

The Veenstra Model

The Veenstra Model for Freshman Engineering Retention is derived from the education research literature. It is designed to model both freshman engineering retention and freshman general college retention. The model has identified nine pillars for student success. For each college, the priority of these nine pillars may be different. The nine pillars are:

Pillars for Student Success

- High School Academic Achievement
- Quantitative Skills
- Study Habits
- Commitment to Career and Educational Goals
- Confidence in Quantitative Skills
- Commitment to Enrolled College
- Financial Needs
- Family Support
- Social Engagement

Colleges with high freshman retention rates have students who successfully transitioned from high school through the freshman year, both academically and socially, through the support and culture of the college. The Veenstra Model is shown in Figure 1.

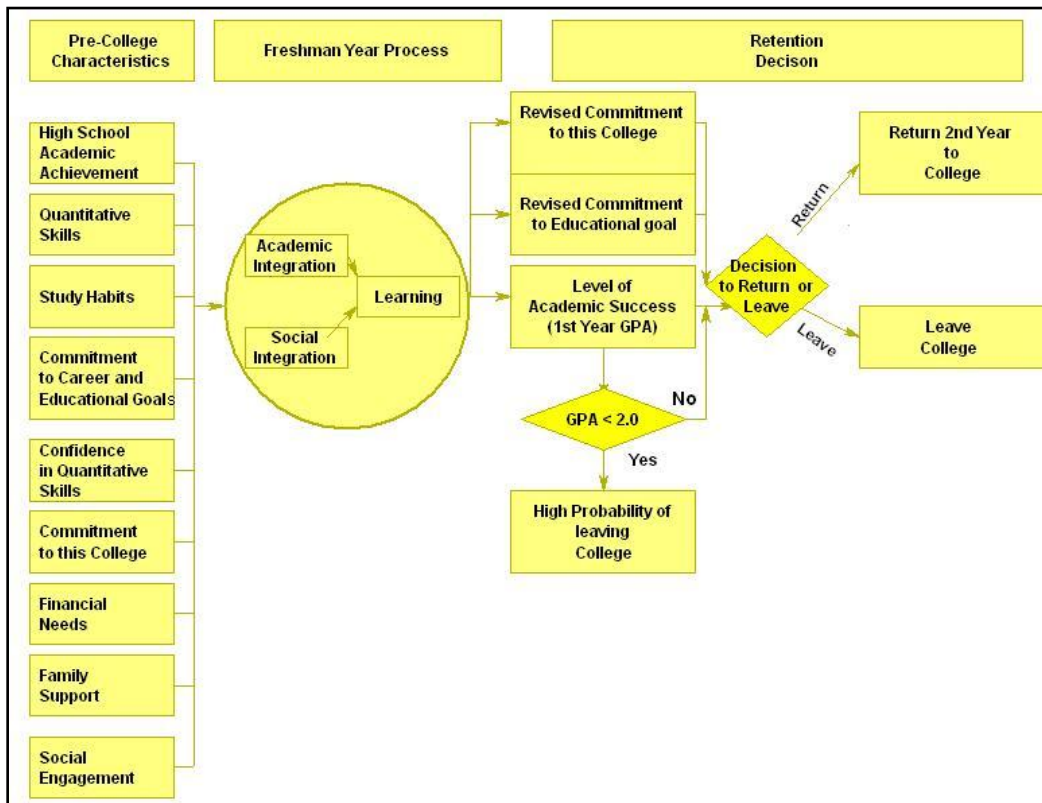


Figure 1: The Veenstra Model

For a high freshman retention rate, the college must establish a first year culture that is both process-oriented and based on the college providing positive learning experiences to its students. Consistent with the model, the successful college provides student support programs to help students use their strengths to overcome weaknesses in the nine pillars for student success. Veenstra and Associates will consult with colleges on a strategy for addressing these needs.

More detail on this model is available in the article “A Model for Freshman Engineering Retention” published in the Advances in Engineering Education, Winter 2009 issue (ASEE). It is available at <http://advances.asee.org/vol01/issue03/07.cfm>