Information Technology Services

Project Proposal

Project Title: Degree Audit Transformation Initiative	Prepared By: Erica Simpkins, ITS	Date: 12/13/2021

Project Information

Situation/Problem/Opportunity:

Accurate, timely and complete information about students' progress toward completion of graduation requirements is not consistently available to students or staff at UC Santa Cruz. Students frequently don't know what courses they need to take to graduate and struggle to self-advise with the current resources available to them. The availability and modality of requirement completion information varies widely from student to student depending on a number of factors, including their choice of major and/or minor, their catalog year, and whether or not they have transfer credits from other institutions.The frustration and confusion this causes among students is leading to undesirable persistence and graduation rates for our campus. In some cases, it results in students taking classes they don't need, extending their time to degree and increasing their long- and/or short-term financial burden. Lack of clear and consistent self-service resources for students shifts the focus of our advising staff to bridging transactional gaps and away from being able to offer the transformational advising they are intended to provide, robbing our students of meaningful dialogues that lead them to critically self-reflect on their experiences and shape their goals and aspirations.

Systemwide, campus and independent reports have echoed the need for more clear, consistent, accurate and readily-available resources to support advising and degree requirement completion, including the following:

- UCOP's 2013 Transfer Action Team report called for campuses to provide information to incoming transfer students about which requirements they have completed prior to enrollment for their first term. Our campus is far from this goal.
- UCSC's 2018 Advising Task Force Report indicated a need for improved tools so that students can understand their requirements.
- NACADA's 2019 review of advising in the Division of Undergraduate Education indicated that the lack of a functioning degree audit system affects our students and the advisors on which they rely for support, noting that "It is nearly unheard of in 2019 that any institution would be relying on manual processes for monitoring degree progress".
- An Academic Advising Assessment by an external consulting firm, Ocean Bright Consulting Inc., in 2021 resulted in a detailed "health check" report identifying issues, challenges and recommendations specific to UC Santa Cruz's advising and degree audit ecosystem.

Among the campus' 4 priorities,
- Advance student success by improving retention and graduation rates and closing equity gaps
- Increase UC Santa Cruz's research profile and impact
- Foster an inclusive campus climate that embraces and values diversity
- Improve efficiency, effectiveness and resilience.

This project clearly and directly supports the first and fourth priority. Additionally, through the ready promotion of clear, accessible information to all students, regardless of (for example) their and their families' familiarity with higher education, we will also contribute to being an open, welcoming, and inclusive campus by simplifying and/or clarifying complex rules and requirements.

Purpose Statement (Goals):

Addressing the problems above will require a multi-pronged solution that includes cross-campus collaboration and a commitment to change business processes, technology tools and, in some cases, campus culture. The goals of this project are to:
- Provide electronic degree audit capability for all undergraduate majors, minors and colleges by the start of fall 2025
- Provide students, advisors, staff, etc. an intuitive user interface through which they can access accurate and complete degree progress/completion information by the start of fall 2025
- Reduce manual effort required for staff to support degree audit by 30%
- Reduce time and effort required for admissions staff to clear records/process transfer credit by 30%
- Have a realistic and achievable plan for maintaining degree audit data into the future
- Improve transparency of student degree audit data and processes
- Improve cross-campus collaboration in support of degree audit.

More information about how these goals will be met is included in the Objectives/Deliverables section below.

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Objectives/Deliverables(if known):

- Provide students an intuitive user interface through which they can access accurate and complete degree progress/completion information by the start of fall 2025.
    - The user interface should be clean, showing requirements and completion status at minimum, with option to access additional information about the requirement as needed (how does this requirement support the intended curriculum goals and what courses satisfy the requirement at minimum).
    - The campus must have a realistic and achievable plan to solicit student feedback, evaluate, maintain and update user interfaces into the future.
    - This solution may require custom development to the existing Academic Advisement Report (AAR), or a new custom or vendor bolt-on.
- Provide advisors, staff, etc. an intuitive user interface through which they can access individual and summary/multiple student degree progress/completion information by the start of fall 2025.
    - The user interface should be clean, showing requirements and completion status at minimum.
    - The campus must have a realistic and achievable plan to evaluate, maintain and update user interfaces into the future.
    - This solution may require custom development to the existing AAR, or a new custom or vendor bolt-on.
- Provide electronic degree audit capability to all students for all majors, minors and colleges by the start of fall 2025.
    - Identify and implement policy and requirement changes that simplify and clarify those policies and requirements, and allow codified enforcement.
    - Identify business process changes and system customizations to support coding efficiencies.
    - Analyze FTE across campus to determine staffing needs to support this effort.
- Reduce manual effort required for staff to support degree audit by 30%
    - Reduce need for manual exceptions:
        - Evaluate exception entry by plan to identify opportunities for additional rule expansion
        - Simplify requirements to allow easier/quicker coding
        - Reduce frequency of requirement changes to ensure coding changes can be made in a timely fashion
    - Create option for batch processing exception entry
    - Identify and implement customizations and business process changes to introduce processing efficiencies to build degree audit rules (e.g. can we capture and create rules from existing degree audits or Catalog CAT requirements? Can we streamline staff data entry and/or allow exceptions to be migrated to related majors?)
- Reduce time and effort required for admissions staff to clear records/process transfer credit by 30%
    - Provide admissions and articulation staff with professional consultant/training for articulation rule configuration and transfer credit processing
    - Identify and implement customizations and business process changes to introduce processing efficiencies (e.g. can we capture and create rules from existing direct articulations from 4-year institutions or analyze past articulations from which to build rules? Can we streamline staff data entry?)
- Have a realistic and achievable plan for maintaining degree audit data into the future.
    - Maintain adequate staffing and staff training for registrar, admissions and department positions.
    - Ensure transparent and informed decision making for requirement changes (e.g. make codified enforcement considerations part of the review and approval process)
    - Enforce reasonable time frames during which annual updates are proposed, reviewed, approved and coded.
- Improve transparency of student degree audit data and processes
    - Create and publish a summary of business processing that goes into articulating and applying transfer credit, coding requirements and exceptions (e.g. a service blueprint to help us visualize how university processes influence and impact the student experience)
    - Provide departments with real-time visibility into which academic plans have accurate requirements coded
- Improve cross-campus collaboration in support of degree audit
    - Provide departments with a mechanism to report degree audit and transfer credit errors and track the assignment and resolution process
    - Provide department staff with regular training on degree audit tools, usage, policies and business processes.
        - Full training for new advisors, department managers and curriculum analysts
        - Annual refresher training that includes a "what's new" component for current staff
    - Build and publish reports to analyze aggregate degree audit data (e.g. number of exceptions, usage by students and staff)
    - Use degree audit data, enrollment data, admissions data, and analytics to support curriculum capacity and planning based on multiple cohorts

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Methods/Approach:

It is recommended that several workgroups be formed to tackle the following topics and propose recommended solutions to a central oversight group, with workgroup representation that adequately covers both upstream and downstream stakeholder populations:

- Academic requirements and policies
  - Analyze existing policies and requirements for clarity, consistency of language and structure, simplicity and ability to be enforced using reasonable technological means
  - Recommend policy and requirement changes that uphold the intent of the policy/requirement but improve clarity, consistency, simplicity and/or enforceability
  - Analyze and recommend changes to policy and requirement change process and deadlines to ensure future adherence to goals of clarity, consistency, simplicity and enforceability
- Transfer credit
  - Analyze current business processes and technology for coding articulation rules and applying transfer credit
  - Recommend, implement and document business process and technology changes
  - Create training plans for admissions, registrar, advising and department staff
- Degree requirement rule building and maintenance
  - Analyze current business processes and technology for coding degree requirements
  - Recommend, implement and document business process and technology changes
  - Create training plans for admissions, registrar, advising and department staff
- Degree audit and academic planning tool
  - Define requirements for a degree audit and academic planning tool (with strong preference towards utilizing existing degree requirement rules in PeopleSoft)
  - Select and implement solution (can be in-house improvements to existing AAR, in-house bolt-on interface or third-party software)
  - Create training plans for admissions, registrar, advising and department staff
- Communication and collaboration
  - Analyze and recommend changes to existing campus processes and organizational structures to improve transparency and collaboration
  - Create training resource hub that brings together materials from other workgroups
  - Coordinate/create training model for new and current advisors
  - Propose a central advising notification/reminder plan for students based on common milestones (e.g. standardized To Do List items to declare a major, apply to graduate, etc.)

A central oversight group consisting of the following roles should be formed to review and approve/deny recommended solutions from the workgroups:

- Vice Provost and Dean of Undergraduate Education
- Vice Chancellor of Information Technology
- Chief Experience Officer
- University Registrar
- Director of Admissions
- Assistant Vice Provost for Undergraduate Advising
- Divisional Lead (nominated by Disciplinary Deans group)
- Academic Senate representative (selected by Senate, e.g., Chair, Vice Chair, or CEP Chair)
- Program manager (TBD)

Success Criteria:

- 80% of undergraduate students have an up-to-date degree audit that reflects their university, college, major and minor requirements by Fall 2024; 95% by Fall 2025.
- Manual degree requirement exceptions are reduced by 50% from Fall 2021 to Fall 2025.
- Every new policy approved by the Council for Educational Policy is vetted by those charged with enforcing it and a reasonable plan for enforcement by the end of the quarter following approval is in place.
- 95% of transfer credit has been processed for incoming students by the first day of their first quarter.

Risks and Dependencies:

- Historic campus culture values individuality, customizability, and variability which generally leads to complexity in our policies and requirements. This project demands we find a balance between maintaining our historic values and

simplifying policies and requirements for the benefit of our students, faculty and staff. High on-going probability of risk.
- Gaining campus wide consensus and agreement on a common definition of academic degree progress across all stakeholder constituencies is vital to this effort. The analysis and consensus-building effort is time-intensive and difficult to estimate. High on-going probability of risk.
- Identifying and bringing a Program Management resource up to speed is likely to be difficult. High probability of risk at project outset.
  - An external hire (recommended) will require time to gain context and understanding of UCSC and our unique advising ecosystem but should provide an external perspective of how modern degree progress is tracked. Consultant resources to fill this role should be strongly considered.
  - Alternatively, selecting a qualified internal candidate will lead to a knowledge and workload gap elsewhere on campus and may not provide the external perspective needed to introduce the transformational change this project is aiming to achieve.
- Hiring and retaining sufficient numbers of qualified staff to support AAR development has been problematic since 2004; this is unlikely to change. High on-going probability of risk.
- Availability of current campus staff to contribute to the project while maintaining their existing work may lengthen project timelines. Clear delineation of roles, deliverables and deadlines will be critical to ensuring project progress. High on-going probability of risk.
- Technological changes to the systems that currently support transfer credit evaluation and degree audit work may impact availability of human resources and lengthen project timelines (i.e. quarterly PeopleSoft/Oracle maintenance, replacement of our campus reporting tool, requirement maintenance to Slug Success, etc.).

Required Consultations:

- Project management (see Resources > People section below)
  - Program Manager
  - Project Manager 1
  - Project Manager 2
  - Business Analyst
  - Technology consultant
  - Articulation consultant (currently in progress)
- Business requirement consultation
  - College Provosts, Preceptors and Academic Program Coordinators and Advisors
  - Department Chairs, Managers and major/minor Advisors
    - Advising Council members (see page 3 of their annual report)
  - Office of Admissions: Campus Articulation Officer, Admissions evaluators and analysts
  - Office of the Registrar: Registrar, Associate and Assistant Registrars for Curriculum Management, Academic Advising analysts, Registrar Systems and Development analysts
  - Office of Campus Advising Coordination: Assistant Vice Provost of Undergraduate Advising, Associate Director of Academic Advising, Assistant Director for Programs Advising, Advising Programs Coordinator, Advising Data and Process Analyst
  - Committee for Educational Policy Chair, members and analyst
- Technology requirement consultation and solution implementation
  - ITS Student Systems team
  - Technology consultant (see Resources > People section below)
- Process and user experience consultations
  - Students, including SUA VP Academic Affairs
  - Office of Campus Advising Coordination
  - Program advisors
  - College advisors
  - Chief Experience Officer
- Procurement & Business Contracts/Purchasing
  - Consultant staffing
  - Possible software procurement

Resources:

The list below represents our current estimate of resources needed for this project. ITS will be requesting research and analysis from Gartner services in January 2022 to validate that the resources below will satisfactorily meet our project needs based on their experience with comparable higher education transformation projects.

- People

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- ○ Program Manager: to be hired; will report to Undergraduate Education and coordinate the project as a whole
  - ■ Recommendation: A consultant resource with advanced knowledge of higher education and standard degree audit policies, processes, practices and related system needs is highly recommended to lead this project.
- ○ Project Manager 1: to be hired; will report to the Program Manager and be responsible for coordinating the work of the "Academic requirements and policies" and "Communication and collaboration" workgroups
- ○ Project Manager 2: to be hired; will report to the Program Manager and be responsible for coordinating the work of the "Transfer credit," "Degree requirement rule building and maintenance," and "Degree audit and academic planning tool" workgroups
- ○ Business Analyst: to be hired; will report to Program Manager and be responsible for providing project analysis across workgroups as needed
- ○ Technology consultant with expertise in PeopleSoft/Oracle transfer credit and degree audit functionality or other system(s) purchased through this project to support technology and user interface changes
- Time
  - ○ Because of the breadth of the issues being addressed in this project, actual time required to complete the work will depend on the solutions selected. Below are rough estimates, with acknowledgement that solutions will be multifaceted and will likely allow for overlap (e.g. policy change is likely to be piecemeal and can begin before technical solutions are selected).
    - ■ Research: Once program and project managers are selected and begin work, the research phase of this project is likely to take 9 months to a year.
    - ■ Policy changes: Dependent on scope and number of policies identified as requiring updates, 1-2 years is likely.
    - ■ Technology changes: Depending on the technology solution(s) selected, implementation is likely to be 1-2 years.m
- Cost
  - ○ TBD following Gartner consultation; costs likely to include professional project management and business/policy analysis services, technical services, potential software purchase, and backfill.
- Data/Systems
  - ○ AIS/MyUCSC
  - ○ InfoView
  - ○ Slug Support
  - ○ Google

Project Duration (est): 3 years	**Project Budget (est):** TBD

Executive Sponsors: Cynthia Larive, University Chancellor Lori Kletzer, Campus Provost/Executive Vice Chancellor **Project Sponsor:** Richard Hughey, Vice Provost/Dean of Undergraduate Education	**Program Manager:** To be hired

ITS Project Classification Matrix

Sizing Matrix: *The Sizing Matrix determines your initial project classification. Use whichever classification is larger (e.g., if your project is 180 hours [class 2], but you will spend $30,000 in external costs [class 3], your initial project classification is 3).*

Project Class	Work Effort (Hours)	Budget Override (External expenditures only)
1	80-159	<$8000
2	160-499	$8000-$24,999
3	500-4,999	$25,000-$249,999

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4	5,000-9,999	$250,000-$499,999
5	>10,000	>$500,000

Risk Matrix:

HIGH

Use the column on the right to calculate your risk score. Add points for each row, based on your project's risk score (e.g., if your project has 8 team members, enter "1" on the Total Team Size row). Sum your scores for each row in the Risk Scoring section below and use the definitions provided to see if you need to increase your initial class size from the Sizing Matrix.

Risk Factor	Low (0)	Medium (1)	High (2/3)	Very High (4/5)	Your score
Total Team Size	<5	5 – 9	10 – 14	>15	4
Workgroups Involved	1 – 2	3 – 4	5 – 6	>7	5
Technology / Process	Expert	Familiar	New to UCSC	Breakthrough	3
Complexity	The solution is well defined and no problems are expected	The solution has identified problems	Multiple approaches to the project goal	The solution is only vaguely defined	3
Political Profile/Impact	Unit/Dept	Director Area	VC/Dean Area	Enterprise-wide	5
Deployment Impact	Unit/Dept	Director Area	VC/Dean Area	Enterprise-wide	5

Risk Scoring	[0-10] Manageable – no change to classification [11-17] Moderate – increase class 1 level [18-25] High – increase class 2 levels	TOTAL SCORE	25 (HIGH)