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Abstract

The dream of an intuitive self-service electronic Education Planner (EP) is elusive. Due to their complexity, current commercial products fail to deliver a truly self-service EP experience. Santa Monica College decided to take a fresh look at this challenge and leveraged modern mobile-ready application interface design methodologies in concert with innovative real-time degree-audit and prerequisite engines, wizard-based decision channels that simplify complex choices and create a truly intuitive self-service education planning application, MyEdPlan. Counselors and students share a common dataset and this connection empowers collaboration never before imagined. Regressive, big data degree analysis generates insight to students, counselors, and the institution on related program options (associate degrees, certificates, GE patterns). Beyond the technology, features like the Time Management wizard, contextual feedback, and graphical benchmarks, enhance the student experience. Since May 2014, over 17,500 education plans have been developed by students and counselors. Over 140 counselors have now used MyEdPlan. SMC continues to expand MyEdPlan's features and improve the user experience and regularly solicits/accepts user feedback. Our evaluation plan, as elaborated upon in this report, indicates high levels of satisfaction from students and counselors with MyEdPlan.

Our Challenge

With the adoption of SB1456, the Student Success Act of 2012, California Community Colleges have faced new challenges and opportunities to rethink, recraft, and develop means by which to support student success and progression toward degree/goal completion, centered on four core areas of emphasis: assessment, orientation, counseling/educational planning, and follow-up services. While each of these areas has brought about new requirements to bear, Santa Monica College has been relatively well positioned to address new mandates, and in some areas, we have been a step ahead of many other colleges. For example, at the time of the signing of SB1456, SMC already had in place both the requirement and the mechanism by which to enforce mandatory student participation in college orientation and assessment. We also had in place 24 unique programs delivering counseling support and follow-up services to a variety of student populations. However, we recognized the newly expanded educational planning requirements would present some setbacks unless we dedicated time, effort, and development time to devise new systems to address the complexity of educational planning as mandated by SB1456 and expanded State regulations.

With respect to educational planning, SB1456 requires that all new, first-time college students have in place an abbreviated education plan consisting of one or two semesters/sessions prior to enrolling in their first term; and then a comprehensive education plan, which accounts for all requirements for a program of study by the time students complete their 15th unit of study or before completing their third semester. Given the 33,000+ students attending Santa Monica College any given semester, and the fact that counseling is not mandatory, this requirement appeared insurmountable, especially since only about 18% of fall 2011 first-time freshmen had an education plan in our student information system (ISIS) prior to the start of their first term. Data provided by the Institutional Research Office indicated this percentage increased to 40% by the end of their third semester. This percentage could conceivably be higher as some special programs maintained paper education plans on file for various reasons until about 2013 when the Student Success Act of 2012 went into effect. Officially, it has been the Counseling Department's position to encourage all counseling programs to use the electronic ISIS SEP program since it was initially developed. While the percentage of firsttime freshmen with an education plan reached 40% (as noted above), an overwhelming majority of them do meet with a counselor by the time they complete their first semester (87% of fall 2013 cohort students).

Under the leadership of the SMC Counseling Department Chair, the Dean of Counseling and Retention, and the auspices of our SB1456 Workgroup (composed of counseling program leaders and administrators), it was recommended we revamp our approach to educational planning at the College by initially replacing our decade-old student education planning tool, which was not adequately addressing counselor or student needs. That tool was not accessible to students, was not integrated with our degree audit program, prerequisite engine, or enrollment system. In short, it did not meet our needs or expectations to allow end-users (students in particular) the opportunity to develop well-crafted, albeit guided education plans, on their own.

The SMC SB1456 Workgroup recommended we consider purchasing or developing a homegrown education planning tool that would meet our unique needs. To this end, a workgroup composed of counselors and MIS staff was appointed to research what was commercially available, and if necessary devise the scope of a project to develop an education planning tool, with the understanding that it would be used by students on their own, by counselors, and by college administrators, and be available for use within a 6-12 month period.

Since the Workgroup's research revealed that none of the commercially available educational planning tools (e.g., DegreeWorks, Ellucian's Colleague) or other homegrown systems (e.g., Degree Compass, Saddleback's MyMAP) adequately addressed our desire to fully integrate a real-time degree audit and prerequisite checking engine, it was decided we would create our own education planner, which would later become MyEdPlan. The scoping process started approximately in May 2013 and concluded in early fall 2013. Development started approximately in October 2013, and a working alpha version was available in February 2014, with a more stable beta version available in the latter part of April 2014 (student version). MyEdPlan fully launched around August 2014 to students and the counselor version of MyEdPlan in mid-October 2014. Students and counselors are invited to

report their experiences using MyEdPlan and provide feedback on specific features or comment on potential enhancements.

About MyEdPlan

MyEdPlan is an online, interactive, wizard-driven student education planning program designed for student and counselor use. It is a collaborative effort between our Management Information Systems, Counseling, and Enrollment Services departments, funded in part by our Student Success and Support Program (SSSP).

MyEdPlan Components as Model of Practice and Innovation

In order to deliver a robust educational planning tool sophisticated enough to guide students toward developing self-service "ed plans," the team of counselors and MIS personnel carefully considered the typology of students attending our college and the educational goals they pursue. Principles guiding MyEdPlan's development included the need to provide a modern mobile-ready user interface; multi-step wizards simplifying complex decisions into simple steps; the integration of realtime processes capable of responding to user input expediently and with high levels of accuracy; and a common platform/database/architecture for the student and the counselor version. MyEdPlan integrates an educational goal selection wizard, a time management wizard guiding course/unit-taking decisions, a real-time Degree Audit program capable of generating student insight on related program options and/or certificates, a newly developed and highly innovative realtime prerequisite/advisory checking engine system, and the education planner itself. Embedded throughout MyEdPlan are directed feedback messages designed to facilitate the proper planning, sequencing, and selection of courses leading to the development of a comprehensive education plan for a specific goal/program of study. MyEdPlan continually encourages students to see a counselor once an educational plan is initiated, since there are many complex questions that can only be addressed in person. MyEdPlan components are described below in greater detail.

- Educational Goal Selection Wizard: guides the student toward defining the educational goal they wish to pursue, ranging from transfer or degree/certificate attainment to basic skills or single course-taking. From here, students are branched into specific goal components, such as choice of transfer institution, program, or major of study. In the case of transfer and degree goals, the wizard automatically selects the most relevant general education pattern suitable to the student's goal. The wizard also provides contextual guidance at each step of the process and provides supplemental information in the form of "FYI—For Your Information" as a supplement. It also includes links to select transfer and career resources such as the popular handouts "What can I do with a major in..?" The counselor version of MyEdPlan condenses these separate steps into a single screen since counselors are familiar with each education goal option and do not need the additional guidance provided to students.
- Time Management Wizard: directs students to consider how they spend their time in 10 academic and personal tasks, including number of units desired, hours spent at work, commuting, and family responsibilities. The wizard automatically computes the time spent on these tasks and displays feedback to alert students if their impending semester schedules are well-balanced or if time spent on tasks or number of units should change to achieve a wellbalanced schedule. Students are advised on both the number of courses and number of units

they should consider taking given the total number of hours reported in the wizard. Students are recommended to enroll in a study skills or student success seminar course when their schedules are unbalanced.

- MyEdPlan Benchmarks: located at the top of the screen, this section graphically depicts students' progress toward specific goals, including: the applicable general education pattern, the SMC program of study (major), a local global citizenship graduation requirement, and total number of courses/units needed for the specific goal. Students are also presented with the number of areas required for a goal, how many areas students have completed or remaining. Benchmarks are automatically updated as students add courses to their education plan or complete courses.
- Real-Time Degree Audit Program: The integrated real-time degree audit program regressively examines a student's academic record (inclusive of SMC and other colleges' coursework, provided they have been evaluated by a counselor/evaluator) against the requirements of a particular major, program, or general education pattern. The student is presented with the results of the audit by displaying a summary of all coursework used in fulfillment of applicable requirements, as well as any areas where coursework is missing. The program is highly interactive and allows students to drill-down to specific program requirements—course-level. Students may optionally review catalog description for any course and add a course to their education plan directly from the degree audit program. This, in turn, updates the audit report, the education plan, the education plan benchmarks, and if appropriate, the prerequisite checking engine. As students add courses to their education plan directly from the education plan module or from a "Course Search" tab, the degree audit is automatically updated. Thus, the audit program responds in real-time.
- Real-Time Prerequisite/Advisory Engine: The prerequisite engine is one of the best features available in MyEdPlan and no other commercially available program reviewed rivals it. This engine automatically determines student eligibility for a course by examining their transcript, placement test results, and placement/prerequisite waiver history. The engine accounts for various types of recency rules. The engine is highly responsive to the proper sequencing of courses as students add these to their education plan, and displays alerts in real-time as courses are added or removed from the sequence. Using this sophisticated engine, MyEdPlan depicts for students the earliest possible term when they may enroll in specific courses in the sequence given their academic history and planned coursework in disciplines where prerequisites, corequisites, or advisories are used. This is communicated through directed messaging and contextualized buttons/text in various colors. Students are "forced" to properly plan course-taking in the case of computer-enforced prerequisites in areas like English, ESL, mathematics, life and physical sciences, as they are unable to add a course to the education plan until they have accounted for the proper prerequisite. The counselor version of MyEdPlan relaxes some of these business rules and relies on counselor professional judgment to make decisions in the best interest of the student.

Education Plan—MyEdPlan by Term: because MyEdPlan utilizes a common and well integrated platform, architecture, and dataset for the student and counselor version, this connection empowers collaboration between students and counselors as never before achieved with our previous education planning platform. MyEdPlan may be used independently by students to create education plans on their own; counselors may develop plans alongside students; or counselors may review/update/approve student-developed education plans at any time. MyEdPlan automatically populates the current semester/term schedule with any courses in which the student is enrolled, as well as those in which he/she is enrolled in the coming term (dependent on timing of the enrollment cycle). Both students and counselors may optionally review the student's course-taking history at the College or retrieve the unofficial transcript directly from the MyEdPlan by Term section. Students and counselors may add courses to their education plan directly from the degree audit program section, the Course Search function, and the "Assessment Test/Waiver Eligible Classes" function. Counselors may also add courses through a "Quick Add" search function or may optionally add a generic course placeholder for an elective or GE Area function. MyEdPlan by Term allows counselors to add course-level comments or global comments, which are displayed electronically to the student and are also printed in the education plan report. These comments are viewable to other counselors as well. Grades are also displayed directly in the semester/term. Students and counselors may also review any education plan ever developed for or by the student. Counselors may directly edit a plan they or the student created; may copy and then edit a plan created by another counselor, but may not directly edit another counselor-developed plan. This safeguards against accidental deletion of content. Counselors are able to "approve" education plans directly from the MyEdPlan by Term section. As noted previously, as courses are added to the education plan, the degree audit report and education plan benchmarks are updated in real-time, and the prerequisite engine accounts for the addition/deletion of courses. The plan accounts for other business rules such as term units limitations.

MyEdPlan Development Challenges

The most significant challenges included the creation of a self-service, intuitive, education planner capable of simplifying and guiding decision making to students. The development team overcame these by using a modern interface design, real-time degree audit and prerequisite engines, decision channels with multi-step wizards to simplify complex decisions, and the regressive degree audit which provides students with insight on specific degree programs and certificates. Key to overcoming these challenges included:

- The decision channels-multi-step wizards break complex decisions into smaller chunks and narrow the choices so the student is not overwhelmed by information.
- A real-time degree audit and prerequisite engine ensured course selection options were valid for the student's major/program. In short, real-time processes ensure all courses and sequences presented are valid options at the moment they are added or redacted from the plan. Students are alerted in real-time to actions they take that will invalidate a prerequisite sequence. Other education planner programs reviewed by the development team did not account for removed/deleted courses from a sequence.

Because Counselors share the same education planner application, they can clone a copy or the student's initial plan, or start a new plan and work interactively with the student to create and/or maintain the student's educational plan. Plan notes, visible to the student, provide counselors with the ability to communicate their intent and explain options the student should consider should a specific course be unavailable during enrollment.

Outcomes

Education Plans Created

Students and counselors have readily leveraged the use of MyEdPlan. Between May 2014 and February 11, 2015, MyEdPlan has been used by 12,068 students, who have produced a total of 13,416 education plans on their own. Of these 2,131 were abbreviated education plans consisting of one or two terms, and 11,285 comprehensive ed plans consisting of three or more terms. Although MyEdPlan was released to counselors only on October 22, 2014, counselors from across all counseling programs (over 125 counselors) have utilized it to create 4,053 education plans of which 443 are abbreviated and 3,610 are comprehensive education plans. Taken together, nearly 17,500 education plans were created in MyEdPlan since May 2014 by new (33%), continuing (59%), and returning students (8%). We anticipate this number will grow significantly over the course of the spring semester and summer term as we move MyEdPlan toward full institutionalization. This will be aided by mandatory education plan development by first-time college students starting SMC in summer/fall 2015.

Even with a relatively high number of counselors employed at Santa Monica College, education planning remains a challenging undertaking given the 34,000 students attending the College any given semester or the 15,000+ students attending a summer/winter session. When counselors meet with students, it is often to address just-on-time enrollment or transfer-related questions, and educational planning is but one of the many tasks they address. By creating our mobile-ready education planning program, we have leveraged students' interest in becoming agents of their own educational paths and they have readily embraced this responsibility by using MyEdPlan to devise education plans guided by integrated wizards and our real-time degree audit and prerequisite check engines that allow students to make the right academic choices. Given the common platform used by students and counselors, counselors can use MyEdPlan to review, edit, and approve studentcreated education plans, and therefore spend more time talking to students about the choices they made, their goals, etc., but at a deeper level of engagement since students are more familiar with the context of educational planning and degree, certificate, or transfer requirements.

We anticipate that the number of students using MyEdPlan will approach or exceed 20,000 by the time we start the summer 2015 session. We will get there by implementing a carefully orchestrated communication plan that is currently under development; by adding an animated orientation to education planning serving as precursor to MyEdPlan; and by creating a new Steps to Student Success access point in the student portal, Corsair Connect, which directs new students to complete four essential steps prior to enrollment: Prep2Test + Assessment, Orientation, Education Planning Animated Orientation (aka Monica), and MyEdPlan.

Demographics for Students Using MyEdPlan

In reviewing the demographic characteristics of students for whom an education plan was created using MyEdPlan, relatively minor differences were found between those accessing the program on their own or going to a counselor to help them develop the ed plan. Hence the demographics below are for students as a whole.

- 57% were female; 43% male. The average age was 23.6 (SD = 7.5).
- Students reported spending an average of 121.7 (SD = 83.5) hours per week on personal, work, social, and academic activities.
- 48% had coursework from other institutions; and 13% had Advanced Placement credits.
- 52% were interested in transferring to a 4-year college/university with an Associate Degree; 35% in transferring to a 4-year college/university without an Associate; Degree; 8% in obtaining an Associate degree from SMC (no transfer); 3.1% in obtaining a certificate of achievement; 2% were unsure of a goal; and less than 1% were seeking to improve their English skills.
- With respect to a transfer institution, 29% expressed an interest in the University of California; 24% in either the University of California or the California State University; 19% in the California State University; 6% in a private California university; 3% in an out-of-state university.

Counselor and Student Feedback

Counselor and student feedback has been an integral part of the development process leading to the creation of MyEdPlan. As noted previously, a workgroup consisting of MIS personnel and counseling faculty was convened early on and was charged with devising the scope of the project. General and specific input on features for our new education planner was solicited from counselors and their feedback guided development. A select number of counselors were targeted for feedback and later others participated in a pilot project, which led to several changes/additions in features. Counselors have also been asked to submit feedback as they think of features to be added or if they encounter problems with the program. The development team considers this feedback, and in most cases, we have implemented these requests within a short period of time, but have had to hold off on others as we prioritize requests. Students have also been participants in the development process. Over the course of two days, approximately 50 students participated in an in vivo alpha review session. The development team observed how they interacted with MyEdPlan, asked questions of them, and solicited specific input, which students readily provided. Students and counselors continue to submit feedback on MyEdPlan through an embedded feedback form.

Now that MyEdPlan has been operational for a few months, MyEdPlan's leadership team has undertaken a comprehensive evaluation project to inform us how counselors and students are using MyEdPlan—the user experience with the program and what they like and do not like. Surveys were deployed in the latter part of February 2015 to solicit input from counselors who have used MyEdPlan more than a few times and of students who used MyEdPlan to create an education plan on their own in either fall 2014 or winter 2015. A separate evaluation involving counselors participating in a pilot project where they reviewed education plans created by students using MyEdPlan was implemented in Winter 2015 and is being used to asses student learning outcomes

related to education planning. A summary of preliminary findings for these evaluation projects is presented below, albeit the full results will not be available until the end of March 2015.

Counselor Survey Results

A summary of findings on counselors' experience with MyEdPlan is presented below. These are based on 49 responses of counselors completing the survey within the first five days of launching it. As may be observed in Figure 1, counselors generally reported MyEdPlan was better than the old Student Education Plan (SEP) program we had in place. Counselors were more likely to indicate MyEdPlan was more comprehensive in features (90%); more helpful (73%) and more effective (71%) to counselors; albeit fewer counselors indicated MyEdPlan was more efficient (56%) or easier to use (52%) than the old SEP program. These lower percentages are not surprising considering that MyEdPlan is significantly different from the SEP program, much richer in features, and it does take some getting used to.

Counselors were also asked how helpful they found specific MyEdPlan components to which they have access (Figure 2), with 86% finding the education planner itself as the most helpful feature, followed by the real-time prerequisite/advisory engine and alerts displayed as students add courses to their education plan (84%), the real-time degree audit program (82%), the education goal selection questions (Wizard—69%), and lastly, the education goal progress bars (59%). Additionally, counselors were asked to indicate their level of agreement on a few outcomes following MyEdPlan use (Figure 3). Nearly 90% strongly agreed/agreed they were confident in their ability to prepare education plans in MyEdPlan and 82% agreed they were proficient in its use. An additional 69% reported being skilled on how to use the embedded real-time prerequisite/advisory engine and the real-time degree audit program. Only 41% agreed knowing how to use all MyEdPlan components, and 45% expressed a need for further training using the program. Taken altogether, 78% of counselors reported being very satisfied/satisfied with MyEdPlan (Figure 4).

Counselors were also asked to respond to open-ended questions on what their favorite and least favorite features were. Listed below are a few representative quotes on the favored features:

- "Being able to see prerequisites and projected time of completion."
- "If the student has already register for classes that semester is completed for you."
- "Progress checks/degree audit. Helps students understand BIG picture."
- "Being able to see all the semesters in one screen is great. It's easier to see (great visual) how classes are "plugged-in" and organized."
- "That it is viewable for student's at every moment they need to view it. Papers are no longer necessary to be in student's folders for them to know what courses remain for their goals. Also the percentage charts of what is completed is a tremendous help for a student to see with their eye right way what areas are lacking, and for what AA or certification they are attempting to complete."
- My favorite part about MyEdPlan is that it is efficient, user friendly and accessible to students. I have had nothing but positive feedback from students about MyEdPlan."

Counselors also commented on features they did not like:

"Not being able to erase or change classes" [referring to pre-populated courses in which student is currently enrolled]

- "Searching classes. It's sometimes a bit slow."
- "That I can't make specific comments for certain classes or semesters."
- "Inability to list counselor's advised courses if student is already enrolled in the specific term. The old Ed Plan let you do this."
- "It doesn't show both SMC major and transfer major. No button to add notes next to the current enrolled classes."
- "I wish we could populate a couple of classes at a time in a semester, instead of one at a time. A typical plan is one page but when you print it's two half pages."
- "I don't like that I can't go back and change the degree option after I've already planned the classes. I don't want to have a new plan."

Counselors were also asked how MyEdPlan could be further enhanced. Some of their feedback included:

- "By adding transfer articulation agreements we already have and also by including more help on how to select math classes after their placement tests."
- "On the Clarify Goal page- the "create" button can be at the bottom. To input comment, the order of the buttons are not-intuitive. (For example, "Add a Comment" can be first.) Also, to change a course to a different semester, if there could be an easier way to transfer (such as click and drag, etc..) that would be more efficient. Also, if there was an option to have a placeholder for math, if the student has not taken the assessment yet, it would be great."
- "Need to be able to change classes that students enroll in without having them drop classes during session. Need to be able to print out a simplified schedule on one page."
- "It would be great to be able to modify a currently enrolled semester (prior to start), so inform students of changes that should be made to their upcoming semester. Finding it hard to add more than one elective to any given semester/term. It seems to only allow one."
- "It would be helpful that to have a feature that we could delete a course that a student is currently enrolled in on MyEdPlan. When creating plans for financial aid appeals sometimes students are enrolled in courses that they do not need towards their progress. Also, MyEdPlan could be enhanced if there was a feature when in the middle of an ed plan to go back to the primary questionnaire page and he able to switch goals. For example, a student may change their mind from fulfilling the CSU GE plan to the IGETC or from the AS in ECE to the AS-T. As of now I am just deleting old plans and starting new ones."

With respect to the need for further training, some counselors noted:

- "Additional help features that are not immediately visible."
- "As new Counselor, possible getting a formal training to the overall use of the Ed Plan tool."
- "Be able to go through several student examples as a group."
- "How the student navigates MyEdPlan."
- "I just need to use it more and get practice. I think the training was more than sufficient."
- "I would definitely like more training on the Degree Audit feature."
- "Tricks" and "shortcuts." Sometimes I wonder if I am doing things the "hard way". It may not be the case, but I constantly wonder that since I'm still learning all of the capabilities of the program."

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% More Helpful to Counselors (MB+B = 72.9%) 16.7% 6<mark>.3%</mark>29 Less Helpful to Counselors More Effective for Counselors (MB+B = 70.9%) Less Effective for Counselors More Efficient for Counselors (MB+B = 56.3%) Less Efficient for Counselors More Comprehensive in Features (MB+B = 89.6%) Less Comprehensive in Features Easier to Use (MB+B = 52.1%) Not as Easy to Use Much Better ■ Better ■ About the Same Slightly Lower ■ Much Lower

Figure 1. Counselor Reported Comparison between MyEdPlan and Old Student Education Plan Program

Figure 2. Counselor Reported Helpfulness of Select MyEdPlan Components

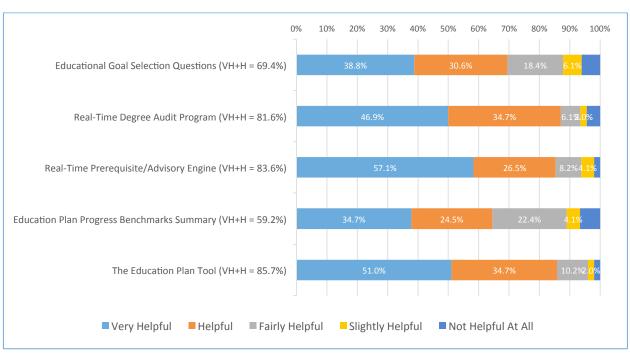


Figure 3. Counselor Reported Outcomes Following MyEdPlan Use

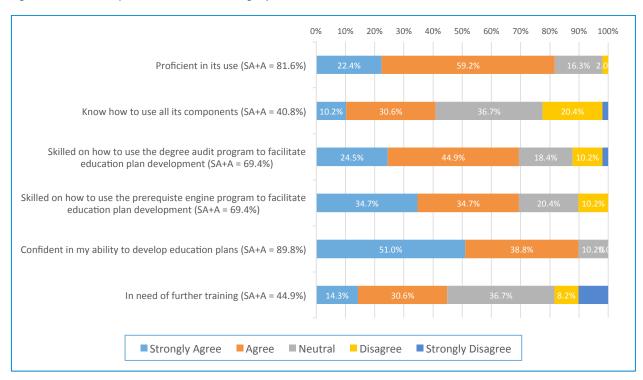
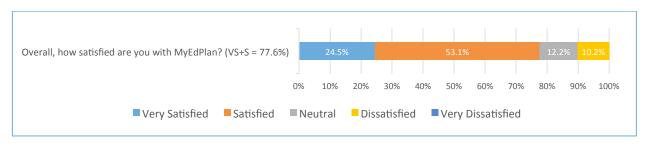


Figure 4. Counselor Reported Satisfaction with MyEdPlan



Student Survey Results

A summary of findings concerning students' experience with MyEdPlan is presented below. These are based on 225 responses of students completing the survey within the first two days of launching it. The vast majority were Matriculant 1, interested in pursuing an associate degree, certificate, or transfer. Thirty-seven percent were new students at the time they used MyEdPlan.

Asked about their first impressions of MyEdPlan following their first use (Figure 5), 88% described it as helpful; 81% as informative; 77% as easy to use; 71% as easy to navigate; 68% as visually pleasing; 68% noted it had just the right amount of information; 20% indicated it was confusing; and 16% found it overwhelming. Also asked about select outcomes following MyEdPlan's use (Figure 6), 84% of students indicated they would recommend MyEdPlan to a friend; 79% stated they now knew which courses they needed to meet degree, major, or transfer requirements; 79% noted being more aware of prerequisites/advisories for their courses; 79% expressed confidence that they could make better decisions about their degree path; 78% stated MyEdPlan had prepared them to ask better questions of a counselor; 75% were more knowledgeable about their degree, major, or transfer requirements; and 74% expressed confidence in preparing a full education plan on their own. Students were also asked how helpful they found specific MyEdPlan components (Figure 7), with 84% finding the education planner itself as the most helpful, followed by the education goal progress bars (79%), the information displayed as students progressed through the education goal wizard (79%), the prerequisite/advisory alerts displayed as students add courses to their education plan (79%), the way MyEdPlan shows students how soon they may take a course if they have not yet met a prerequisite (78%), the education goal wizard (75%), the degree audit program (74%), and the time management wizard (63%). Three-quarters (75%) also stated MyEdPlan had all the resources students needed to put together an education plan (Figure 8), and an overwhelming majority expressed being very satisfied/satisfied—82%--with MyEdPlan as a whole (Figure 9).

Students were also asked to respond to open-ended questions on what their favorite and least favorite features were. Listed below are a few representative quotes on the favored features:

- "Converting the needlessly convoluted process of checking possible courses printed on a frustrated piece of paper into a streamline, aesthetically pleasing digit [sic] template for our college career goals. This tool tremendously transformed my conceptualization of what I wanted college to be and how I wanted to accomplish my goals."
- "I loved the fact that MyEdPlan helped me visualize what classes I needed and that helped put me on track."
- 'I love that it lets me see how many classes in each category I still need, it shows when I've fulfilled a category (even if its just planned), and I especially liked how I could quickly and easily view class descriptions."
- 'The green bar and the red notifying me what I was missing. I was not aware that I was missing a course but this aided me towards the right direction."
- "My favorite component of MyEdPlan are the bars that show one's progress. I also enjoy the large circular symbols that stand for 'Complete" or "In Progress."
- "Seeing what class I need to complete my goal. That way it makes it much easier for me to stay focused on what I need to complete"
- "The time management part of MyEdPlan, because if it believed you to be taking too many courses it would answer with something entertaining and comical."

Students also commented on features they did not like, although more than half the comments provided were to indicate they did not dislike anything. Other comments included:

- "I think the MyEdPlan layout is perfectly fine the way it is. It was designed well."
- "Nothing. I check MyEdPlan every day and don't have to wait to talk to a counselor anymore."
- "It can be a little confusing at first, but you get the hang of it as you continue using it."
- "A lot of info all at one time."
- "For Major, have a list of prerequisites needed."
- "Having to choose where you want to go and trying to get the courses in the right semesters."
- "The least favorite part was the hour calculator."

Figure 5. Student Reaction to MyEdPlan Following First-Time Use

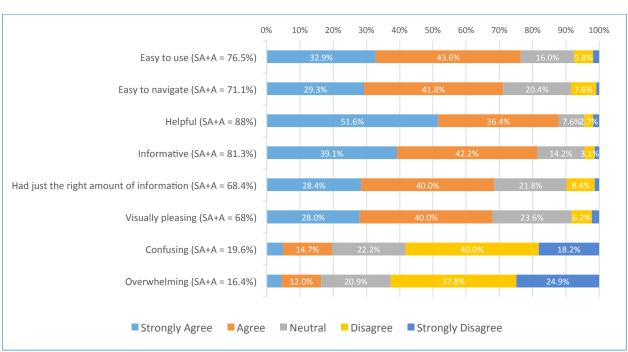


Figure 6. Student Reported Outcomes Following MyEdPlan's Use

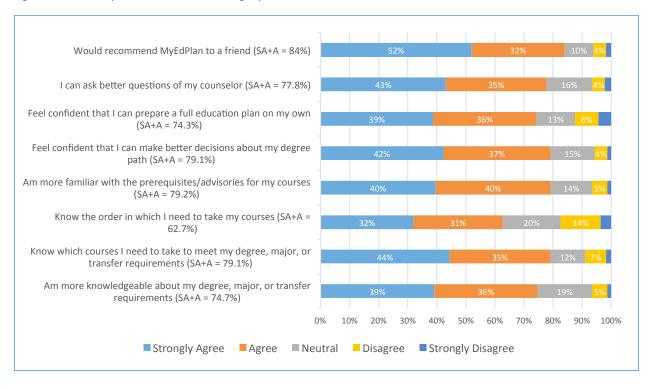
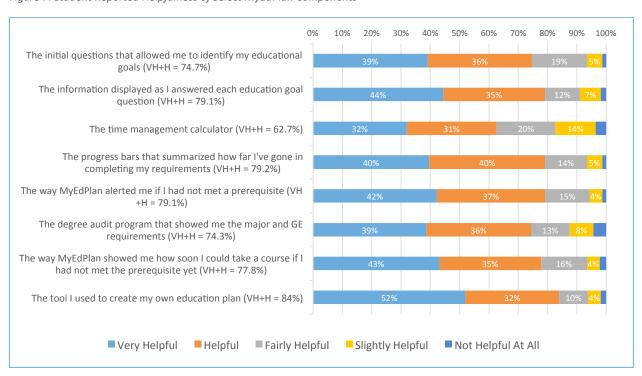


Figure 7. Student Reported Helpfulness of Select MyEdPlan Components



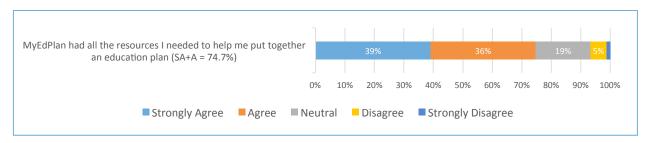
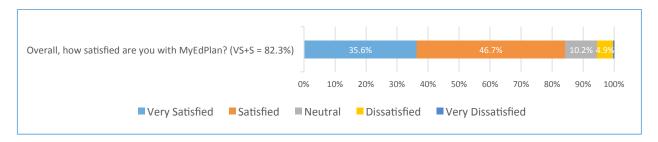


Figure 8. Student Reporting MyEdPlan Provides All Needed Resources

Figure 9. Student Reported Satisfaction with MyEdPlan



MyEdPlan Student Learning Outcome Assessment

In Winter 2015, the Counseling Department launched a pilot process to review and validate studentsubmitted education plans. The goal of the project was two-fold:

- 1. To review student-submitted education plans to see how accurately and effectively MyEdPlan leads students through the educational planning process; and
- 2. To proactively reach out to students to offer them additional guidance as necessary and approve plans which met the validation standards established.

To assist the counselors with an efficient way to record their evaluation results in ISIS, an education planning SLO was established in December 2014, which focused specifically on the student learning that results from utilizing the MyEdPlan. The SLO was as follows:

As a result of utilizing MyEdPlan, students are able to appropriately plan and sequence the coursework needed toward fulfillment of their stated academic goal.

Selected counselors were asked in Winter 2015 to review assigned student-submitted education plans and consider standards such as whether included courses were generally applicable to the stated educational goal; whether the student correctly identified and properly sequenced prerequisite courses; whether substantial progress toward the stated goal seemed likely based on the included courses; and whether the combination of submitted courses appeared manageable, appropriate and relevant. This pilot project was limited to a review of randomly selected Matriculant 1, Enrollment

Status 1 students. In reviewing the ethnic make-up of the pilot group, the students were predominately Latino, representing 63% of the students examined.

After reviewing each student-submitted plan, counselors were instructed to summarize their recommendations (if applicable) and e-mail them to the student, with encouragement to see a counselor in person for more follow up. Alternatively, if a student-submitted plan appeared to meet the aforementioned evaluation standards, counselors approved (validated) the plan in ISIS.

Based on the results provided, 290 student-submitted educational plans were proactively evaluated as part of this pilot project in Winter 2015. Eighty-six percent (86%) of these plans were deemed by counselors as meeting the majority of the previously outlined evaluation standards. Generally speaking, those students who previously completed English 1 or higher or a Counseling course, such as Counseling 20, were significantly more likely to submit a satisfactory education plan. Additionally, those who had made at least one counseling contact at SMC were more likely to submit a satisfactory education plan.

Based on the overall percentage of 86% of student-submitted education plans rated as "satisfactory" by the counselors, we can conclude that thus far, MyEdPlan is working as intended, with the program successfully guiding students through the complex educational planning process. Considering that over 12,000 plans have been submitted by students to date, however, it appears that a continuation of this validation project is indicated.

Taking the three evaluation projects into account, it would appear that MyEdPlan's launch was generally successful, and incorporated essential tools conducive to education plan development, albeit there are aspects in need of further refinement or development.

Benefits to Students, Counselors, and Administrators

- Students now have access to a power range of tools required to explore educational options by engaging MyEdPlan in what if scenarios. They can access MyEdPlan directly from their student portal, Corsair Connect, and are able to create an initial education plan until they can see a counselor for additional guidance to craft a comprehensive education plan. Students become part of the education planning process instead of relying on others (e.g., friends) for guidance.
- Counselors and students: MyEdPlan enables a new level of collaboration and facilitates better communication between students and counselors. We see this now a pilot project concluding in mid-February 2015 where a group of counselors have been reviewing studentcreated education plans in MyEdPlan for accuracy and completeness. As part of the project, counselors provide students with comprehensive feedback on the ed plan via email and invite them to come in person to meet with a counselor to follow-up. We are using this pilot project to inform the College how an online counseling component can be added to MyEdPlan so that students can submit their self-developed plan for review and approval.

- Counselors: In addition to the benefits above, counselors are able to provide feedback to the development team on specific features they believe need to be enhanced, changed, or added. MyEdPlan has undergone several small revisions since launching to counselors in October 2014 to address these. Thus, MyEdPlan in the product of ongoing counselor feedback, and it has been designed to facilitate the education plan development process for counselors. A commercially bought program would not have allowed us to customize it to the level we have with MyEdPlan. Based on extensive feedback from counselors and from the development team itself, we are planning for a significant upgrade in late spring.
- Administrators: MyEdPlan has been designed to leverage every bit of data collected. As the number of students using MyEdPlan and the number of plans developed by students and counselors increases, the College will be able to use this data to help anticipate enrollment in specific classes in future semesters. For example, starting with the winter and spring 2015 terms, the Enrollment Services office has been able to send targeted messages to students who noted needing classes in these terms, yet had not enrolled in these terms. We anticipate that Academic Affairs and department chairs will also use MyEdPlan data to consider (among other sources) which courses to offer in upcoming terms.

MyEdPlan's Contribution to the Efficient Use of Resources

In addition to the benefits discussed above, students are able to engage in academic exploration on their own in MyEdPlan (what if scenarios) as they become interested in a specific program of study at the College. Because they are able to assess how their coursework applies to any program, students no longer need to seek counseling assistance every time. Instead, they are able to gather information in MyEdPlan and develop a better informed education plan, on which counselors spend less time editing/finalizing. This means counselors are able to use their time more efficiently as they answer students' questions, or introduce them to college, career, or transfer resources. Another ancillary benefit coming from the development of MyEdPlan has been our streamlining and improving of our curriculum database and degree audit program. During MyEdPlan's development, many curriculum-related data-input errors (e.g., prerequisites and advisories) were discovered and addressed. The degree audit engine has also been repurposed by MIS to conduct regressive degree audit scans on student transcripts to identify students who have met degree or certificate requirements. As a result of this regressive audit, we have identified approximately an additional 800 current students who should have received a degree/certificate last academic year. They have now been awarded the degree/certificate by our Admissions and Records Office. We will soon implement this regressive degree audit algorithm directly in MyEdPlan for student and counselor use. It is often the case that a students complete excessive units in preparation for transfer or for employment, but had not been following a specific program of study. This regressive degree audit algorithm will allow students and counselors to determine which degree or certificate the student qualifies for, or is closest to completing. Thus, it will save staff time from having to investigate this for each individual program.

Limitations

The initial phase of development has focused on the first-time college student and native continuing students. As Admissions & Records begins to rollout a transcript pre-enrollment evaluation service, and as counselors meet with reverse-transfers (those who have previously completed college-level coursework at other institutions), such students will be able to fully utilize all MyEdPlan features. While all students have access to MyEdPlan, there exists the possibility a student will make a mistake preparing an education plan unless his transfer coursework has been evaluated and integrated into the degree audit program. This can only be done at this time as students meet with counselors or upon graduation check.

Future Development Plans

Plans are under way to develop a set of key performance indicators to help us monitor and assess how MyEdPlan is being used by counselors and students. These will be implemented in Spring 2015. The College is committed to continue to develop MyEdPlan based on user feedback and a comprehensive user interface and ADA evaluation currently underway. Within the next year, we anticipate MyEdPlan will add several key components: (1) We will add an additional wizard that will facilitate the selection of English and especially mathematics courses given their specific majors. (2) We plan to integrate the O*NET® Interest Profiler, a web-based, self-assessment career exploration tool that can help students discover the type of work activities and occupations that are related to their interests. This instrument will be available to students within the MyEdPlan framework. (3) We plan to fully document MyEdPlan and create video tutorials for student use. (4) We will integrate ASSIST Next Gen articulation data. This data will be used as one of our degree audit components and will permit the student to identify university/program specific requirements for hundreds of majors for all campuses of the California State University and University of California systems, as well as the equivalent courses at SMC. We anticipate that ASSIST Next Gen's web services data will be released for institutional use by the end of 2015. (5) We also plan to implement a regressive algorithm to our degree audit component, which will truly enable students to engage in "what if" exploration with ease to see how close they are to meeting requirements for any major/program available at SMC. (6) This same technology will be used by the College to project which students are close to finishing these programs. We plan on reaching out to them to encourage them to sign-up for the missing coursework. (7) We also plan to mine MyEdPlan data derived from the many education plans prepared by students and counselors and to share this information with Academic Affairs and department chairs to help them build schedules reflective of student needs.

MyEdPlan Development Team & Workgroup

Many individuals have participated in one way or another in the development of MyEdPlan. We are appreciative of all their assistance. Listed below are the individuals who are part of the development team and workgroup.

- Yongjian (Jane) Yan (Development, Workgroup)
- Brenda Benson, Dean, Counseling & Retention, (Workgroup)
- Jocelyn Chong, Dean, Information Technology (Workgroup)
- Laurie Guglielmo, Chair, Counseling Department (Workgroup)
- Lee Johnston, MIS Director (Development, Workgroup)
- Peggy Kravitz, Counselor (Workgroup)
- Pin Lor, Counselor (Workgroup)
- Rosaura Martinez, Counselor (Workgroup)
- Srey Ngov, Counselor (Workgroup)
- Robin Ramsdell, Counselor (Workgroup)
- Delores Raveling, SSSP Faculty Lead, Counselor (Workgroup)
- Jackie Felix-Seiden, Counselor (Workgroup)
- Esau Tovar, Interim Dean, Enrollment Services, Counselor (formerly) (Development, Workgroup)

Report Prepared by:

Laurie Guglielmo, Lee Johnston, and Esau Tovar

Appendix 1: Summary of Features

The table below summarizes key features of MyEdPlan. Administrative tools, including tracking, reporting, and leveraging of data for course schedule planning purposes will be developed once MyEdPlan has been fully tested.

Table 1. Summary of MyEdPlan Features

	Modules		
Features	Student	Counselor	Admin.
Online Deployment			
Multi-browser support (Firefox, Chrome, Safari)	Ø	$\overline{\mathbf{A}}$	Ø
Mobile ready (iPad, tablets)	Ø	$\overline{\mathbf{A}}$	Ø
Full integration with Student Information System (ISIS)			V
Student portal (Corsair Connect) integration	☑		
Section 508 compliant	☑	$\overline{\square}$	☑
Student Education Plan			
Academic profile information (placement, prerequisite waiver history, course history)	V	Ø	
Integrated unofficial transcript	Ø	$\overline{\square}$	
MyEdPlan Wizard (to collect program, degree, major, previous college background information)	Ø	☑	
Identify educational goal (transfer, degree/certificate, basic skills, unsure)	Ø	Ø	
Provides educational goal-relevant information based on selections (e.g, unit requirement, GE requirements)	Ø	Ø	
Major/career related information through sources such as the Occupational Outlooks Handbook or "What can I do with a major in"	Ø		
Selection of initial enrollment semester/session		$\overline{\square}$	
Time Management Calculator with integrated unit recommendation	V		
Refers student to in-person counselor assistance (e.g., evaluation of previous college coursework/AP scores)	Ø		
Which English/ESL/Math class should I take wizard	Planned		
Degree Audit Integration			
Catalog rights integration for individual student	Ø	$\overline{\square}$	
Progress check for relevant General Education Plan requirements: IGETC (UC/CSU), CSU GE, SMC GE	Ø	Ø	
Progress check for relevant SMC degree/certificate major concentration requirements	Ø	Ø	
Transfer major requirements integration: direct integration of ASSIST articulation data	Awaiting ASSIST Next Gen web services availability		
Includes courses completed, in progress, enrolled in	Ø	$\overline{\mathbf{A}}$	

	Modules		
Features	Student	Counselor	Admin.
future semester/session, and planned			
Integrated visual progress check meters for discreet goal	Ø	Ø	
requirements: GE, major, certificate, Global Citizenship,			
overall unit requirement			
Building an Education Plan			
Automatically adding/moving English/ESL/Math/STEM	Planned	Planned	
sequential courses into education plan: "Show me the			
way from ELIGIBLE course to FINAL course"		✓	
Multiple ways to add courses to ed plan by type:	V	<u>V</u>	
relevant GE plan, major-specific courses, course search engine with ability to filter, quick search			
Ability to add placeholders for area specific GE (instead		<u> </u>	
of course level) or electives			
·		✓	
Integrated course descriptions for courses selected (course transferability, associate degree applicability,	V	V	
units, prerequisite/advisory, full course description)			
Integrated Interactive Prerequisite Engine System			
Interactively checks for prerequisite, advisory, and	<u> </u>	✓	
corequisite completion at the course level across	_	_	
disciplines			
Accounts for proper sequencing of prerequisites as		✓	
courses are added to education plan			
Color-coded prerequisite buttons signaling eligibility			
for course by semester/session			
Blocks the addition of courses with enforced	\square	☑	
prerequisites into education plan unless prerequisites			
have been incorporated in previous			
semesters/sessions			
Allows counselors to bypass prerequisite		☑	
checking/enforcement			
Notifies student of break in the prerequisite		☑	
sequence if a given course is deleted from ed plan			
Permits addition of non-enforced prerequisites into	\square	☑	
education plan through an informed consent			
prerequisite override tool		✓	
Validation of duplicate courses in education plan	<u> </u>	<u> </u>	
Enforced unit limitation for semester/session		Dia I	
Addition of alternate semester/session courses	Planned	Planned	
Creation/archival of multiple education plans		☑	
Editing of saved education plans	<u> </u>	☑	
Deletion (or archival) of saved education plans	<u> </u>	☑	
Integration of counselor derived/validated ed plan into	\square		
student portal			

	Modules		
Features	Student	Counselor	Admin.
Reports			
Summary of MyEdPlan Wizard responses (online)	Ø	$\overline{\mathbf{A}}$	
Detailed education plan report (online and printed)	Ø	$\overline{\mathbf{A}}$	
Abbreviated education plan report (online and printed)	Ø	$\overline{\mathbf{A}}$	
Course descriptions report (online and printed)	$\overline{\square}$		
Graphics-rich summary progress reports			
Degree audit reports for major and general education			
(online) (planned printed version)	Planned	Planned	
Other			
Ongoing interactive validation of selections	Ø	\square	
Automatically saves responses	Ø		
Customized directions	Ø		
Informed disclaimer of MyEdPlan limitations	Ø		
Access to information resources such as articulation			
agreements, transfer requirements, ASSIST, catalog, course			
sequences chart, help, FAQs			
Video explanations and tutorials on "tricky" areas	Planned	Planned	
Enrollment tips	Planned		
Administrative Tools			
Field of Study/Major maintenance engine			V
Tracking and reporting			Planned
E.g., Education plans created by select student demographics			Planned
Leveraging of course-level data in education plans to inform course offerings			Planned
Integration of updated prerequisite waiver system for enforced prerequisites whereby students request waivers directly through MyEdPlan			Planned

Appendix 2: Select Screenshots

Figure 10. Six-Step Education Plan Wizard with Contextualized Answer Choice Information

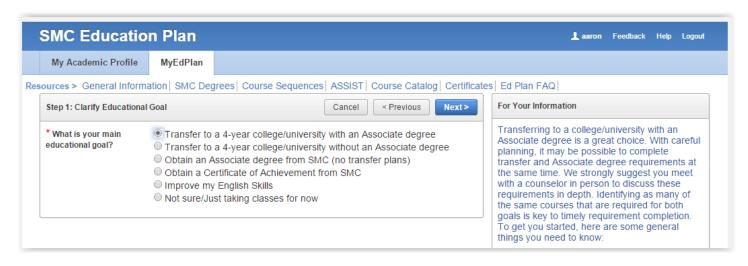


Figure 11. Six-Step Education Plan Wizard with Contextualized Answer Choice Information

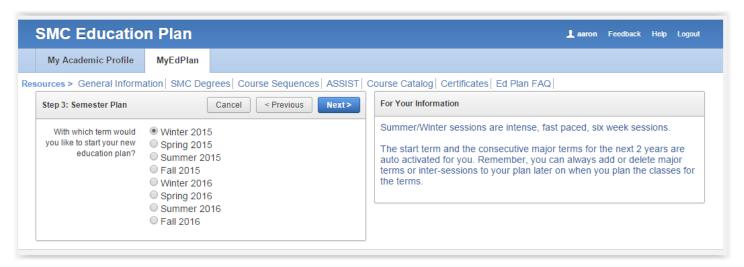


Figure 12. Six-Step Education Plan Wizard with Contextualized Answer Choice Information: Time Management Wizard

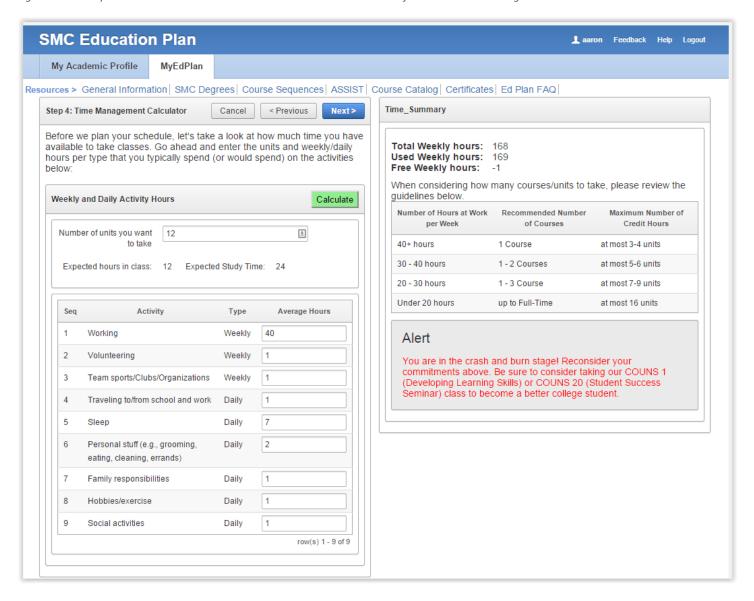


Figure 13. Educational Goal Progress Check and Degree Audit Integration

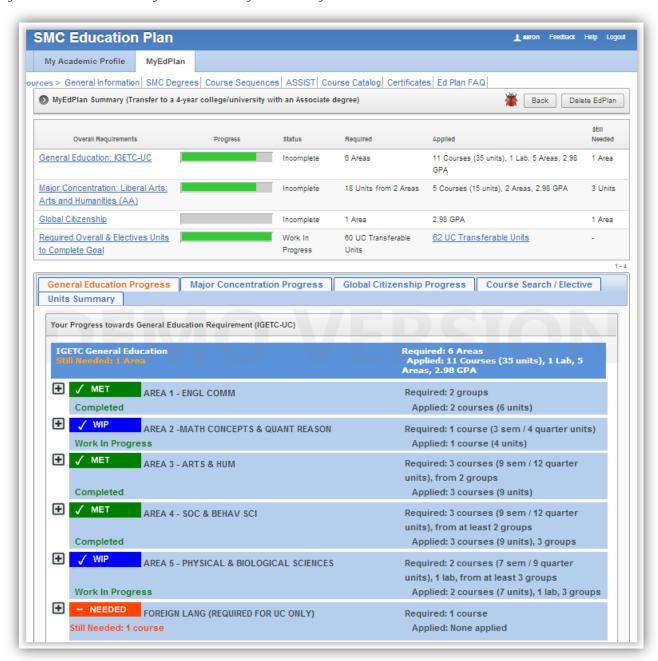


Figure 14. Education Plan by Semester

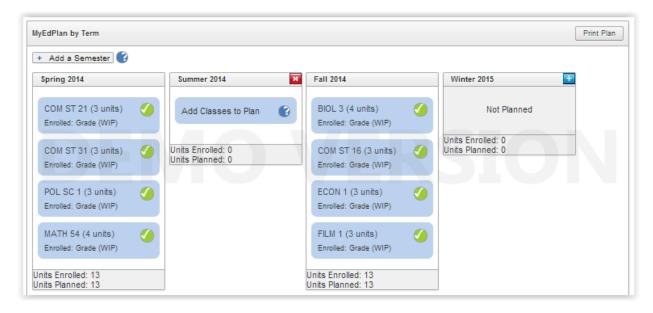


Figure 15. Education Plan Course Selection Based on Degree Audit, Prerequisite Engine, and Validated Course Sequencing

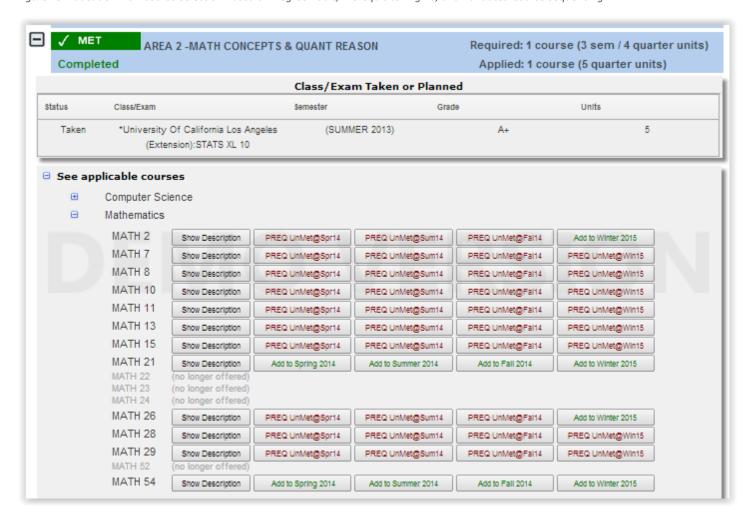


Figure 16. Prevents Students from Adding Course Where Enforced Prerequisite Has Not Been Met



Figure 17. Informed Consent for Adding Courses with Non-Enforced Prerequisites

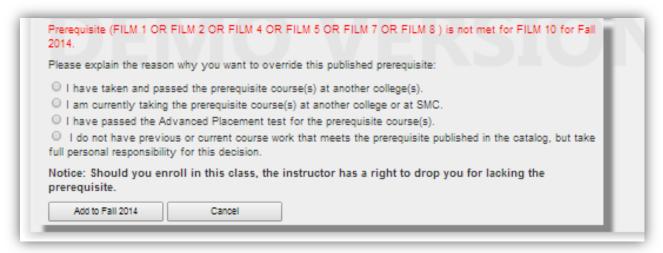


Figure 18. Course Search Engine

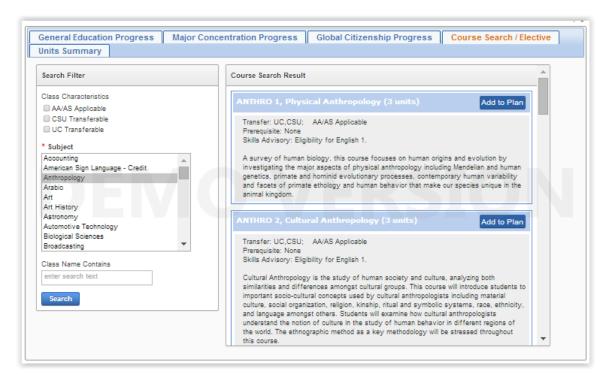


Figure 19. Disclaimer Notice

