated back to a single starting date. for several reasons:
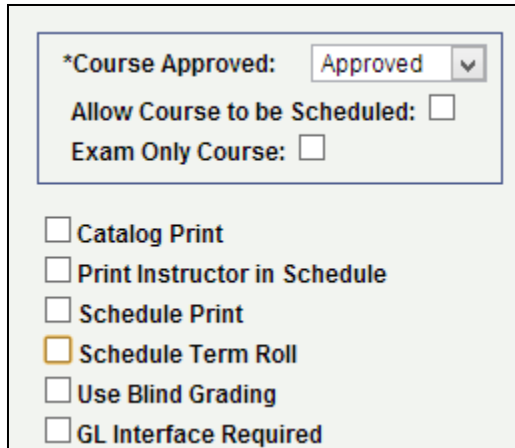1. Courses can then be "grandfathered" into course lists for students with earlier catalog years.
2. Courses will be more likely to appear on the AAR if they have always been active.

Many institutions use 1/1/1901 but UCSC may find that a newer date is sufficient to enable use in all actively maintained AA configuration.

The following SQL will identify all the Course IDs in the course catalog which do not have a row in the catalog as of a given starting date (1/1/1901 used below as an example):

```
        SELECT A.CRSE_ID, A.EFFDT, A.EFF_STATUS
          FROM PS_CRSE_CATALOG A
          WHERE A.EFFDT =
              (SELECT MIN(A_ED.EFFDT) FROM PS_CRSE_CATALOG A_ED
              WHERE A.CRSE_ID = A_ED.CRSE_ID)
            AND A.EFFDT > TO_DATE('1901-01-01','YYYY-MM-DD')
```

If the volume is such that it is not feasible to manually update all the courses, a one-time SQL script can be written to insert the new rows of data. The new rows would duplicate all information on the earliest course existing catalog row except **Allow Course to be Scheduled, Catalog Print, Print Instructor in Schedule, Schedule Print and Schedule Term Roll should all be unchecked on the Course Offerings tab.** These setting make the course effectively inactive while making it available for use in degree requirements.

Inactive Courses: Similarly when a course is discontinued, it is recommended that rather than inactivate the course, the checkboxes noted above be unchecked on the newest effective dated row to disallow any scheduling while allowing the course to be utilized in Academic Advisement and (and to a lesser degree in Transfer Credit). In addition, it is recommended that the course description be updated to include text such as "No Longer Offered." The benefit of this approach is that the course will continue to appear on the student's Advisement Report. The student can then work with an advisor to identify a suitable replacement. If the course is inactive, it does not display at all. Without the information on the discontinued course, finding an alternative is more difficult for both students and advisors. UCSC has not found inactive courses to be a significant pain point as their AA report configuration often contains the specific course information in the requirement line descriptions (which continue to display even if the required course is no longer available).

Note: It is <u>always</u> risky to update information via SQL update. It may be preferable for the campus to apply these practices on a moving forward basis (and perhaps manually update existing courses where an active issue needs to be addressed).

Technical staff should be made aware that there are several tables to insert/replicate. Following is a list of delivered catalog tables, there may also be additional custom CSU tables to consider.
- PS_CRSE_CATALOG
- PS_CRSE_OFFER
- PS_CRSE_COMPONENT
- PS_CRSE_ATTRIBUTES
- PS_CRSE_TOPICS
- PS_CRSE_ATTENDANCE
- PS_CMPNT_CHRSTC
- PS_CRSE_OFFER_GL

Not all of the above tables are required to be populated, UCSC may opt not to replicate all the data on the earliest row. ***Thorough testing is recommended to ensure data integrity prior to running any script in production.***

Typically Offered Information

A step UCSC can take to prepare for Academic Planning software is to utilize the PeopleSoft-delivered Course Typically Offered field on the course catalog. This field allows UCSC to define values for each course offering that would inform students and advisors (and potentially a planning tool) as to what quarters a course is likely to be scheduled.

Example:

To use this field, UCSC would need to:
1. Create new typically offered codes. Each institution creates its own values, so it is possible to create codes that indicate scheduling varies or is undetermined. (Set Up SACR > Product Related > Student Records > Curriculum Management > Course Typically Offered)
2. Determine whether the values should display in self-service (Set Up SACR > Common Definitions > Self Service > Student Records)
3. Determine the business process for soliciting this information from Academic Departments and updating it.

Section 5. Student Record Maintenance

The main purpose of the AA report is to apply the information from a student's record to the published degree requirements to indicate which requirements are / are not yet satisfied. As such, student records policies and maintenance practices greatly impact the ability of the report to provide an accurate picture of the student's progress.

Repeated Coursework

UCSC has two repeat policies that impact the AA report's ability to correctly interpret a student's record.

UCSC Courses

When a student repeats a UCSC course, UCSC policy is to leave the units earned on the original attempt, even when the new grade replaces the original one in the student's GPA. The AA report uses the presence of earned credit to determine whether a course has been passed or failed. Therefore, the new attempt with a higher grade is not used to satisfy degree requirements. UCSC may want to pursue one of two avenues to address this issue:
1. Change policy to have earned credit applied to the course attempt that is used in GPA. A change to an Academic Senate policy would likely take a long time to enact and would not provide any resolution for students with repeated courses already included in their transcript. In addition, this change would impact appearance of units earned on the transcript for historical terms which may be undesirable.

2. Revisit AA report maintenance conventions such that courses without earned credit can complete degree requirements (using the "Allow Attempts" setting). UCSC may be able to exclude failed coursework by requiring some minimum grade points rather than earned credit. This approach would be a massive change to AA configuration and would require significant testing to ensure failed/withdrawn courses are not used inappropriately and that non-GPA grades such as P/NP and T (Transfer) are not excluded.

Transfer Credit

If a student repeats a course at UCSC for which they already have transfer credit, the credit is double counted on the student's transcript. Because direct course articulation may vary depending upon UCSC's relationship with the transferring institution, UCSC faculty have determined that it is inequitable to remove credit only from students where direct articulation exists. However, this practice is problematic for the AA report because two instances of a single course may satisfy requirements where the student should be required to complete two different courses.

To address this issue, OBC recommends that UCSC identify these cases using a report and manually update the transfer credit to replace direct course articulations with elective credit where the student has earned credit for the same (non-repeatable) course at UCSC. This approach will resolve the AA report issue without penalizing student by removing transfer credit entirely when courses are retaken at UCSC.

Processing Student Exceptions

In order for the AA report to be a reliable source of information for students and advisors, it is critical that all information pertaining to the student's program be as complete as possible. When exceptions are not entered for students at the time they are identified, advisors and students begin to rely on shadow systems or paper to track outstanding requirements.

Some departments do not enter exceptions until the student applies for graduation. This practice arises from the limited resources which all departments are managing and the fact that students' plans, requirement terms or course selections may change such that exceptions submitted early on in the student's career may not be needed by the time they reach graduation or may need to be updated/reentered. UCSC has already implemented system modifications to make the data entry less onerous but it remains a time-consuming task for advisors. While the increased resource requirements are certainly a consideration, the success of the AA report depends upon departments finding a way to ensure the information is accurate and up to date.

In addition, for UCSC to adopt a student planning tool, real-time entry of exceptions is a prerequisite If exceptions are not identified up front, a planning tool will include courses into students' plans and schedules which they do not need.

UCSC should consider the following practices to encourage timely entry of exceptions:
- Incorporate exception review into the change of major process within the Registrar's Office. If a change of plan or requirement term causes a student's exceptions to be "lost," the Registrar's Office should update/reapply them.
- For transfer credit, rather than enter AA exceptions, encourage advisors to work with Admissions to update the student's evaluation where appropriate (and approve standard

articulations). When the change is made to the students transfer credit evaluation, it will also satisfy course prerequisites whereas an AA exception does not.
- Reduce the reliance on exceptions by codifying accepted practices in the course catalog. UCSC has already begun working toward this goal so that where alternate courses are acceptable to an academic department they are formally recognized in the catalog and the AA report obviating the need for individual exceptions.
- Communication and education for advisors as to the benefits of timely entry of exceptions – most importantly the opportunity for them to reduce workload prior to graduation if students could be reviewed using batch processes.

Batch graduation evaluation/reporting

The current process requires a great deal of manual effort on an individual student-by-student basis both in the academic departments and in the Office of the Registrar. Because this process is so resource-intensive, some departments do not begin reviewing students until after final grades are posted – denying the student the opportunity to resolve issues or change class selections during their last quarter.

Once other concerns are addressed and UCSC determines the AA report can be used as the official record of graduation requirements, PeopleSoft delivers the ability to review students and post degrees in batch. In general, the steps required are:

1. Run AA Reports in Batch – The Population Selection feature in CS 9.0 allows campuses to define a query identifying the students to be processed (for example all students who have applied to graduate for a particular term). It is recommended that campuses use a unique Report Identifier and possibly a separate AA report type for these processes so that the data can be easily identified and purged when it is no longer needed.

2. Once the data has been generated, reports or queries can be used (see below for more information on reporting tables) to identify populations such as:
   a. Students who have completed all degree requirements
   b. Students who will have all requirement satisfied if they successfully complete their current coursework
   c. Students with unsatisfied requirements who require manual review

3. If desired, the delivered Graduation Processing feature can update the student's degree checkout status (and even award the degrees and assign degree honors) in batch based upon the query results.

Adoption of batch evaluation in this way would also provide USCS with an opportunity to standardize communications around graduation approval and denials. Currently each department crafts its own language providing students with varying explanations and directions for resolving deficiencies.

Preserve Graduation AA Report

An additional benefit of transitioning to use of the AA report for graduation evaluation is the ability to centrally store a record of how each student completed their degree requirements. Currently at UCSC this information is recorded in the Academic Departments. Format and record retention policies vary such that obtaining this record for any given student can be challenging.

Where the AA report is the official record of the coursework used to graduate a student, it is important to preserve the report at the point of graduation. Although in many cases, the report could be regenerated after the student has graduated, there is a risk that the information may not match the report as it was at the point of graduation. Changes can result from update to the AA configuration or the student continuing at UCSC for additional courses or degrees.

There are several approaches that can work for storing this information (in order based upon the automation involved:
- Print and save a copy of each final AA report in the student paper file
- Print and scan a copy of each final AA report in the document imaging system
- Save pdf copy of each final AA report to a folder from which the document imaging system can automatically upload & index it
- Run the AA reports in batch with the "Freeze Report" box checked (recommend a separate report type) so that the report can never be overwritten.
- Store the final graduation AA data in a data warehouse from which reports can be generated

- Run the AA reports in batch and send the pdf files in batch to the document imaging system [Note: The output would be the delivered XML-style report, not the CSU standard report view]

At a later date, UCSC should review their available resources, both records staff and technical to determine how best to store these records.

Section 6. Academic Advisement Configuration

Augment Resources

Typically, one staff member can maintain 100-150 plans depending upon their experience level and the complexity of an institution's requirements. With 400 active plans, a recommended staffing level for UCSC would be 3-4 people. UCSC has never staffed the AA maintenance team to this level. In recent years, budget cuts and attrition have reduced the UCSC AA maintenance staff to one person.

The resource shortage at UCSC has caused a backlog wherein degree requirements for many majors and minors have not been updated on the AA report for several years. This backlog is a significant contributing factor to the lack of trust in the AA report at UCSC.

UCSC is already working to address this resource issue and plans to have 4 resources after all open positions are filled.

Depending upon the timeline for catalog publication, AA maintenance activities tend to be busiest in the Spring and Summer quarters. During the Fall and Winter quarters, other institutions typically focus AA maintenance staff on other activities such as:
- Production Support: Answering questions for Advisors and Students, configuration fixes and updates as needed.
- Curriculum Review: Review proposed course and program changes. Provide feedback on items that will be challenging to enforce. Clarify language prior to publication.
- Testing: Periodic PeopleSoft updates from Oracle
- Modifications: Design, test, support UCSC AA customizations.
- Transfer Credit: Maintain automated articulation rules during AA slower times.

Establish and Document Conventions

For any institution, it is important to establish conventions for maintenance of the AA report so that the report has a consistent look and feel to users. UCSC requirements currently have a consistent look and feel but with many new resources planned, it will be important to document and monitor that all established conventions continue to be followed.

In addition, UCSC noted that conventions are needed in course list maintenance. When courses are added or removed from a requirement, often faculty do not understand all of the implications in terms of "grandfathering" courses into subsequent catalog years or retroactively adding them to new ones. The UCSC AA team should establish conventions for handling these cases so that the treatment is consistent across the university. Rather than ask faculty their preferences, this convention should be shared with faculty so that they understand how the report works.

Typical business rules for course list maintenance are:
- When courses are added or removed from a list where the student has agency to make selections (e.g. pick 6 units from the following list), the changes are applied to all catalog years.
- When a required course is discontinued in the catalog and replaced by a brand new course, the AA report is configured such that students in older catalog years can take the new course to complete the requirement. Students on newer catalogs must complete the new course (or request an exception from their advisor).
- When a required course is replaced by a different course (and the "old" course is still offered), students must complete the course specified in their catalog requirements (or request an exception).

To the extent that UCSC convention is inappropriate for a specific degree planOBCexpress concerns and work with the AA team on adjustments.

Establish a Maintenance Schedule

Trust in the UCSC AA report has been diminished in part because requirements have not been maintained consistently in recent years and advisors do not know when or if their majors will be updated.

To address this issue, UCSC should establish a schedule for updating degree requirements and provide the advising community with visibility into the planned schedule and progress toward this goal. A typical estimate for planning purposes is that on average a dedicated, fully trained resource will take four hours to build or update a single academic plan (or subplan where applicable) for one catalog year, including basic unit testing and validation. UCSC can use this guideline to estimate how long it will take to address the current backlog. In forming their estimates and schedule, UCSC should consider the following:
- How should AA updates be prioritized? Options include: GE Requirements first, prioritization of plans by student volume or building major qualification requirements first to assist admissions.
- UCSC's new resources will likely work at a slower pace at first.
- In many cases resources are not truly dedicated so four hours per plan does not always equate to 2 plans in an eight-hour work day.
- UCSC should build an achievable schedule to demonstrate success to the advising community, rather than aggressive goals that may be interpreted as false promises.

Given the number of years that UCSC has been under resourced and the resultingly large backlog, it is unlikely that UCSC will be able to configure all active plans and subplans for all catalog years. UCSC should define a business rule to use in determining which to address. Options include:
- Begin with the new catalog (Fall 2021 requirements) and move forward (only assign messages to backlog plans to indicate requirements are not available)
- Begin with the current catalog (Fall 2020 requirements) and move forward
- Focus on Undergraduate career (for example, update Undergraduate requirements for Fall 2020 and Graduate beginning Fall 2021).

To the extent that the estimate indicates that even with a reduced scope, UCSC indicated they may want to consider augmenting UCSC resources for a limited period of time to address the backlog (e.g. consultants/contractors).

Below are very rough estimates on the time required to address the backlog under the options noted above.

Approach	UCSC In House Resources*	UCSC + 1 Full-Time Consultant**
Fall 2021 forward (all plans)	3 Weeks	2 Weeks
Fall 2020 forward (all plans)	22 Weeks	15 Weeks
Hybrid (2020 for Undergraduate / 2021 for Graduate Programs)	17 Weeks	11 Weeks

*UCSC In-House Resources, assumes UCSC achieves staffing level of 4 AA Maintenance employees, operating at the level of 2 experienced dedicated employees (assuming less productivity due to learning curve and other responsibilities).
**Consultant would require additional time for onboarding, knowledge transfer and documentation.

Another option for prioritizing the backlog is to evaluate each plan / catalog year based upon the number of students and selectively update plans and subplans with larger volumes. This approach would allocate resources where the most value would be gained. However, it can be challenging to communicate to advisors and students which students can (or cannot) use the AA report.

Ensure Completeness

For the AA report to become the official record of a student's progress toward graduation, it must encompass the totality of the student's degree requirements. UCSC has identified several requirements that are not currently configured in the AA report:

- UCSC Grade Point Average (GPA)
- Total Units (180)
- Pass/No Pass Limits
- Major GPA
- Major Qualification GPA

UCSC should review the above item and where possible configure the AA report to evaluate and enforce these requirements.

In the case where requirement evaluation cannot be automated, UCSC can provide messaging to indicate that manual intervention or review may be required. A message can display on the AA report in these cases which would achieve the following:

- Highlight the need for review to students, advisors and registrar's office staff.
- The requirement can be used to ensure the degree is not automatically awarded by a batch process.

Some examples of UCSC requirements that would require messaging and manual intervention are:

- Courses with P/NP grades cannot exceed 25% of coursework. The AA report cannot evaluate this requirement since threshold is a sliding scale that varies by student. However, the report can highlight this issue to student where applicable. Students with more than 45 units of P/F should be manually reviewed to ensure they have sufficient graded coursework.

- Grade Point Averages (GPA) for Major Qualification or Degree Honors – If a student has Transfer Credit, the AA report cannot currently evaluate the GPA because UCSC does not match grades and unit to courses (see the "Match Courses to Grades and Units" section under Transfer Credit Evaluation for more information). Messaging can be provided to students with applicable transfer credit in indicating manual GPA calculation will be needed.
- Students with multiple plans (double majors or minors). PeopleSoft is unable to restrict double counting of coursework in alignment with UCSC policy. UCSC already has customizations on the report that identify courses that are used more than once. Additional language or guidance for students and advisors in these cases may be beneficial.

Technology limitations should not define academic policy. However, to the extent that some policies cannot be easily tracked or enforced, there may be opportunities to evaluate alternative policy language that might achieve the same goals with less administrative burden. Using the P/NP policy as an example, a limit of 45 units of P/NP (25% of 180) could easily be tracked and enforced. The AA maintenance team should raise these questions where appropriate to determine if changes to policy language would be of benefit without sacrificing academic integrity.

Include In-Progress Coursework

UCSC currently does not include ungraded (in-progress) courses in the AA report. This configuration decision means that students and advisors cannot confirm that the student's current course selections will fulfill requirements as intended.

UCSC includes in-progress courses in the What-If report as an alternative evaluation option. Advisors are directed to use this report type to see how current courses will apply to degree requirements. This approach is problematic for several reasons:

- It requires students and advisors to run a second AA report to obtain this critical information.

- This additional step is not intuitive (what-if reports are typically simulations to determine "What If" the student changes their major/minor declarations. Since most users would not guess that the report is being used in this way, communicating this information is a constant training issue.

Typically, institutions include in-progress courses on the main AA report used by advisors and students so that they have a full picture of the student's progress toward their degree requirements. Along with updating the above configuration items the following can help users understand and interpret the report when in-progress courses are included:

1. A separate report type should be created for use in final graduation evaluation that does not include in progress courses to ensure that all requirements are satisfied using fully graded courses.
2. Many institutions add an informational section to the AA report listing In Progress courses and noting that while they are used in the report, such information is provisional until grades are assigned. UCSC may consider incorporating this information into their existing modifications that display the student's course history and transfer credit.
3. Modify the AA report display as it treats requirements using in-progress courses as satisfied. Some institutions modify the "Satisfied" label to read "In Progress." In addition, many institutions force these sections to be expanded rather than collapsed so that students and advisors see that the requirement is not yet satisfied. OBC may be able to identify institutions willing to share this modification.

Populate Default What-If grade

UCSC has not populated field on the Grading Scheme Table called "Default AA What If Grade." Despite its title, the primary purpose of this field is to provide information to the advisement report for <u>ungraded coursework</u> (e.g. "In Progress")

The Default What-If Grade is attached to the grading basis and should be populated on every active grading basis.

There are two primary impacts to populating this grade when in-progress courses are included in the AA report:
- Any requirement line which selects courses by "Grade Points" (e.g. highest grade first) will be impacted.
- If the grade is populated, the report will simulate the effects of end-of-term repeat processing while students are repeating courses (if in-progress courses are included in the report).

Important! If the Default AA What If Grade is blank and a student is repeating a course which cannot be repeated for credit (and in progress coursework is included in the report), the report will overstate the student's credit until after grades are posted and repeat codes are assigned.

The Default What-If Grade setting can vary according to UCSC's preferences.

- Equivalent to an "A" – The underlying assumption is that the student is taking the course for grade improvement and would want to use the new course wherever possible.
- Equivalent to the lowest acceptable grade for completing GE or major requirements (varies by institution) – This approach is used by institutions that want to maximize stability of AA report information for a particular student. By selecting a lower what-if grade, if the student already has a requirement satisfied, it is more likely that the requirement would retain the older course.

Even if UCSC continues with current practice and excludes in-progress courses from the main AA report, the Default AA What If Grade should still be populated so that What-If reports using in-progress courses are as accurate as possible.

Consider Course Attributes

UCSC currently uses Requirement Designations to identify courses that can fulfill General Education requirements. Requirement Designations have the following capabilities:
- They can be assigned to a course in the course catalog.
- They can be updated for individuals class sections in the schedule if needed.
- They can be assigned to individual students' transfer or test credit evaluations.

Requirement Designations have one drawback: A given course or class can only be assigned one Requirement Designation. If a course can fulfill more than one requirement

A feature that was not available when UCSC first implemented the AA report is the ability to use Course Attributes in Academic Advisement Requirements to identify courses that can meet general education requirements. Course Attributes have one distinct advantage over Requirement Designations in that a single course can have more than one attribute assigned.

While UCSC courses typically only satisfy a single General Education requirement, they may fulfill other University Requirements in addition to General Education. For example, History 10A satisfies the Ethnicity and Race (ER) General Education requirement but also the American History and Institutions University Requirement. Ethnicity and Race (ER) is tracked using a Requirement Designation while the American History and Institutions is identified by Course Attribute.

As with Requirement Designations, students can search the Class Schedule using Course Attributes and configuration options exist to control which values are (or are not) visible to students. UCSC does not currently allow students to search by Course Attribute. If UCSC were to transition from Requirements Designations to Course Attributes, students would have one unified mechanism to search for General Education and University Requirements courses.

There are a few important considerations in using course attributes in AA:
- Because Course Attribute information is accessed in Academic Advisement Configuration using a derived Course List, failed or withdrawn classes will be included unless specifically excluded (by intersecting with another course list).
- Derived Course Lists based upon Course Attributes cannot be displayed on the AA report (displaying the courses is a requirement for the PeopleSoft Enroll by My Requirements and Plan by My Requirements features).
- The Course Attribute must be attached to each class section to fulfill AA requirements. Changes made to the catalog do not retroactively update the schedule of classes. If historical attributes

on the class schedule were not always accurate, some clean-up may be required to use this feature.
- Course Attributes cannot be associated with transfer credit articulations in the way that requirement designations are. Course Attributes can only be inherited from the catalog. Institutions that use Course Attributes typically adopt one of two approaches:
    o Create equivalent courses in the course catalog as needed when Transfer Courses require course attributes that differ from the native equivalent course.
    o Continue to maintain Requirement Designations just for Transfer/Test credit. This approach would be recommended for UCSC since the Requirement Designation framework is already in place.
- If Requirement Designations are used in Enrollment Requirements (prerequisites/corequisites), this configuration would also need to be reviewed and updated to include Course Attributes.

Display Courses Not Used (Additional Coursework)

It can be helpful to students and advisors if unused coursework is displayed in the AA report. An added benefit of adding this requirement to the report is that the results would be available for use in reporting (example: Students who have registered for classes that are falling into Courses Not Used).

Some key elements of the setup are:
- The Courses Not Used information must be attached to a Requirement Group with a **Reporting Sequence of 900 or higher** (so that coursework is evaluated after all other requirements). The Courses Not Used Requirement Group must have the highest Reporting Sequence number of any Requirement Group in the career.
- The Courses Not Used Requirement Group, Requirements and Lines should all have the "**Hide Status**" box checked so that it neither appears satisfied nor unsatisfied.
- The Courses Not Used Requirement should have two "Verify" lines:
    o The first line would display successfully completed coursework that is not being used.
    o The 2nd line should include ineligible coursework (repeats, failed/withdrawn courses). If UCSC includes In-progress coursework, the AA report can simulate repeat checking while courses are in progress making this information even more helpful to advisors and students. This 2nd line should be set to only "Print if there is Line Detail," it will only appear if the student has applicable coursework.

Following are examples of the Line Item Detail information for these two lines:

Line 1 – Courses Not Used

If a line is Verify and the 1ˢᵗ Course List is Derived, the Advisement Engine will automatically include all attempts (including Fs, Ws, etc). For this line, it is important to only include Earned Credit, so the first line must be a "real" course list (a Wildcard that pulls in all coursework).

Line 2 – Ineligible Coursework [Failed, Withdrawn or Repeated Classes]

In this case, all attempts should be displayed so it is important that the 1ˢᵗ line is a derived course list. Then subtract the Wildcard Course list that captures all earned credit coursework.

The Course Not Used information will appear as follows on the report:
(The "Ineligible" section only appears if there are courses that fall into that category)

Enhance the User Experience

Some UCSC users have expressed frustration with the length of the AA report. Many institutions have implemented more user-friendly tools to help users visually understand a student's progress toward their degree such as:

- PeopleSoft Fluid dashboards and pivot charts
- Third party software solutions
- Custom reports and summaries of AA report data

Determining the right approach for UCSC will require engaging multiple constituencies: students, advisors, and administrative staff to understand what information and format would be helpful and still accurate.

Utilize AA Reporting Tables

Every time the AA report is generated, all the associated information is stored in a series of tables called the Report Results Tables. These tables can be extremely useful to answer questions such as:

- How many students (or which students) have a particular requirement or group of requirements satisfied or unsatisfied?
- How many students used a particular course to satisfy a certain requirement?

- What percentage of students required one or more exceptions to complete their degree requirements? How many per student?
- What are the most common course directives or exceptions/waivers?
- Which students have satisfied all of their degree requirements?

CAUTION: The information in these tables is **only as current as the last time the report was generated for each student**. Prior to generating any information from these tables, it is important to run the reports (usually in batch) for all students in the population.

Table Name	Description	Join to…	Notes/Key Fields
SAA_ADB_REPORT	Header information stores each unique time the report has been run (who requested the report, what type and when).	Any of the other tables	Use the MAX(SAA_RPT_DTTM_STAMP) the last Time Processed to select only 1 report per student SAA_RPT_IDENTIFIER can also be used as criteria if a specific report identifier was used to generate a batch of reports (and all data associated with that identifier was purged first).
SAA_ADB_RESULTS	Shows status of each Career, Program, Plan, Subplan, Requirement Group, Requirement & Line Includes information any Waivers or Requirement Changes used.	SAA_ADB_CRSEUSE SAA_ADB_CONDUSE	ENTRY_R_TYPE – defines what level of information is being provided • KEYCAR - Career • KEYPRG - Program • KEYPLN - Plan • KEYRQG – Requirement Group • KEYREQ – Requirement • KEYRQL - Requirement Line ITEM_R_STATUS tells whether the items is Satisfied (COMP), Unsatisfied (FAIL) or has been Waived (EXMP). RQ_DATE is the start date of the Student's Requirement Term.
SAA_ADB_CRSEUSE	How courses are used to satisfy requirements Includes information any Course Directives used.	SAA_ADB_RESULTS SAA_ADB_COURSES	SEL_MODE = 'N' means the course was rejected (usually because it exceeds some limit) Must join to SAA_ADB_COURSES to get information about the course (Subject, Catalog, etc).
SAA_ADB_COURSES	Lists all courses in a student's record (Enrollment as well as External Credit)	SAA_ADB_CRSEUSE	Great source of a student's full course history in one place

SAA_ADB_CRSEAVL	List of courses eligible to satisfy a requirement line (the "select line")	SAA_ADB_RESULTS	**Use with Caution** – information requires a great deal of interpretation and validation
SAA_ADB_CONDUSE	How conditions are used to satisfy requirements	SAA_ADB_RESULTS	
SAA_ADB_RQDPLAN	Required Plan information (related to the "Plans Required" tab on the requirement group setup)	SAA_ADB_RESULTS	
SAA_ADB_WHATIF	What-If Scenario (used to simulated a particular report)	SAA_ADB_REPORT	

- 1st 4 tables listed are the most commonly used. It is recommended that they are joined/added to a query in the order listed (in which case Query Manager will properly join the key fields).
- Bottom four tables are shaded because they tend to be less useful
- If the AA report Type is configured to keep more than 1 version of the report, need to use the SAA_ADB_REPORT to limit the results to only the most recent report information (see above).
- Always be sure to specify an AA report Type (TSCRPT_TYPE)

Tables do not contain any of the descriptions (users have to refer back to set up tables for that information).

Purge Advisement Data

In PeopleSoft, AA reports are said to be "self-purging" meaning that they system will retain a limited volume of information. UCSC only retains the most recent report for each student. However, UCSC should still purge the report information occasionally to ensure accuracy of information and manage database size, otherwise reports for inactive students remain in the database forever. For small campuses, once per year may be sufficient (generally prior to the start of the Fall term). For larger institutions like UCSC, twice per year is recommended.

UCSC can opt to purge all information or specify based upon report type and date range as well as report identifier to purge specific batches (such as those used for graduation processing).