The A to Z of A-G

UC High School Counselor Conference
September 2018

Topics

History of A-G

Course List Essentials

UC A-G "Quirks"

Examples: Questions from Counselors

Resources

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No other state system has an eligibility construct that establishes the University's academic standards and, at the same time, makes admission available to every student in the state who meets those standards.

UC Board of Admissions and Relations with Schools (BOARS)

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History of UC Freshman Admission Requirements

Freshman admission requirements are determined by UC faculty who serve on the Board of Admissions and Relations with Schools (BOARS)

- Beginning is 1884, the Academic Senate was charged with setting admission policies

- BOARS was established in 1934

- The faculty committee adheres to (systemwide) Academic Senate Regulations

- The requirements are part of an evolving process as the landscape changes over the years

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In 1884, the Academic Senate was charged with setting admission policies

BOARS was established in 1934

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The requirements are part of an evolving process as the landscape changes over the years

For over 150 years (1868-2018) UC has always had academic requirements for admission; curriculum requirements from the 1930's evolved into the predecessor of the current A-G pattern of academic courses

In 1968, SAT became a requirement in addition to academic courses.

Admission Requirements Timeline

2002 VPA requirement
- Visual and Performing Arts became the area 'f" subject requirement

2014 Geometry requirement
- All applicants must complete a geometry course – cannot "skip" the course

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Now we'll jump 30+ years to the year 2002. Prior to that the subject requirements were referred to the "a-f" courses.

VPA:
When UC faculty added the Visual and Performing Arts or VPA requirement – the pattern became known as the A-G subject requirements.

As an aside, we cannot historically document why the subject requirements were labeled "a" =, "b" =, etc. It might have been because as someone was writing down the subject in the order in which the faculty discussed them, they may have simple made the list in a format which was *simply* a, b, c, d, etc. Who knows?!

Geometry Requirement:
Next, in 2014, faulty determined that all freshman applicants ***must*** complete a course in geometry because they believe the contents taught in a geometry course were essential for a students understanding of more advanced mathematics.

History of A-G Subject Requirements

2013-2016 Common Core Math

- Introduction of CDE Common Core Math Standards; UC affirms it's acceptance of both traditional and integrated math courses.

2015-16 Online high school courses

- Completion of online high school lab science and VPA courses became acceptable

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CCM:
When the CDE introduce the Common Core Math Standards which are essentially integrated math courses, that is a sequence of courses for which in each course students learn different types of math (algebra, geom, trig, pre-cal, & stat) the landscape shifted.
Most California public schools begin teaching integrated-style math courses in 2015 or 2016 and wha la, meeting the geometry requirement became a bit more complex.

[As a quick refresher, UC substitute CCM IM2 to meet the geo reqmnt.]

In 2015-16, with the proliferation of online courses, the landscape shifted again such that UC faculty reconsidered the previous decision not to allow online *high school* course to meet the area 'd' lab science and the area 'f' VVPA requirements. Online *college* were previously acceptable. [A note about online high school or college lab science courses must include supervised lab assignments.]

History of A-G Subject Requirements

2015-16 — VPA one-semester courses
- Two one-semester courses, in the same discipline, acceptable; allows flexibility for students who have unavoidable conflicts

2018-19 — Next Generation Science
- Alignment with the CDE's adoption of Next Generation Science Standards in 2013-2016, UC recognizes new science disciplines

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Also in 2015-16, faculty modified how the area 'f' VPA could be satisfied. Now two one-semester courses in the same discipline acceptable to allow flexibility in meeting the VPA requirement for students who have unavoidable conflicts

Now to the present – After the CDE adopted the NGSS, and the State legislature enacted Senate Bill 300 (Chapter 480, Statutes of 2013) which called for the revision of the Science Framework to align with the CA NGSS. A new Science Curriculum Framework was adopted by the State Board of Education on November 3, 2016. California public schools begin to change the type of science courses they offered and adopted a three or four year science curriculum to align with NGSS
Science Disciplines: Biology/Life Sciences, Chemistry, Earth & Space Sciences, and Physics
Single Science Discipline Integrated with Earth & Space Sciences: Biology/Earth & Space Sciences, Chemistry/Earth & Space Sciences and Physics/Earth & Space Sciences
Integrated Science: Integrated Science 1, 2 & 3
And, Other Disciplines Names: Applied Science, Computer Science, Engineering and Interdisciplinary Science

UC faculty are *considering* change the minimum # of years for area 'd' lab science to from two to three to support California public schools as they require students to complete three year of science to meet State graduation requirements.
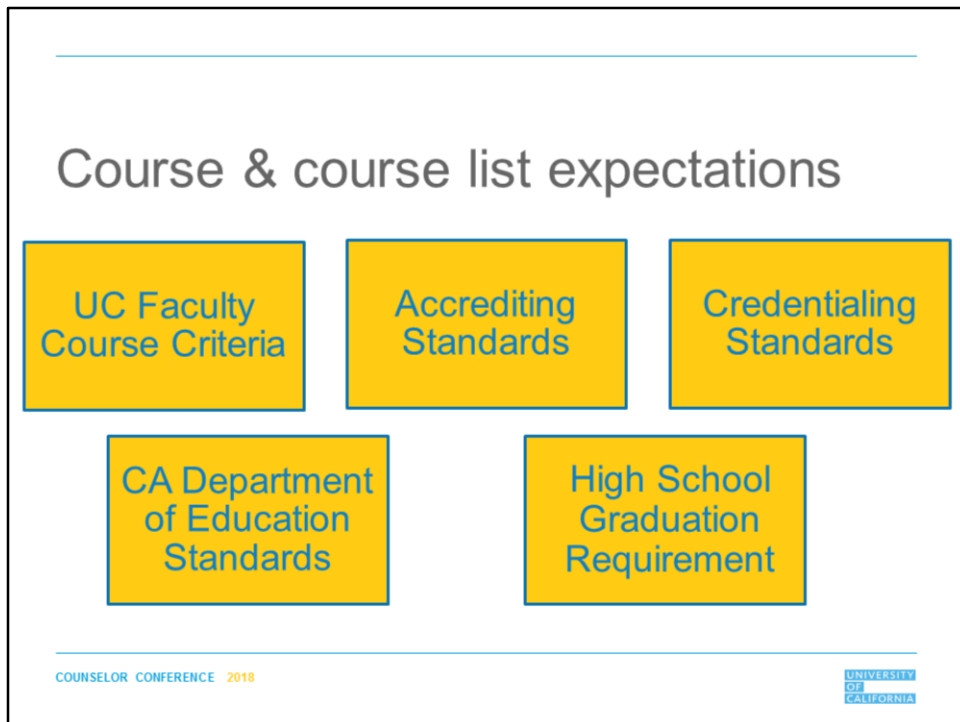
Course Expectations

Faculty course expectations

UC faculty define the minimum requirements for course content in order to be "approved" for meeting subject requirements (a-g)

- Also establish expectations for Honors designation and courses from online publishers/online schools

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We've walked-thru a brief history of the admission and subject requirements. Let's delve a bit into the faculty's expectations of courses that can meet the freshman admission subject requirements.

- UC faculty define the minimum requirements for course content and they establish expectations for Honors designation and online publishers/online schools courses

Course & course list expectations

UC Faculty Course Criteria

Accrediting Standards

Credentialing Standards

CA Department of Education Standards

High School Graduation Requirement

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Faculty course criteria are defined/explained on our A-G Guide website

Accrediting standards: Any public or private California high school may establish an "a-g" course list if they are **accredited** (or a candidate for accreditation) by a U.S. regionally accrediting-body (WASC), receive a school code from the College Board, and are a diploma-granting institution.
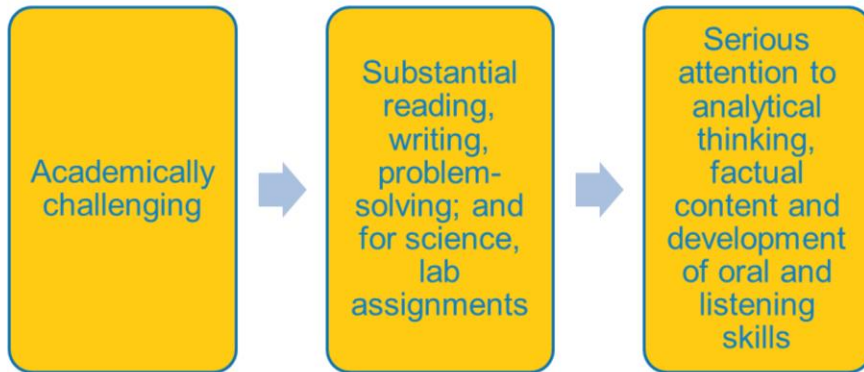
- Non-California high schools are not eligible to establish "a-g" course lists with the exception of online schools that serve California students.

- Out-of-state students applying to the University of California are still expected to meet the same admissions requirements as California residents with some distinctions.

Credentialing Standards: teachers must be credential in the single subject they are teaching, in other words, your math teacher should not be teaching World History unless the teacher also has a credential in History; these are CDE and accreditation standards – UC assumes that courses submitted for a-g approval are being taught by teachers who meet these credentialing standards

CDE Standards: school must adhere to CDE standards such as CCM and NGSS

High School Graduation Requirement: diploma-granting institutions

Course content expectation

| Academically challenging | → | Substantial reading, writing, problem-solving; and for science, lab assignments | → | Serious attention to analytical thinking, factual content and development of oral and listening skills |

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Course content expectations apply to all subject areas.

Examples of course content expectations –

- English
    - **Extensive reading** of classic and modern literature and content-rich works of non-fiction,
    - **Frequent *writing***, from brainstorming to final paper, and
    - **Practice *listening* and *speaking*** with different audiences.

    Math
- Not just a collection of definitions, algorithms and/or theorems to memorize and apply, but rather a coherent and tightly organized body of knowledge that provides **a way to** think about and understand a broad array of phenomena.
- Use of critical thinking to grasp and **solve unfamiliar problems** that may not match examples the student has seen before. Students should find patterns of reasoning, make and test conjectures, try multiple approaches, analyze simple examples, make abstractions and generalizations, and verify that solutions are correct, approximate or reasonable, be encouraged to see the *purpose* behind each concept and skill.
- Confidence and **fluency in handling formulas and computational algorithms**: understanding, mathematics is also a language; fluency in it is a basic skill, and fluency in computation is one key component.
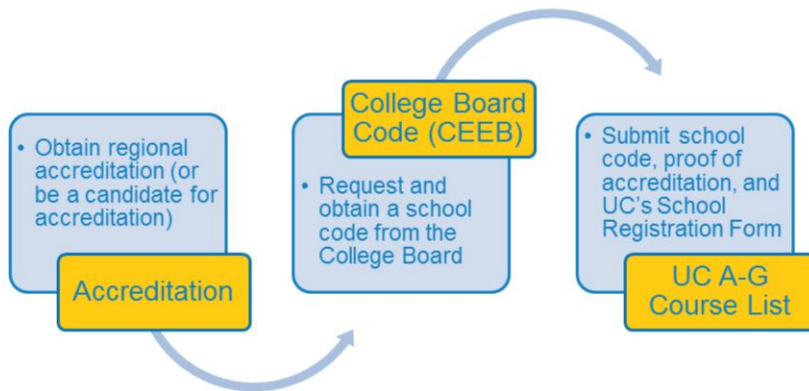
- VPA

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A-G Course List Essentials

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Establishing an A-G course list

- Any public or private high school in CA can establish an A-G course list if:
    - The school holds regional accreditation or is a candidate for accreditation as a diploma-granting institution
    - The school has obtained a College Board code
    - The student has submitted UC's School Registration Form
- Accredited supplementary education centers/programs cannot establish a course list unless they are affiliated with UC or CSU
    - Example: UC Scout
- New schools should apply for an A-G Course List no later than the summer before their first entering class
- To obtain a College Board code, a school must:
    - (1) teach at least through the 10th grade, or provide evidence that a 10th grade will be added within the next 12 months;
    - (2) have a course of study that leads to a diploma or GED; and
    - (3) have a minimum of 10 students enrolled in grades 9-12.
- The UC School Registration form is available online in the A-G Guide
    - Registration forms are accepted between February 1-July 15
    - July 15th deadline gives school time to submit courses before Sept. 15th A-G course submission deadline

Updating the course list

Submission period: February 1 to September 15 annually	• May 31: close of Phase 1 • July 31: close of Phase 2 • Sep 15: close of Phase 3
Retroactive course submission	• Submit courses beginning February 1 • Retroactive back to current academic year • **No retroactive honors designation**

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- Schools that have already established their course lists can/should update the lists each year
- The course submission period opens on February 1 each year, and includes three phases for submitting coursework
  - Schools can resubmit courses in a later phase if not approved in an earlier phase –another reason for submitting early
  - No submissions will be accepted after Sept. 15th – NO EXCEPTIONS
- Schools can submit courses on February 1 for retroactive approval back to the beginning of the current academic year
  - Retroactive approval is how a school would get courses approved if they missed the Sept. 15th deadline
  - New schools can ask for retroactive approval back to 3 years
  - UC does NOT allow retroactive approval of honors designation
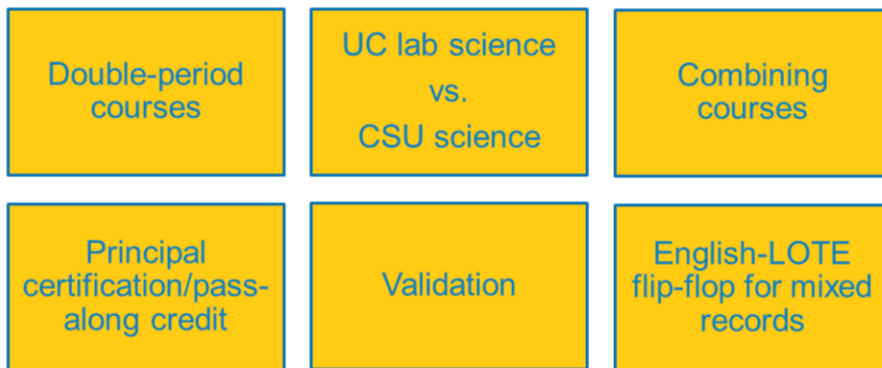
NGSS new science disciplines

Single Science Discipline	Single Science Integrated with Earth & Space Sciences	Integrated Science	Other Discipline Names
Biology/Life Sciences	Biology/Earth & Space Sciences	Integrated Science 1	Applied Science
Chemistry	Chemistry/Earth & Space Sciences	Integrated Science 2	Computer Science
Earth & Space Sciences	Physics/Earth & Space Sciences	Integrated Science 3	Engineering
Physics			Interdisciplinary

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- The Next Generation Science Standards are currently being implemented across CA, and as of 2018-19 UC has introduced new lab science disciplines that align with NGSS
- Schools can choose from three different science models:
  - The NGSS 4-course model is the traditional single-subject model, in which a different science is taught each year
  - The NGSS 3-course model incorporates Earth & Space Science content with each of the core science disciplines of Biology, Chemistry, and Physics
  - The NGSS Every Science, Every Year model is the integrated science model, which includes content from all three of the core science disciplines in each year
  - There are other science disciplines which will also be used as of 2018-19; students cannot complete two years of science coursework from the "other" disciplines to meet the area "d" requirement

UC A-G "quirks"

| Double-period courses | UC lab science vs. CSU science | Combining courses |
| Principal certification/pass-along credit | Validation | English-LOTE flip-flop for mixed records |

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- Double-period courses: no different than "stretching" a year-long course over two years; even though course may be taught as a double-period for the entire year, the course only gets one year of a-g credit and all grades from the double periods will be averaged into the GPA calculation
- UC and CSU both have very similar a-g requirements, but the one requirement that generates the most questions is the area "d"/lab science requirement
    - UC requires two years of lab science from two different science disciplines approved under the "d" area to meet our lab science requirement; UC does NOT specifically require one biological science and one physical science
    - CSU DOES specifically require one biological science and one physical science, and one year must be from area "d" while the other year can be from either area "d" or "g"
    - Refer to the CSU/UC A-G Comparison Matrix at http://admission.universityofcalifornia.edu/counselors/files/csu-uc-a-g-comparison-matrix.pdf
- Every course on a UC-approved A-G Course List is assigned a specific discipline; the discipline is located immediately below the course title on the course list
    - We will typically allow students to combine single semesters of different courses to equal one year of an a-g requirement, as long as both semesters of coursework are from the same discipline
    - Example: one semester of Geography (under the World History/Cultures/Historical Geography discipline) combined with one semester of Modern Civilizations (also under the World History/Cultures/Historical Geography discipline) will meet the one-year World History requirement ("a" area)
- Principal certification is a process which allows schools to post classroom-based coursework from an unaccredited institution or a CA high school without an A-G Course List onto their own high school transcript with credits and letter grades; certification follows careful review by the principal/school of the curriculum to ensure it is comparable to the college-prep coursework offered at their own high school
    - Pass-along credit is similar to principal certification, but for out-of-state coursework
    - Online courses are not eligible for principal certification or pass-along credit
- For students with some of their high school outside of the U.S., UC will use the primary language of instruction to meet the "b"/English requirement for the years that the student was overseas; English courses at the foreign high school are used to meet the area "e"/Language other than English (LOTE) requirement. Essentially, areas "b" and "e" are flip-flopped for the years that a student is in a school where the language of instruction is not English.
- Validation allows a higher level of a sequential subject to validate either the omission or a grade deficiency in a lower level
    - Sequential subjects are those where each level builds upon the knowledge of the previous level
    - For UC purposes, only Math and LOTE are considered sequential; they are the only subjects that can be validated
    - Geometry is the anomaly; UC will not allow validation for the omission of geometry, except that the second semester of geometry can validate the omission of the first semester of geometry

UC A-G quirks: Repeats

Repeating a course
- D/F grades only
- Grades are not averaged

Repeating a grade level
- First instance of C grade
- Both years must be reported

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- Repeating courses is another area where UC and CSU differ – refer to the CSU/UC Matrix for details
  - UC will only allow repeats of D/F grades; C or better grades cannot be repeated
  - If a student repeats a D/F grade, only the repeated (higher) grade is included in the GPA calculation, but students MUST report both the original and the repeated grade
  - One exception: VPA courses can be repeated multiple times for credit
- Students who come to the U.S. after completing one or more years at an international high school are often placed in a grade level that they may have already completed
  - UC does not encourage students to repeat an entire grade level
  - UC allows courses from non-CA high schools to meet a-g requirements, so repeating an entire grade level may not be necessary
  - If a student does repeat an entire grade level, both years must be reported on the application and UC will remove duplicate coursework; only the first instance of a C grade will be used in the course totals and GPA calculation

UC A-G quirks: online courses

	Online School	Online Publisher
Regionally accredited	✓	
Develops curriculum	✓	✓
Teaches the course	✓	
Issues transcript	✓	
Maintains A-G course list	✓	✓
Courses assessed against iNACOL standards	✓	✓

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- The distinction between Online Schools and Online Publishers is significant
    - UC allows both online schools and online publishers to maintain A-G course lists
    - BUT: only the online schools are approved to offer, teach, and transcript their courses; online publishers are approved only to create a curriculum that they can sell or license to CA high schools to adopt onto their own course lists and teach themselves
    - Students cannot earn a-g credit for courses completed directly through an online publisher

UC A-G quirks: College courses

CCC A-G Course Lists	• Last updated 2013-2014 • Use 2013-2014 course list in conjunction with ASSIST.org
ASSIST.org	• LOTE footnotes • VPA (IGETC Area 3A)
Course and honors counts	• One course/one honors point • Single course may fulfill multiple years of a requirement

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- Many UC applicants complete college courses while in high school – either through dual enrollment or middle college programs, or by just directly enrolling in specific courses
- Each of the CA community colleges has an A-G course list, but it was last updated in 2013-14
- The lists may be outdated, but using them in conjunction with ASSIST.org can provide some good college course options for students
- College LOTE courses in ASSIST.org: look for the course with the footnote that says "Corresponds to 2 years of high school study" – that is the course that meets the minimum area "e"/LOTE requirement
- College VPA courses: look for the courses that are identified as meeting IGETC Area 3A (Arts) – those are typically acceptable courses to meet the minimum area "f" requirement
- Typically one semester/quarter of a course meets one year of a high school requirement, but the course counts reflect the actual semesters of coursework completed (i.e., one) and the number of honors points corresponds to the number of grades received (i.e., one)

AskUC Sample Q & A

Sample Questions from AskUC:

I am contacting you on behalf of "XXX" High School. We had a student transfer in second semester of his freshman year. At his previous school, he took Drawing I for his first semester. Since we do not have a Drawing course, the only option we had was to place him in Exploring Visual Arts. Would these two one-semester courses count toward the "F" requirement? Please let me know as soon as possible.

Q: What information is missing from this question?

A: The school where Drawing 1 was completed.

Sample Questions from AskUC:

If one of my students has successfully completed a semester of World Studies and a semester of AP World History, am I correct in understanding that he has met his year of world history credit for a-g? I just want to be 100% sure that I can combine two classes/two semesters to meet that requirement, or if it needs to be a single course.

Message includes the course titles, the subject area, and a clear statement of the question. The signature (not shown) also includes the name of the high school. Students can combine two semesters of different courses approved under the World History/Cultures/Historical Geography discipline to meet the requirement.

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Sample Questions from AskUC:

Would a grade of a C- meet the minimum grade requirement for an a-g area, or would it need to be repeated to meet the requirement? I am unsure if the minus grades are a factor.

Q: What makes this question difficult to answer?

A: The message does not specify if the course is a high school course or a college course. C- grades are acceptable in high school courses, but not in college courses.

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Sample Questions from AskUC:

I have a senior who earned a D each semester in Algebra 2. He is currently enrolled in our Discrete Math course. The prerequisite for Discrete Math is Algebra 2 and it is UC-approved as advanced math.

I just wanted to be certain that it will validate his Algebra 2 as I did not see it listed on the UC Validation Matrix.

Message included thorough information about the courses in question and the name of the school (not displayed). The Validation Matrix does not have every possible course listed, but courses approved under the Advanced Math discipline will validate Algebra 1 & 2.

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Sample Questions from AskUC:

I have a student who wants to take the Italian subject test to fulfill their language requirement. As it is only offered in June, I feel that this is risky. Also, can you tell me, if they do pass, how it will be reflected on their transcript? [Question was sent to HS Articulation Unit]

Q: What additional information might be helpful with this question?

A: The question mentions that the Subject Test is only offered in June, and that it seems "risky." This could mean that the student is taking the test at the very end of the senior year, or perhaps that they are taking it at the end of junior year. Without knowing the student's year in school, we cannot provide options in the event that the student does not pass the test with the appropriate score.

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Sample Questions from AskUC:

I'm a new counselor who will be working with many students applying to UCs. I'd like to familiarize myself with the online UC app prior to supporting them (so I can see all the questions asked, etc). Is there an online version available for counselors to see and walk through?

Clear question and valid reason for wanting access to the application. We'll advise her to fill out the student application without actually submitting it.

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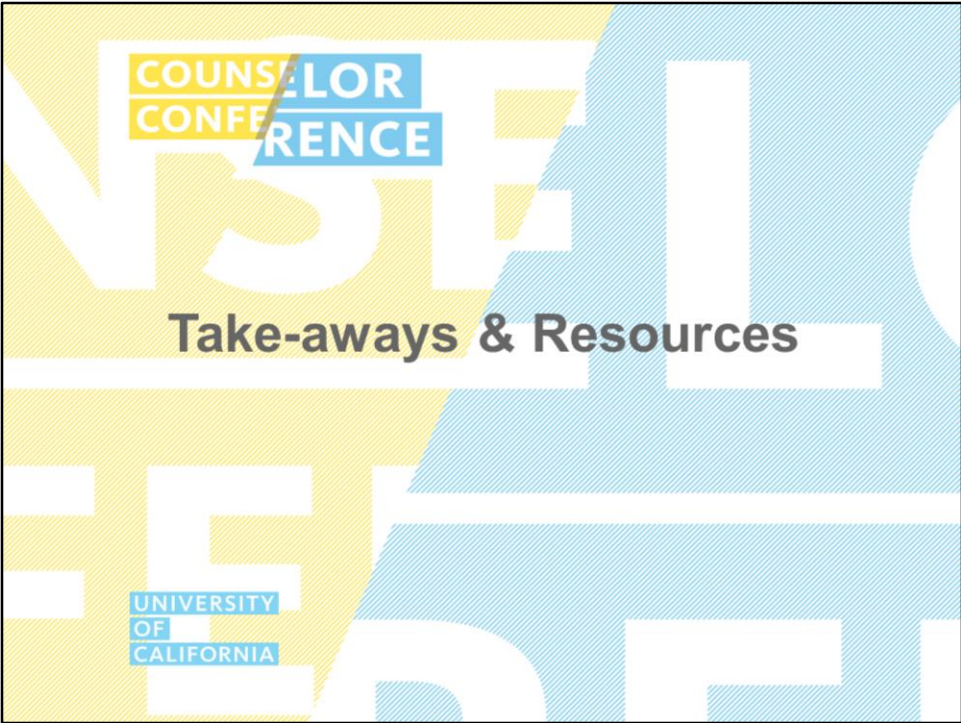
Sample Questions from AskUC:

There has been confusion about what language classes our students can take at "XX Community College" that would satisfy their LOTE requirement. Our confusion is what counts for a full year for LOTE requirement, because "XXCC" offers languages in a 1, 2 or 1A, 1B, 2A, 2B sequence.

Usually our counselors get the grade from the 1A class from the "XXCC" transcript and they waive the 2 year requirement as a university waiver. We as a district would just like some clarity since "XXCC" has not updated their A-G list since 2013-2014.

Q: Why is this message confusing?
A: The inquiry alternates between determining which course(s) clears the 2-year LOTE requirement and what counts as a full year of LOTE – these are two different concepts.

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Take-aways & Resources

Take-aways

- Knowledge of how your school's courses are submitted/approved and how the course list creation process works; and UC faculty course expectations and content of approval courses.

- Better understanding of the ways in which the subject requirements can be met in atypical scenarios

- Access to and knowledge of how to use resources

- And, **we're as close as an email message away.**

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Resources

Quick Reference Guide to UC Admission 2018:
http://admission.universityofcalifornia.edu/counselors/files/quick-reference-2018.pdf

Options for Meeting A-G: pages 9-13

   Validation: pages 16-19

   Math – page 18

   LOTE – page 19

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Use the table of content and index to identify topic

Resources

A – G Guide: https://www.ucop.edu/agguide/index.html

- Course Content Expectations: https://www.ucop.edu/agguide/a-g-requirements/index.html

A – G Course List (Course Management Portal-CMP) *New Look and Navigation*:
https://hs-articulation.ucop.edu/agcourselist#/list/search/institution

CSU/UC A-G Comparison Matrix:
http://admission.universityofcalifornia.edu/counselors/files/csu-uc-a-g-comparison-matrix.pdf

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Resources
Evaluation Issues

AskUC@ucop.edu

- Be sure to include as much detail as possible, including:
    - Name of school(s)
    - School code/website (if non-CA)
    - Specific course titles in question
    - Course description/website for descriptions

- Allow up to three business days for reply
    - During peak seasons (Sept.- early Dec.) – allow up to five days

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Thank you!