

# Degree-Planning Tools

## Scenario

Brenna has an associate's degree and has worked for several years as a nursing assistant for a home-health organization. She has decided to complete a bachelor's degree and become a registered nurse. She enrolls at a large local university, which offers dozens of degrees and has an extensive course catalog. When she meets with her advisor, Dr. Howell, they discuss requirements, including options for electives. She tells him that her ultimate goal is to be a nurse practitioner. She also mentions that part of her funding comes from a program that provides tuition assistance in exchange for a commitment to work in an underserved part of the city. Because the funds are only good for two years, it's important that she complete her degree in that period of time.

Howell shows her the institution's degree-planning tool. He explains that it provides recommendations tailored to her background and goals. Brenna logs in and sees which requirements she has met, through transfer credits and placement tests. Beside each course is her final grade and credit hours awarded. Howell shows her where to specify her career plans and indicate that time to completion is a primary concern. Brenna also adds information about the kind of environment where she plans to work.

For her first term, the tool offers three suggested course sequences. One is a general approach to the degree, another focuses on the multicultural dimension of working in a medically underserved community, and the third supports Brenna's aspiration to be a nurse practitioner. Any of the three options would allow her to finish in two years, but pursuing both areas of specialty would add a fifth semester to her studies. Howell suggests that she target nurse-practitioner skills and pursue multiculturalism through noncurricular activities, such as special seminars. The degree-planning tool can help identify those avenues, as well.

For subsequent terms, Brenna mostly uses the tool on her own, working through various scenarios each semester to plan her studies in a way that best suits her. She meets with Howell about particular questions, but as she moves through the program, the system is continually updated with current information about her, providing increasingly targeted recommendations for courses and supplemental learning activities that help Brenna reach her educational goals.

## 1 What is it?

**Degree-planning tools provide personalized guidance to students about navigating higher education.** Whereas degree-*audit* tools have long furnished students with planning grids based on generic requirements, degree-*planning* tools are tailored to individual students. One might use a degree audit to see how many elective credits are required for a degree. A degree-planning tool, on the other hand, recognizes each student, accesses data from various institutional systems, and makes recommendations based on the student's goals and the tool's design. Some tools, for example, are intended to help students find the most efficient path to degree completion. Others focus on enriching students' college experiences by helping them choose courses that satisfy program requirements in ways that match students' passions, diversify their perspectives, or deepen their exploration of a key theme within an academic discipline.

## 2 How does it work?

As "smart" applications, degree-planning tools require students to log in, at which point the tool can access their profiles and information from the student information system, the learning management system, and possibly others. Depending on its design, the tool might be able to see a student's full academic record, including courses taken, grades, transfer credits, and declared major and/or minor. It might also have access to SAT scores, information about whether the individual is a first-generation college student, and other factors that can bear on success. The service might allow students to enter data about personal interests and academic goals. With this information—and possibly data from an institutional analytics system—**the tool helps students choose courses and craft a degree plan.** A tool designed to improve degree-completion rates might recommend courses that meet requirements and—according to its algorithms—in which the student is predicted to earn an A or a B. Such tools highlight courses that fail to satisfy relevant requirements or duplicate requirements already met. A tool targeting enrichment, on the other hand, aims to optimize the educational experience through course selections that support personal interests and long-term goals, helping learners see how diverse, interdisciplinary courses can meet requirements in fulfilling and

# Degree-Planning Tools

unexpected ways. Other tools help students choose majors based on career goals and academic interests.

## 3 Who's doing it?

**Several vendors offer degree-planning tools, and some institutions are building their own.** MyEdu is a tool from Blackboard, and Ellucian offers Degree Works. Degree Compass was developed at Austin Peay State University (APSU) and later acquired by D2L. The student population at APSU includes large numbers of nontraditional learners and others who historically have had difficulty completing degrees; Degree Compass was designed to increase persistence and completion by forecasting student grades and recommending particular courses, using analytics data and information about individual students. The Student Success Plan (SSP) is an open-source tool that originated at Sinclair Community College. The SSP is a student-facing support and communication tool that can also be accessed by faculty, staff, and advisors. The system draws on student input to make recommendations to speed learners toward graduation. Affordances include an early-alert system for at-risk students and student self-help tools. In contrast, the University of Miami is developing an enrichment-style application called the Cognate Search Engine, which allows students to customize degree paths through cognates, which are three or more related courses that satisfy program requirements. The tool shows students examples of cognates other students have pursued, highlighting the flexibility of their options. As a result, two students who complete the requirements for the same degree might do so using cognates consisting of very different courses.

## 4 Why is it significant?

**Degree-planning tools can use data and modeling to provide important benefits** to higher education. Students at some two- and four-year institutions struggle with completion. Even though many of them have more than enough credits for a degree, they don't have the *right* credits. The cost of "wasted" credits and unproductive course selection is a drag on institutions and their students. Guiding students to better course selections saves money, helps students see the path to a degree, and can bolster GPAs and grades in individual courses. Degree-planning tools can empower students to find unique paths to their learning goals and have richer college careers. These tools can also support an institution's ability to forecast course schedules, helping streamline staffing and space planning.

## 5 What are the downsides?

Steering students toward courses in which they are expected to earn high marks is controversial. Course selection based on expected grades can reduce opportunities for students to develop broad, analytical skills and can limit their exposure to new perspectives. One might benefit more from a hard-earned C than an easy B. Although a degree-planning tool will foster creativity among some students, others might mistake suggestions for instructions and simply accept any recommendations, resulting in *less* initiative. By the same token, access to a degree-planning tool might lead some students to spend *less* time meeting with advisors, who are in a good position to help students interpret and act on the tool's recommendations. **A highly prescriptive tool could diminish the variety of a student's college experience** or limit personalization by creating groups of students who all pursue the same goals through the same courses.

## 6 Where is it going?

As these tools evolve, they might begin to address other kinds of goals, encouraging the kind of "purposeful wandering" that for many is a hallmark of the college years, while preventing students from losing momentum toward a degree. **Degree-planning tools could offer a menu of more than coursework**, directing students toward learning paths that include field study, self-directed projects, or on-the-job experience. Such tools might support competency-based learning and emerging models of education that recognize mastery in new ways, and they could include activities such as volunteer efforts, business endeavors, student-designed projects, or peer-reviewed work.

## 7 What are the implications for teaching and learning?

Whether focused on persistence and completion, enrichment of college experiences, career aspirations, or other goals, **degree-planning tools help students see where they are on the academic map** and how they can select learning experiences, courses, and degree programs consistent with their goals. Tools that support completion can have enormous value for students who need to finish promptly. Tools that address enrichment can enable students to enhance their educational experience with courses and activities that accommodate their interests and passions while fulfilling degree requirements. For all students, these services offer an excellent starting place for designing their college learning experience, providing a platform for discussions with advisors while empowering learners to make informed decisions affecting their academic careers.