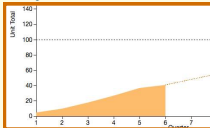
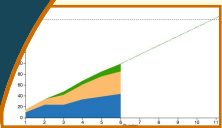


Visualizing Degree Progress

By: Brad Reyes and Mark Schramm

PROGRESSION

All Units Major Units



Left: Units accumulated along with pace. Goal line is horizontal

Right: CR/NC bar. Tracks both activity units and total CR units. Exceeding this could spell trouble.



83%

Sides: Units towards major left to complete over all units left to complete. This will hopefully help encourage students with a high percentage to start taking more courses in the major.

22%

COLOR

Color is a common way we show progression in our system. Red denotes that the user should take notice, while green/yellow denotes that the pace they're going at is sustainable.

MOTIVATION

The system we have now, Axess, is often the punchline of jokes, being criticized by many students. Making this process less stressful in an environment that pushes excellence and helping students make smart course decisions for graduation (especially first-generation students) makes solving this problem relevant and important, allowing students to focus on learning instead of graduation.

PROBLEM

Students often must sift through clunky tables and degree worksheets to ensure that they not only graduate, but also take classes in a timely manner to prevent loaded quarters. A task that should take two minutes ends up taking hours because the presentation of course/degree data fails to give insight into a student's past, present, and future degree progression.

FUTURE WORK

The following features were left out because of time constraints or lack of data, but should be explored: coterm support, support for people taking more than twelve quarters, summer school, scheduling help, student course evaluations, seeing what paths other students take, GPA projection, comparing different majors, nonlinear projections taking into account future course difficulty.

COURSES

A subset of our system is course support. This includes methods/algorithms to parse complex data for degree completion for specific courses and ways to visualize this.

Requirements Type	
Mathematics	16
Science	11
Engineering Fundamentals	3
Technology in Society	3
Core	5
Senior Project	5
Unspecialized	14

Left: A simple table that can be hovered over to open up specific courses that complete that degree requirement.



Above: A prereq system

```
"Science": {  
  "units": 11,  
  "classes": [  
    {  
      "type": "req",  
      "name": "Sequences for Physics",  
      "classes": [  
        {  
          "type": "all",  
          "name": "Physics 40 series",  
          "classes": [  
            {  
              "type": "req",  
              "name": "MATH or Physics 41",  
              "classes": [  
                {  
                  "type": "class",  
                  "number": "PHYSICS 41",  
                  "name": "Mechanics",  
                  "units": 4  
                }  
              ]  
            }  
          ]  
        }  
      ]  
    }  
  ]  
}
```

Right: Course data

RELATED

The above picture with the nodes is a related work's piece that we took inspiration from for parsing our data for future use. This allows for easy course lookup and course suggestion.