

NGSS Science Update and FAQ February 2020

Q: What is the new required course sequence for TUHSD students in light of the transition to Next Generation Science Standards?

	2018-2019	2019-2020	2020-2021
9th	Physics in the Universe * (new)	Physics in the Universe	Physics in the Universe
10th	Integrated Science 3-4 (old)	The Living Earth (new) *	The Living Earth (new) *
11th	Electives available	Electives available	Chemistry in the Earth System (new) *

Q: How does this impact graduation requirements?

- Class of 2020 and 2021 (current juniors and seniors) need Integrated Science 1-4 sequence for diploma (1-year life, 1-year physical for transfer students)
- Class of 2022 and beyond (current sophomores and below) 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 Drake high school due to the structure of their small learning communities

Q: How does this impact UC/CSU eligibility (UC requires 1-year biological/1-year physical lab “D”)?

- The IS 1-4 sequence (both years, uninterrupted) = 1 year of lab D
- The 3-year NGSS sequence= 3 years of lab D

Q: What if my sophomore took Chemistry in 2019-2020? Will they still need to take Chem in Earth Systems as a junior?

- No. Chemistry (taken in 2019-2020) will count towards the 3-year graduation requirement for this class (seen as equivalent to Chem in Earth Systems)

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? Will there be honors? Can my 10th grader double up?

- The recommended course sequence is outlined above (*exceptions at Drake).

- There will not be honors levels of any of the required courses at this time. Students who want to broaden or deepen their science experience have many upper-division science options to choose from, including honors and AP.
- With approval, and pending facilities and staffing resource availability, 10th graders can be allowed to “double-up”, in line with existing practice. Approx 15% of 10th graders currently double-up in Chem, as a data point to consider. Priority in courses required for graduation (i.e. Chem in Earth Systems) will be given to 11th and 12th-grade students.

Q: What about extra support?

- Finances pending, we will continue to offer support classes such as AVID and academic workshop 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, yet reconfigured to address the successful implementation of these courses, 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.

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.
- Some current questions we are fielding:
 - Can Chemistry at an outside institution (such as BYU or COM) count for Chemistry in Earth Systems?
 - A: During the transition, we can accept Chemistry courses from outside accredited institutions (within the 20 credit limit), until more viable alternatives that are NGSS aligned surface, as long as they are deemed comparable. We will consider these courses on a case-by-case basis through a review of the courses of study and in line with board policy.
 - What about Living Earth?
 - A: Same as above. During the transition we can consider accredited Biology courses as equivalent, until more viable alternatives that are NGSS aligned surface.
 - Can Physics at BYU, COM (or equivalent) count for Physics in Universe?
 - A: No. Course content and courses of study are not deemed to be equivalent.