

Pedagogical Cap Considerations

BCEA Contract Article 7.1: The District shall have a WSCH/FTE target of 530
 (A WSCH target of 530 translates to an average per section student cap of 35)

Without a preponderance of evidence that proves otherwise (such as statistical analysis), ped caps will remain the same. (Curriculum Decision Log 11/5/2012). Complete the yellow highlighted boxes.

Course	# of Sections per Semester	Current Ped Cap	Proposed Ped Cap	Change in Total # of Students	# of New Sections to return to original students
PAR 303	2	25	35	10	none
PAR 304	2	25	35	10	none

Answer the following questions that support reducing the ped cap for your proposed course(s)

A: Safety and Compliance Factors Influencing the Enrollment Cap

1 Health or safety reasons that the class should be capped at a certain number (example: safety considerations in a welding class).

Yes

No

If "Yes", explain:

2 Standards outside of the college calling for specific student-teacher ratios (example: nursing, police, fire).

Yes

No

If "Yes", explain:

3 External accreditor or advisory panel recommendation on class size.

Yes

No

If "Yes", explain:

4 Class maximum has already been determined through negotiations.

Yes

No

If "Yes", explain:

If you entered "Yes" to any of the above, **stop here**. If you answered "No" to all of the elements above, complete Section B.

B: Instructional and Academic Factors Influencing the Enrollment Cap

1 Total amount of graded work required per week (in pages).

- 15+ 13-15 10-12 6-9 0-5

Answer Yes, No or enter rank and provide an explanation

2 Standards outside of the college calling for specific student-teacher ratios (example: nursing, police, fire).

- Substantial Above Average Average Below Average Minimal

Explain:

3 Discussion/group participation is required and graded.

Yes

No

If "Yes", explain:

4 Every student is evaluated individually on a set of skills (e.g., technical competencies, presentation skills, composition).

Yes

No

If "Yes", explain:

5 Course is designed for a special population of students who require a smaller class size to achieve the goals and intent of the course.

Yes

No

If "Yes", explain:

6 Course is designed for underprepared students who may need additional attention or assistance.

Yes

No

If "Yes", explain:

7 Course outcomes anticipate demand of more higher order, complex thinking skills from students who may therefore need additional guidance from the instructor.

Yes

No

If "Yes", explain:

8 Additional Considerations:

9 Please include comparable course ped caps from similar colleges, as available (attach).

Completed by: Stephanie Jimenez

Summary of AS-T in Physics Changes for Fall 26

AS-T Physics (Current)

Required courses:

MATH 30	Analytic Geometry and Calculus I
MATH 31	Analytic Geometry and Calculus II
MATH 32	Analytic Geometry and Calculus III
PHYS 41	Physics for Scientists and Engineers I
PHYS 42	Physics for Scientists and Engineers II
PHYS 43	Physics for Scientists and Engineers III

Current Major Total: 25 units

AS-T Physics 2.0

Required Courses:

PHYS 41 Physics for Scientists and Engineers I (4)
PHYS 42 Physics for Scientists and Engineers I (4)
PHYS 43 Physics for Scientists and Engineers I (4)
MATH 30 Analytic Geometry and Calculus I (5) or
MATH 30s Analytic Geometry and Calculus I with
Support (5)
MATH 31 Analytic Geometry and Calculus II (4)
MATH 32 Analytic Geometry and Calculus III (4)
MATH 40 Differential Equations (4)
MATH 42 Linear Algebra (3)
CSCI 20 Programming and Algorithms I (3)

Major Total: 35 units

Program Map: Cal-GETC

Term 1

GE/Major List	Course	Units
Area 2	Math 30 or 30s	5
Area 1A	Engl C1000 or C1000E	4
Area 4	Choice (first discipline)	3
Area 1C	Choice	3
Term units		15

GE	Check List
1 A	Y
1 B	Y
1 C	Y
2	Math Major
3A	Y
3 B	Y
4 - 1	Y
4 - 2	Y
5	Physics major
7	Y

Term 2

GE/Major List	Course	Units
	Math 31	4
	PHYS 41	4
	CSIC 20	3
Area 1B	Choice	3
Area 3A	Choice	3
Term units		17

Term 3

GE/Major List	Course	Units
	PHYS 42	4
	Math 32	4
	MATH 40	4
Area 4	Choice (second discipline)	3
Term units		15

Term 4

GE/Major List	Course	Units
	PHYS 43	4
	MATH 42	3
Area 3B	Choice	3
Area 6	Choice	3
Area 7	Choice	3
Term units		16

Total Program Units

63

In the four columns to the right under the **College Program Requirements**, enter the college's course identifier, title and the number of units comparable to the course indicated for the form. If the course may be double-counted with Cal-GETC, enter the GE Area to which the course is articulated. To review the GE Areas and associated unit requirements, please go to Chancellor's Office Academic Affairs page, RESOURCE section located at: <https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/Educational-Services-and-Support/What-we-do/Curriculum-and-Instruction-Unit/Templates-For-Approved-Transfer-Model-Curriculum>

or the ASSIST website: <https://www.assist.org/>.

The units indicated in the template are the **minimum** semester units required for the prescribed course or list. All courses must be CSU and UC transferable. **All courses with an identified C-ID Descriptor must be submitted to C-ID prior to submission of the Associate Degree for Transfer (ADT) proposal to the Chancellor's Office.**

Where no **C-ID Descriptor** is indicated, discipline faculty should compare their existing course to the example course(s) provided in the form at:

<http://www.c-id.net/degreereview.html>

Attach the appropriate ASSIST documentation as follows:

- *Articulation Agreement by Major (AAM)* demonstrating lower division preparation in the major at a CSU or UC;
- *UC Transfer Course Agreement (UCTCA)* for the transfer courses; and/or,
- *Cal-GETC Certification Course List by Area (GECC)*.

The acronyms **AAM**, **UCTCA**, and **GECC** will appear in **C-ID Descriptor** column directly next to the course to indicate which report will need to be attached to the proposal to support the course's inclusion in the transfer degree. To access ASSIST, please go to <http://www.assist.org>.

Associate in Science in Physics 2.0 for Transfer Degree					
College Name:					
TRANSFER MODEL CURRICULUM (TMC)		COLLEGE PROGRAM REQUIREMENTS			
Course Title (units)	C-ID Descriptor	Course ID	Course Title	Units	Cal-GETC
REQUIRED CORE: (32-33 units)					
Calculus-based Physics for Scientists and Engineers: ABC (12)	PHYS 200S	PHYS 41 AND PHYS 42 AND PHYS 43	Physics for Scientists and Engineers I Physics for Scientists and Engineers II Physics for Scientists and Engineers III	4 4 4	Area 5A and 5C Area 5A and 5C Area 5A and 5C
OR	OR				
Calculus-based Physics for Scientists and Engineers: A (4)	PHYS 205				
AND	AND				
Calculus-based Physics for Scientists and Engineers: B (4)	PHYS 210				
AND	AND				
Calculus-based Physics for Scientists and Engineers: C (4)	PHYS 215				

TRANSFER MODEL CURRICULUM (TMC)		COLLEGE PROGRAM REQUIREMENTS			
Course Title (units)	C-ID Descriptor	Course ID	Course Title	Units	Cal-GETC
Single Variable Calculus Sequence (8)	MATH 900S	MATH 30 or MATH 30s AND MATH 31	Analytic Geometry and Calculus I	5	Area 2
OR	OR		Analytic Geometry and Calculus II	4	Area 2
Single Variable Calculus I – Early Transcendentals (4)	MATH 210				
AND	AND				
Single Variable Calculus II – Early Transcendentals (4)	MATH 220				
OR	OR				
Single Variable Calculus I – Late Transcendentals (4)	MATH 211				
AND	AND				
Single Variable Calculus II – Late Transcendentals (4)	MATH 221				
Multivariable Calculus (4)	MATH 230	MATH 32	Analytic Geometry and Calculus III	4	Area 2
Ordinary Differential Equations (3)	MATH 240	MATH 40	Differential Equations	4	Area 2
AND	AND	AND			
Introduction to Linear Algebra (3)	MATH 250	MATH 42	Linear Algebra	3	Area 2
OR	OR				
Differential Equations and Linear Algebra (5)	MATH 910S				
Programming Concepts and Methodologies I (3)	COMP 122	CSCI 20	Programming and Algorithms I	3	
OR	OR				
Any Introductory Programming Course such as C++, Python, and such that is articulated for transfer for the major	AAM				

Total Units for the Major:	32-33	Total Units for the Major:	35	
		Total Units that may be double-counted <i>(The transfer GE Area limits must <u>not</u> be exceeded)</i>	7	
		General Education (Cal-GETC) Units		34
		Elective (CSU Transferable) Units	-2	
		Total Degree Units (maximum)		66

This is proposed as a high-unit STEM major that prepares students for transfer to both the CSU and UC. Exception to 60-unit requirement by AB 928: 6 additional units for the ADT. Supporting evidence and rationale is required.

*Please note that colleges are permitted to use up to six additional units, but no additional local requirements can be added to this degree. Students are only to be required to complete the full Cal-GETC pattern and the core courses listed in the TMC.

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NOTES: Recommendations and Considerations

1. Require both Differential Equations and Linear Algebra. All UC campuses and most CSU campuses require both. In addition, CSU faculty shared that this would better prepare students for transfer.
2. Removal of one semester of General Chemistry. The one semester of general chemistry was removed because it was not required by all CSU campuses and many community colleges indicated that they would need a modification of Cal-GETC Area 5 (allow two physical science courses instead of one physical science and one biological science) and the six additional units from AB928 to implement the degree locally.
3. Require one introductory programming course. All UC campuses and most CSU campuses require programming. There were concerns that if students waited to take a programming course after transfer that it may create an equity issue between students that start at the four-year institution as freshmen and those that transfer. However, if units are really an issue, then this would be the course that could be taken after transfer.
4. Recommend an exception to the 60-unit maximum to permit a 66-unit maximum for the Physics ADT and/or completion of Cal-GETC after transfer. The units required for the major (with the removal of the first semester of General Chemistry) has been reduced to 32-33. With 7 units of double counting, the required units, based on the minimum units listed in the C-ID descriptors, would be 59-60. More than 30% of the colleges completing the survey for this TMC (that currently have ADTs in Physics) indicated that they would be unable to implement this new TMC locally because of 5 unit physics/math courses. For colleges with 5 unit physics courses, the major becomes 35-36 units. This would move the local degrees to 62-63 units and those degrees would not be possible if the TIMC is approved at 60 units.

To ensure the number of Physics ADT options at community college campuses does not decrease, it is requested that the 6 additional units outlined in AB928 are allowed for colleges implementing this degree program.