



Departmental Assessment Analysis
(DAA form)

"Capturing the meaning of the assessment for the program."

Instructions:

After departmental discussion and review of SLAS forms, complete the following form.

Submit form to SLO Taskforce by census date.

DAA forms will be published as "results" on the Sierra College Accreditation/SLO website

Program/Degree/ Certificate:	Mathematics The analysis below is separated into four categories based on the two classes assessed in Fall 2016: Math 581 – Arithmetic Review Math 8 – Trigonometry Math 16A – Calculus – Life and Social Sciences Math 31 – Calculus II
Today's Date:	01/17/2017
What does the department think it can do to improve teaching and learning?	<p>581 – Emphasize the meaning of operations and their forms (ex. division is a form of multiplication) and conceptual understanding, not just memorization of the order of operations. Other recommendations: see/draw diagrams to visualize process; relate order of operations to everyday situations (putting on clothing or making a sandwich); incorporate calculator use to allow students to see importance of symbols in order of operations; incorporate games (24 using cards or apps); incorporate program – wide strategies.</p> <p>8 – Faculty sharing tips on how they introduce topics; create best practices page for faculty to share ideas and approaches using Canvas; collaboration days organized by course during Flex week and throughout the semester.</p> <p>16A– Provide more support for new instructors; "beef up" Math 12 to serve as a stronger pre-requisite, including increasing the instruction on logarithms; more logarithm review in 16A; more time spent on implicit differentiation; have Math D introduce exponential and logarithms earlier in the course.</p> <p>31– A change in textbook, to one that includes more detail and coverage of the topics (ex. surface area in polar/parametric); communicating the level of expectation to the students in a Calculus II course.</p>

<p>What help or resources are needed from the college to improve teaching and learning?</p>	<p>581– Developmental Math is going to go through a redesign over the next year and the Developmental Math instructors need designated times to debrief and plan. Other requested resources include: class sets of instructional material with storage, including individual whiteboards; money for trainings including conference attendance; release time for a re-design coordinator; release time for a Developmental Math Coordinator.</p> <p>8 – To have more manipulatives similar to what is used in Physics. Using ropes to demonstrated tension in a statics problem; have the Physics and Chemistry departments share their visual aids for similar topics; coordinate with the Sciences to determine how we can better prepare our students for their courses.</p> <p>16A– Provide basic training for new instructors of 16A.</p> <p>31– Review the assessment process with respect to how students are place into Math courses. Specific to Math 31, how are students who take Calculus in high school placed in to our calculus sequence?</p>
<p>What are top priorities for improvement?</p>	<p>581 – Collaborate on the redesign of Developmental Math, focusing on conceptual understanding and critical thinking to develop good teaching strategies.</p> <p>8 – Collaboration day or regular meetings; best practices Canvas page; “Bright Ideas” as a regular department meeting agenda item.</p> <p>16A– Make sure that instructors know to emphasize product/quotient recognition and strategies in implicit differentiation.</p> <p>31– Perfecting our assessment process.</p>
<p>How will department implement those priorities?</p>	<p>581 – Collaboration between the Developmental Math faculty to redesign the Developmental Math program.</p> <p>8 – Use the Planning and Assessment Day during Spring semester to host: 1) Collaboration Hour, 2) the sharing of a best practices Canvas page, 3) “Bright Ideas” as an agenda item.</p> <p>16A– 1 hour flex training for new 16A instructors.</p> <p>31– Meet with the counseling department to get and share information; develop and plan to help counselors place students more appropriately.</p>

<p>Provide timeline.</p>	<p>581 – Collaborate throughout the Spring 2017 semester, with a pilot of the redesigned program implemented in Fall 2017.</p> <p>8– Spring 2018</p> <p>16A– Fall 2017 will offer flex workshop</p> <p>31– By the end of Spring 2017 a subcommittee from the Math Department will reach out to counselors and set up a meeting.</p>
<p>Previous/ongoing actions or plans implemented (Refer to previous DAA form).</p>	<p>581 – These are new goals that have not been previously addressed</p> <p>8 – Rebecca Kyler held a training workshop that was specific to the teaching of Math 8.</p> <p>16A– Not Applicable</p> <p>31– Not Applicable</p>
<p>Goals met, changes made or evidence of improvement.</p>	<p>581 – Not Applicable</p> <p>8 – Rebecca Kyler held a training workshop that was specific to the teaching of Math 8.</p> <p>16A– Not Applicable</p> <p>31– To be determined.</p>