

NGSS Science FAQ

NGSS Full Implementation: The class of 2022 was our first class to graduate with all three of our new NGSS courses as a 3 year science requirement.

NGSS Course Sequence Graduation Requirements	
9th	Physics in the Universe
10th	The Living Earth
11th	Chemistry in the Earth System

Q: How does this impact graduation requirements?

- The class of 2022 and beyond need Physics in the Universe, the Living Earth, and Chemistry in Earth Systems for diploma
 - ★ The recommended sequence is above, however this may alternate at Archie Williams High School due to the structure of their small learning communities

Q: How does this impact UC/CSU eligibility (2 years required, UC requires 1-year biological/1-year physical lab “D”, 3 years recommended)?

- The 3-year NGSS sequence= 3 years of lab D

Q: Are there math (or other) prerequisites for the new NGSS courses?

- No. These courses are designed to be accessible to all students and we will not track or limit access to these science requirements based on math level. That said, these courses are in an intentional order that scales up with math complexity as the years progress.
 - ★ All 11th graders should be enrolled in Chemistry in Earth Systems as a default (unless they took it as a sophomore)

Q: What about accelerated options?

- The recommended course sequence is outlined above (*exceptions at Archie).
- There are not honors levels of any of the required courses.
- Students who want to broaden or deepen their science experience have many upper-division science options to choose from, including honors and AP.
- There is no need for students to double up in science their freshmen or sophomore year now that each of our 3 required courses count for UC/CSU lab credit

Q: What about extra support?

- We will continue to offer support classes such as AVID and AW to the general population
- EL support teams will be in place to help support English Learners and GE teachers
- Special Ed support teams will be in place to help support our special education population and GE teachers
- The Science Task Force will remain in effect, and will continue to re-evaluate the new courses, work towards implementation of common assessments, work to ensure alignment across the district and will include reps from the science department, counseling, special ed, and EL

Q: Can Physics or Honors Physics at TUHSD count as a replacement for Physics in the Universe as a graduation requirement?

- No. Physics in the Universe is considered a prerequisite for upper-division and more complex physics courses.
 - ★ If a student transfers as a junior/senior to our district, a Physics course, taken at their prior school can be used to fulfill our freshmen PhUn course requirement.
 - ★ If a student transfers as a junior/senior to our district and a Physics course has not been taken, students can enroll in Physics if they are “math” ready to fulfill the PhUn grad requirement.

Q: Can my student take a required science course at an outside institution?

- We strongly encourage all students to take our courses, however [Board Policy](#) calls for some flexibility and also states no more than 20 credits of the total required for graduation may be earned through alternative methods. Courses must be determined as comparable to our courses of study. If an alternate course is approved by UC the course can serve as an alternative means to meet our NGSS courses.
- Can Chemistry at an outside institution count for **Chemistry in Earth Systems**?
 - ★ We can accept Chemistry courses from outside accredited institutions (within the 20 credit limit), as long as they are deemed comparable. An emphasis should be placed on the 3-dimensions of NGSS and include earth science. Course needs to be UC/CSU approved Chemistry in the Earth System or Chemistry to qualify.
 - ★ **Reminder:** The unit conversion at COM currently leaves Chemistry students who take a semester of COM Chem 100 shy of units. It is highly recommended to steer students away from this path if they complete the lecture only.
- What about **Living Earth**?
 - ★ Same as above. Course needs to be UC/CSU approved as The Living Earth to qualify.
- Can Physics at BYU, COM (or equivalent) count for **Physics in Universe**?
 - ★ No. Course content and courses of study are not deemed to be equivalent.
 - ★ If a student transfers in as a junior or senior with bio and chem, they should be enrolled in our Physics course if “math” ready or enrolled in PhUn.