New York State Student Learning Objective: Algebra II/Trigonometry

	All SLOs MUST include the following basic components:
Population	*These are the students assigned to the course section(s) in this SLO - all students who are assigned to the course section(s) must be included in the SLO. (Full class rosters of all students must be provided for all included course sections.)* This SLO includes all 65 students enrolled in Algebra II/Trigonometry on BEDS day (October 2, 2013), which culminates in the New York State Algebra II/Trigonometry Regents Exam. This includes two students with Individualized Education Plans (IEPs).
Learning Content	*What is being taught over the instructional period covered? Common Core/National/State standards? Will this goal apply to all standards applicable to a course or just to specific priority standards?* This course is based upon all of the New York State P-12 Common Core Standards for Mathematics, specifically, those articulated by the PARCC Model Content Frameworks for the Traditional Mathematics Pathway for Algebra II, with an emphasis on the mathematical practices indicated below. This Common-Core aligned learning content is in keeping with district priorities around Advanced Degree designation, mathematical literacy, and preparation for college-level course work. Please reference pages 83-86 of the District Curriculum Guide for further information. **Mathematical Practices:** Make sense of problems and persevere in solving them. • Students will build new mathematical knowledge through problem solving. • Students will solve problems that arise in mathematics and in other contexts. • Students will apply and adapt a variety of appropriate strategies to solve problems. • Students will monitor and reflect on the process of mathematical problem solving. Reason abstractly and quantitatively. • Students will recognize reasoning and proof as fundamental aspects of mathematics. • Students will make and investigate mathematical conjectures.

	- Students will develop and evaluate mathematical arguments and proofs. - Students will select and use various types of reasoning and methods of proof. Construct viable arguments and critique the reasoning of others. - Students will organize and consolidate their mathematical thinking through communication. - Students will communicate their mathematical thinking coherently and clearly to peers, teachers, and others. - Students will analyze and evaluate the mathematical thinking and strategies of others. - Students will use the language of mathematics to express mathematical ideas precisely. Model with mathematics. - Students will create and use representations to organize, record, and communicate mathematical ideas. - Students will select, apply, and translate among mathematical representations to solve problems. - Students will use representations to model and interpret physical, social, and mathematical phenomena. Look for and make use of structure. - Students will recognize and use connections among mathematical ideas. - Students will understand how mathematical ideas interconnect and build on one another to produce a coherent whole. - Students will recognize and apply mathematics in contexts outside of mathematics.
Interval of Instructional Time	*What is the instructional period covered (if not a year, rationale for semester/quarter/etc)?* This course runs for the entire 2013-14 academic year (9/4/2013 – 6/26/2014), and will meet for 40-minute class sessions 5 times per week.
Evidence	*What specific assessment(s) will be used to measure this goal? The assessment must align to the learning content of the course.* Baseline data for this course will include students' prior academic performance on the New York State Integrated Algebra and Geometry Regents exams. In addition, the average passing rate on the New York State Algebra II/Trigonometry Regents over the past three years will help to inform appropriate learning targets.

	The 2013-14 New York State Algebra II/Trigonometry Regents exam will serve as the summative assessment.

Accommodations for students with IEPs will be provided as required and appropriate. The Algebra II/Trigonometry Regents exam will be scored by teachers of other courses to ensure those with a vested interest are not involved in the process. |
| **Baseline** | *What is the starting level of students' knowledge of the learning content at the beginning of the instructional period?*

Multiple sources of historical baseline data will be compiled and used to establish rigorous performance targets. Students' scores on the New York State Integrated Algebra and Geometry Regents assessments will be used in conjunction with the average proficiency rate for the last three years on the New York State Algebra II/Trigonometry Regents to determine targets and HEDI ranges for the respective levels of student performance.

These diversified historical performance data points will provide a comprehensive picture of students' prior academic performance and can be compared with previous passing rates on the New York State Algebra II/Trigonometry Regents, allowing for the establishment of rigorous and appropriate academic targets. |
| **Target(s)** | *What is the expected outcome (target) of students' level of knowledge of the learning content at the end of the instructional period?*

The target for all students who take the New York State Integrated Algebra II/Trigonometry Regents Exam is to reach the minimum rigor target of proficiency, defined as a scaled score of 65 or better. This target is in line with district goals and expectations regarding student achievement levels in high school and advanced mathematics courses. In order to yield a HEDI score of "Effective," at least 80% of students enrolled in the course must reach this performance target. |

Comment [SED6]: Describing the provision of testing accommodations and steps that will be taken to ensure the "vested interest rule" is followed allow the reviewer to be certain that the teacher is adhering to all relevant state and federal law as well as NYSED policy. The Student Learning Objectives (SLO) Results Analysis webinar will enable district leaders, principals and teachers to consider systems for scoring summative assessments used with SLOs.

Comment [SED7]: Indicating how baseline data will inform the target-setting process provides the reviewer with a clear picture of how students' current academic abilities are being measured and used to set goals for the instructional period.

Comment [SED8]: Setting a minimum rigor expectation of proficiency ensures elevated, yet attainable targets for students. Requiring at least 80% of students to meet their growth or achievement goals for a course can help to ensure that SLOs are appropriately rigorous.

	How will evaluators determine what range of student performance "meets" the goal (effective) versus "well-below" (ineffective), "below" (developing), and "well-above" (highly effective)?																				
HEDI Scoring	**HIGHLY EFFECTIVE**			**EFFECTIVE**									**DEVELOPING**						**INEFFECTIVE**		
	20	19	18	17	16	15	14	**13**	12	11	10	9	8	7	6	5	4	3	2	1	0
	99-100	97-98	94-96	92-93	90-91	89	88	87	86	85	83-84	80-82	70-79	65-69	55-64	45-54	35-44	30-34	22-29	15-21	0-14

Rationale

Describe the reasoning behind the choices regarding learning content, evidence, and target and how they will be used together to prepare students for future growth and development in subsequent grades/courses, as well as college and career readiness.

As seen in the district strategic plan, a goal of the districts is to increase the percentage of our graduates who earn an Advanced Regents Diploma. The gatekeeper to this goal for many students is the New York State Algebra II/Trigonometry Regents Exam. Therefore, a tremendous amount of effort is placed in ensuring students have access to high quality instruction and support. This includes, but is not limited to regular progress monitoring and adjusting based on student performance on quarterly exams, midterm exams and teacher-generated assessments aligned to the New York State P-12 Common Core Learning Standards for Mathematics.

In support of this goal, the targets for proficiency described above, in combination with a focus on Common Core-aligned learning content and the continuous effort to monitor progress toward proficiency are strongly aligned to district objectives and preparing students for the rigor of college-level coursework. Students are placed in the appropriate level math course based upon previously completed coursework, teacher recommendations, guidance counselor recommendations, and CSE's (if necessary). The district curriculum guides have been certified by building administrators for rigor and comparability across classrooms. Multiple historical data points are used to inform targets to ensure that students are challenged to advance their conceptual and practical mathematical knowledge throughout the course. The continuous monitoring of student progress in applying and adapting appropriate mathematical practices will allow for reflection and provide opportunities to tailor instruction to the needs of individual students as the course progresses.

Comment [SED9]: The content and targets used within an SLO should be in direct alignment with district and/or building goals as appropriate. The connection noted here, in conjunction with the rigorous individualized targets set within this SLO, set the stage for targeted instructional practice that can drive student achievement.

Comment [SED10]: Strong rationales that clearly describe the alignment of course content, learning standards and evidence used to gauge student progress provide both teacher and reviewer with a deeper understanding of how day-to-day learning connects with broader teacher-, school-, and district-level objectives.