GRADUATION SUCCESS SYSTEM
PREDICTIVE V2
STUDENT VIEWS

PREDICTIVE V2

SUMMARY

The new predictive engine requires an interface upgrade in order to offer insight into the factors affecting a student's progress. There are now potentially 5 factors affecting student risk score - cumulative GPA, credit accumulation and 3 skill areas. Also the new risk model incorporates weighting of these factors, which must also be shown in the UI.

1. OVERVIEW

The predictive engine will be updated across the application. Included in this is the risk output on the worklist, the student 360 and the dashboard.

1.1 Worklist
The worklist will not incorporate any visible UI changes. The only aspect of the worklist to change is the underlying engine that determines the risk (color indicator) and the accompanying filter window/panel.

1.2 Student 360
The student Overview screen will be updated to utilize the new engine as well as incorporate a UI overhaul.

1.3 Dashboard
The provost/dean analytical dashboard will involve the updated risk engine, however the extent and scope of the changes will be determined in a future release.

2. ASSUMPTIONS

There is a general assumption that the underlying logic and database procedures will be modularized so that they can be used on the individual student screen as well as on the major matcher. For this reason, the design of the new predictive screen(s) should accomodate the output of any potential major at an institution. The major matcher design may be altered slightly but should still function and contain logic that is consistent and reusable.

3. STUDENT PROGRESS DESIGN

The new area will replace the current student progress area located underneath the Academic summary panel.

3.1 Student Progress
The student progress area will still be used, but will feature the data in a graphical format in two separate graphs. The user will be able to toggle between seeing the data term-by-term (default selection) or cumulatively.

3.1.1 GPA graph
The student GPA will be shown in term-by-term format. The width and height of the graph will be fixed so there will be no scrolling. The width of the data will automatically resize to fit the area.

3.1.1.1 GPA target
When there is a target average GPA for a major, that target should be shown on the graph with the student's GPA trend line where possible (DEV TBD).

3.1.2 Credit graph
The student credit accumulation rate will be shown in cumulative format. The width and height of the graph will be fixed so there will be no scrolling. The width of the data will automatically resize to fit the area.

3.1.2.1 Y-Axis
Because the data is different for the two graphs, the GPA will be displayed as 0-4.0 (or 5.0 depending on institution scale)

In the credit view, the Y-axis will go from 0 to approximately 120 or more depending on the credit cap (TBD).
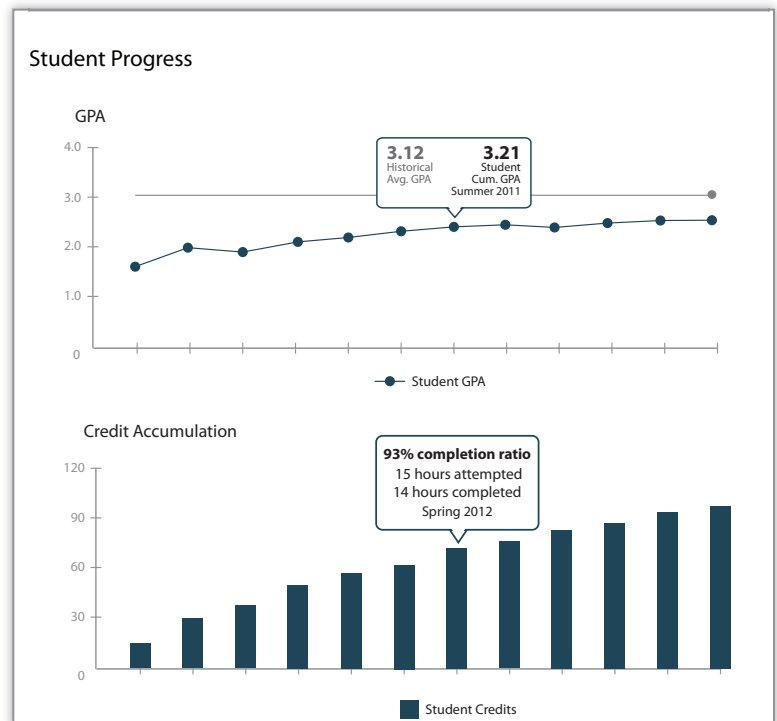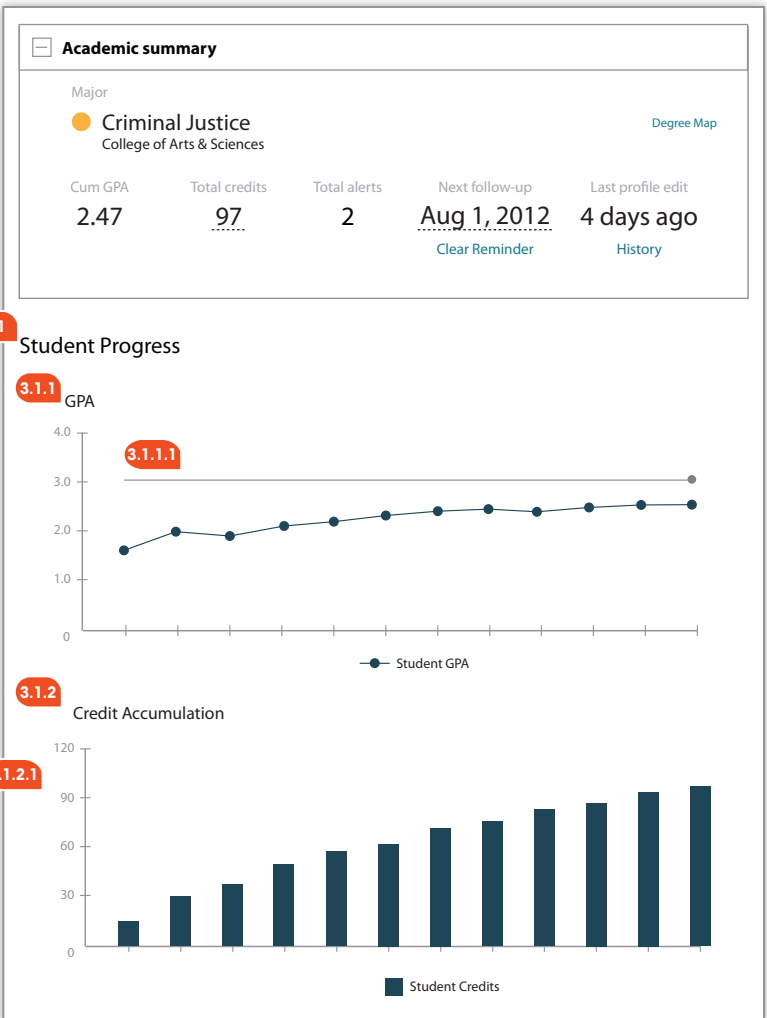

Figure 1 & 2: Cumulative credit chart with and without hovers

4. RISK SCORE ANALYSIS

Relative Weight
The panel should show the breakdown of skills areas and their relative weighting in the model. The skills areas should be listed by heaviest weight to lightest. The weighting will be represented as an abstract series of 5 "blocks" each of which represents one unit of "weight" (TBD) The colored block should be blue unless the student is underperforming and the weight is 3 or more blocks. When this occurs, the colored blocks should be the same color as the alert used in 4.1.2.

NOTE: The student's major and risk color should be repeated just above the skills display for all declared students (see 4.1)

4.1.1 Percentile
The percentile is a measure of the student's performance against similar students (similar student definition TBD by development) For this area, there should be a small bar chart with a shaded area to indicate where the similar student group falls and a small indicator to show where this student falls in relation to the group.

When a student is performing below the population and the weight is 3 blocks or more, the indicator will be a different color and include an alert icon (exact design TBD)

4.1.2 Potential Major Courses
The bottom-most area simply displays the upcoming courses which are already displayed in the UI. This will display the hover as it is currently displayed in Major Matcher. This includes the course code, the course name and the relative level of difficulty for the student.

5. UNDECLARED STUDENTS
In the case of an undeclared student or a student with a major not in the model, the Student Progress and Credit Accumulation should show while the Risk Score Analysis panel and Potential Major courses should be completely hidden.

5.1 Average GPA
Student GPA will still be displayed as term-by-term but it will not show the average GPA line for a particular major.

5.2 Credit Accumulation
Credit completion ratio will still display but will not include the institutional credit completion ratio (see 3.1.2.1).

5.3 Risk Score Analysis
This panel will be hidden.

5.4 Potential Major Courses
This area will be hidden.

ONE FINAL NOTE
Students must have at least one semester of grades before the student progress and risk score analysis sections are to be displayed. For students with no grade information, only the academic summary will show at the top of the screen.
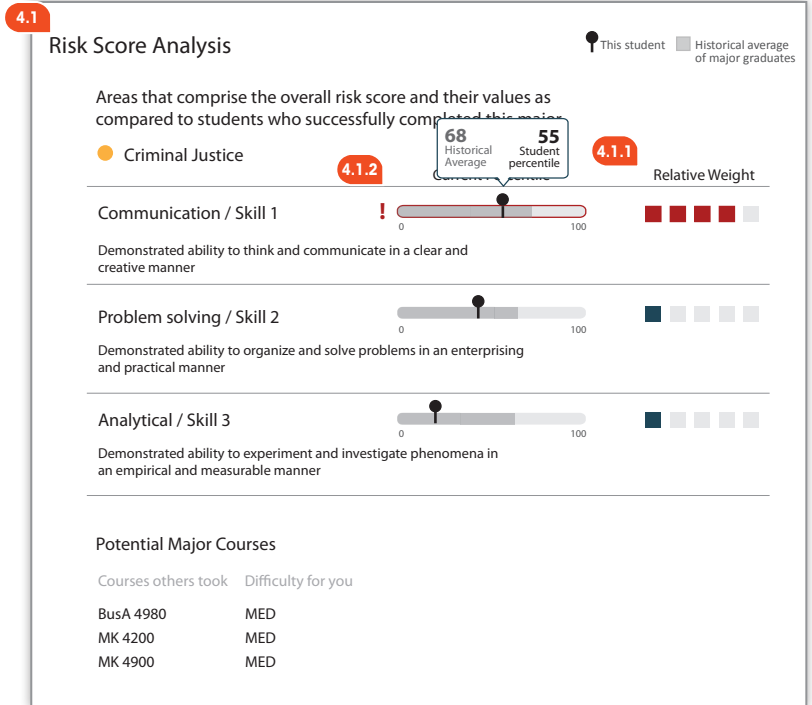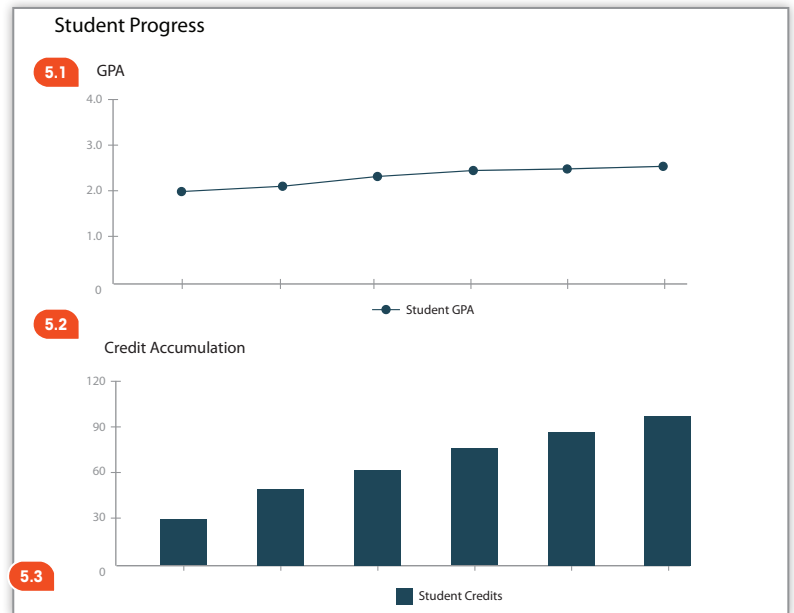

Figure 3: Risk Score Analysis panel

Figure 4: Undeclared student