

# Oklahoma State University

## ALEKS Placement Lowers D/F/W Rates by 15%

### Institution Profile

Oklahoma State University, established on Christmas Day in 1890, provides educational opportunities to more than 25,000 students on its OSU-Stillwater and OSU-Tulsa campuses and more than 37,000 students across the OSU system. OSU has a presence in every Oklahoma county through its extension offices and experiment stations and graduates 5,000 students annually.

Oklahoma State University had unsatisfactory student success rates because of the difficulty placing incoming students into courses where they were more likely to succeed. Some students placed into College Algebra were bored because they already knew the material, while other students in the same class struggled to add fractions. This misplacement led to a frustrating classroom environment for both students and faculty and occurred in courses all the way up to Calculus.

Academic advisors were relying on ACT scores for placing students, which were often old and didn't reflect the students' current abilities, or were using high school transcripts, which were inconsistent and difficult to evaluate. Additionally, underprepared students at OSU had few resources available to help them remediate and graduate on schedule. Facing these challenges, the university needed an accurate and effective placement tool and new policies to ensure student success.

### Implementation

All students who do not have prior college credit are required to take the ALEKS Placement exam. Those with college credit are strongly encouraged to take the exam as well in order to ensure their level of math is appropriate. Students who score at least 19 on the math portion of their ACT may take their first attempt of the ALEKS Placement exam in an unproctored setting. These students must take the assessment in a proctored environment for any subsequent attempt. Students with an ACT math score of less than 19 must have all attempts proctored. All students are allowed to take the ALEKS Placement exam up to five times within a year.

The ALEKS Prep and Learning Modules are not required, however when Chris Francisco, Associate Professor of Mathematics and Associate Head for Lower-Division Instruction, observed students who took the modules seriously, they nearly always improved their score.

Using the detailed diagnostics available in ALEKS Placement, OSU was able to determine where to spend the most time reviewing in Calculus I. They noticed, for example, that students were far weaker in logarithms and exponential functions than in any other area, and their knowledge in trigonometry was acceptable. Thus they added some review time for logarithms and decreased the amount of trigonometry content covered.

### Results

Oklahoma State University is invested in improving their D/F/W rates. They evaluate not only individual course success, but also how students do in subsequent courses in order to measure these rates. After using ALEKS Placement, D/F/W rates have improved overall.

**PLACEMENT COURSES:** Quantitative Literacy, Mathematical Functions (non-STEM alternative to College Algebra), College Algebra, Precalculus, Trigonometry, Business Calculus, Technical Calculus I, and Calculus I.

**STUDENTS TAKING PLACEMENT:** 7,000

**CASE STUDY TERMS:** Summer 2012

Before ALEKS, the 1000-level courses (entry-level courses through Precalculus) had D/F/W rates of 40% or above. Now, the overall D/F/W rate is mostly stable at around 25% (Figure 1).

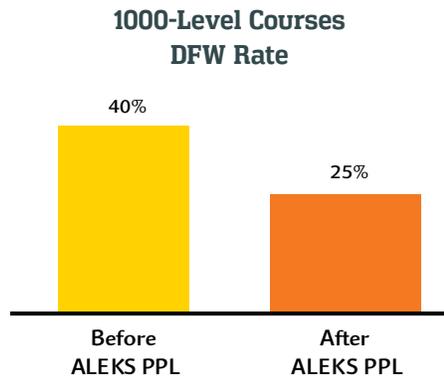


Figure 1

Prior to using ALEKS for placement, many students were taking courses three or more times, which was counterproductive and frustrating for the students and the instructors. After using ALEKS Placement, the D/F/W rate in Calculus I is now around 35% or lower (Figure 2). That is a 10% or greater improvement.

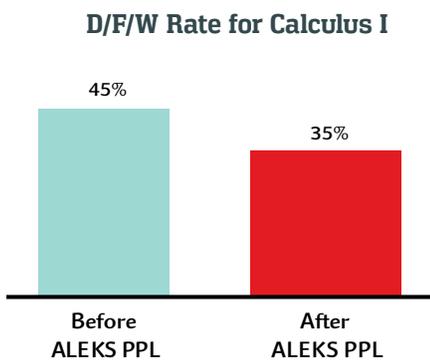


Figure 2

Because students are succeeding at the lower-level courses more efficiently, enrollment and success rates have grown in Calculus II, Calculus III, and Differential Equations even faster than enrollment growth at the university and in the College of Engineering. The enrollment in Differential Equations specifically has skyrocketed, growing nearly 50% in just a few years. Additionally, 92% of students who earned an “A” or a “B” in Calculus I earned an “A,” “B,” or “C” in Calculus II.

### Conclusion

OSU is pushing for all students to take the ALEKS Placement, Preparation and Learning (PPL) assessment and work more with the Prep and Learning Modules in the future. And, although none of the module-use data has been collected yet, participation in the modules are being used as a screening tool. Overall, using ALEKS Placement has led to an improvement in student grades and less classroom frustration for both students and instructors.



**“We have had a great experience with ALEKS. It has done an excellent job in placing students in courses in which they are likely to succeed, and students who make serious use of the learning modules frequently improve their course placement and/or get much better prepared for the course in which they intend to start.”**

–Professor Chris Francisco

