

Modified P-2 <sup>Biology</sup> re: CHEM 150L

**Criselda Yee**

**From:** Regina Eisenbach  
**Sent:** Wednesday, December 06, 2017 11:23 AM  
**To:** Criselda Yee  
**Cc:** Paul Stuhr  
**Subject:** FW: CHEM 150L Missing from Biology in Catalog: P-2 FORM REQUIRED  
**Attachments:** email from Academic Programs.pdf; biol catalog copy.pdf; 0026\_001.pdf

Hi Criselda,

Here is the information from Biology regarding the "modified" P-2 for the CHEM 150L issue. It should be a consent calendar item for UCC in Spring.

As soon as we get the information from Physics, we'll handle the same way.

Paul, please chime in if I missed anything or you'd like something different.

Regards,

*Regina*

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**From:** Deborah Kristan <dkristan@csusm.edu>  
**Date:** Thursday, November 30, 2017 at 10:16 AM  
**To:** Domenica Pearl <dpearl@csusm.edu>  
**Cc:** Kimberlee Prince <kprince@csusm.edu>, David McMartin <dhmcmart@csusm.edu>, Regina Eisenbach <regina@csusm.edu>, Ricardo Fierro <fierro@csusm.edu>, William Kristan <wkristan@csusm.edu>, Matthew Escobar <mescobar@csusm.edu>  
**Subject:** FW: CHEM 150L Missing from Biology in Catalog: P-2 FORM REQUIRED

Hi Domenica,

Thank you for the follow up email. I spoke briefly with Regina for clarification, and I do not think we need to do the formal process of a P2 because nothing is changing in our programs (the course units/contents are the same), the only change is how the course is listed after they split the lab. Our dept has already approved the C2 when Chem 150 was split into Chem 150 and 150L. I've photocopied the relevant pages for changes to the Biology major and minor; please note that this change was already made to the catalog for the Biotechnology major. Per Regina's suggestion, I've cc'd Bill Kristan (chair of our college curriculum committee), Rick Fierro (Assoc Dean), and I have also included Matt Escobar (Director of Biotechnology).

I've scanned some pages from the catalog. The first shows the Biotech major with the correct Chemistry listing; we'd like this to be how it shows for Biology. The next two pages are for the biology major and minor with my handwritten notes.

Please let me know if you need anything else.

Thanks,  
Debbie

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Tracker \_\_\_\_\_  
RP \_\_\_\_\_  
PS \_\_\_\_\_

Deborah Kristan, PhD  
Professor and Chair  
Department of Biological Sciences  
333 S. Twin Oaks Valley Rd.  
California State University San Marcos  
San Marcos, CA 92096  
Ph: 760 750 4638  
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**From:** Domenica Pearl  
**Sent:** Thursday, November 30, 2017 9:39 AM  
**To:** Deborah Kristan <dkristan@csusm.edu>  
**Cc:** Kimberlee Prince <kprince@csusm.edu>; David McMartin <dhmcmart@csusm.edu>; Regina Eisenbach <regina@csusm.edu>  
**Subject:** CHEM 150L Missing from Biology in Catalog: P-2 FORM REQUIRED

Dr. Kristan,

I have discussed this issue with Academic Programs and they have asked for you to submit a P-2 Form to have CHEM 150L added to the Biological Sciences major. I attached the catalog copy of the major requirements to help along the process.

Please let me know as soon as possible once you have submitted the forms so I can follow the approval process. I am hoping it will be speedy so we don't have to remove the course from the major in the Fall.

Please let me know if you have any questions.

Thank you,

**Domenica Pearl, EdD**  
Associate Director | Undergraduate Advising Services  
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760.750.4162 | [www.csusm.edu/academicadvising](http://www.csusm.edu/academicadvising) | Craven Hall 1300

Fall 2017 Semester Office Hours:  
Monday-Friday: 7:00am-1:30pm

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**From:** Domenica Pearl  
**Sent:** Tuesday, November 28, 2017 8:25 AM  
**To:** Deborah Kristan <dkristan@csusm.edu>  
**Cc:** Kimberlee Prince <kprince@csusm.edu>  
**Subject:** CHEM 150L Missing from Biology in Catalog

Dr. Kristan,

I am guessing when CHEM 150 went from 5 units to 4 units, and separated CHEM 150L from the course, CHEM 150L was never added to the BIOL major. As it stands, we technically can't require students to take CHEM 150L unless it is added to the catalog description. I know this was probably just oversight and I am really hoping it will not require a P-2 form, so maybe you could contact Lourdes to see if it can be a simple fix?

Please let me know if there is anything I can do to help resolve this issue.

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## Preparation for the Major (41 Units)

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### Lower-Division Biology Courses (15 Units)

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- [BIOL 210 - Introduction to Cellular and Molecular Biology](#) Units: 4
- [BIOL 211 - Introduction to Organismal and Population Biology](#) Units: 4
- [BIOL 212 - Evolution](#) Units: 3
- [BIOL 215 - Experimental Design and Statistical Analysis](#) Units: 4

### Non-Biology Supporting Courses (26 Units)

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- [CHEM 150 - General Chemistry](#) Units: 4
- [CHEM 160 - General Chemistry II](#) Units: 3
- [CHEM 201 - Organic Chemistry](#) Units: 3
- [CHEM 201L - Organic Chemistry Laboratory](#) Units: 2
- [MATH 160 - Calculus with Applications, I](#) Units: 5

### Choose One of the Following Course Sequences:

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- [PHYS 101 - Introduction to Physics I](#) Units: 4
- [PHYS 102 - Introduction to Physics II](#) Units: 4

or

Best,

Domenica

**Domenica Pearl, EdD**

Associate Director | Undergraduate Advising Services

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**From:** Lourdes Shahamiri

**Sent:** Monday, November 27, 2017 10:09 AM

**To:** Domenica Pearl <[dpearl@csusm.edu](mailto:dpearl@csusm.edu)>

**Subject:** RE: Biology in Catalog

Hi Domenica,

I've looked at our archives, including spring, fall 2017 addenda...and did not see CHEM 150L as part of the Biological Sciences major, including several past catalogs. You may want to check with the program chair regarding your question.

Take care,

Lourdes

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**From:** Domenica Pearl

**Sent:** Wednesday, November 22, 2017 10:47 AM

**To:** Lourdes Shahamiri <[lourdes@csusm.edu](mailto:lourdes@csusm.edu)>

**Subject:** Biology in Catalog

Lourdes,

I was looking at the Biology major (all concentrations) in the catalog and noticed CHEM 150L is no longer listed as a non-Biology supported course. Was this course removed from the major or is this a typo?

Thanks!

**Domenica Pearl, EdD**

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required physics and supporting courses elsewhere. All courses taken for the major, including supporting courses, must be completed with a grade of C (2.0) or better.

## Degree Requirements

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Either option for the Bachelor of Science in Applied Physics requires the completion of 120 semester units. As a part of each option, students are required to complete 51 units of General Education courses. Six (6) to nine (9) units of lower-division General Education, including the laboratory requirement in Area B (Math and Science), are automatically satisfied by combinations of CHEM 150, CS 111, MATH 160, and PHYS 201. The exact number of units satisfied in this way will depend on the option chosen. A minimum of eighteen (18) units in Physics must be completed at Cal State San Marcos.

## Applied Physics

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This option is intended for those students interested in pursuing graduate study, a career in teaching physics, or a career in industry involving the application of the principles of physics.

## General Education (51 Units)

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### General Education Requirements

## Preparation for the Applied Physics Option (39-40 Units)

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### Non-Physics Supporting Courses (24-25 Units)

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- CHEM 150 - General Chemistry Units: 4 †
- CS 111 - Computer Science I Units: 4 † ← Add CHEM 150L Units: 2
- MATH 160 - Calculus with Applications, I Units: 5 †
- MATH 162 - Calculus with Applications, II Units: 4 †
- MATH 346 - Mathematical Methods for Physics Units: 3

### Lower-Division Physics Courses (15 Units)

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- PHYS 201 - Physics of Mechanics and Sound Units: 4 †
- PHYS 202 - Physics of Electromagnetism and Optics Units: 4
- PHYS 203 - Modern Physics Units: 4
- PHYS 280 - Introduction to Electronics Units: 3

### Choose One of the Following Courses:

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- MATH 260 - Calculus with Applications, III Units: 4 †
- MATH 362 - Differential Equations Units: 3
  
- MATH 270 - Basic Discrete Mathematics Units: 3
- or
- MATH 370 Units: 3
  
- MATH 374 - Linear Algebra Units: 3

### Note:

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program are also extremely qualified to pursue advanced degrees in the fields of allied health, environmental and patent law, and all areas of biology. Employers in fields such as biotechnology, natural resources management, environmental monitoring, and research branches of the U.S. Government also seek graduates in biological sciences. The biological sciences degree program at Cal State San Marcos prepares its graduates to successfully pursue any of these opportunities and more.

## Preparation

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First-time freshman applicants must complete, with a grade of C (2.0) or better, a comprehensive pattern of college preparatory study totaling 15 units. For more details, see the section on [Admission and Application](#).

Transfer students entering the program at the junior and senior levels will be expected to have completed the equivalent of lower-division requirements elsewhere during their first two years, including three semesters of chemistry, two semesters of physics, one semester calculus, and one semester of statistics.

Pre-health professions students (pre-chiropractic, dental, medical, optometry, osteopathic, pharmacy, and veterinary) are recommended to take [BIOL 210](#), [BIOL 211](#), [BIOL 351](#), [BIOL 352](#), [BIOL 353](#), two semesters of physics, and several chemistry courses.

## Special Conditions for the Bachelor of Science and the Minor in Biological Sciences

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All courses counted toward the major and the minor, including Preparation for the Major courses, must be completed with a grade of C (2.0) or better. No more than a total of eight (8) units of any combination of [BIOL 488](#) (4 units only), [BIOL 489](#) (4 units only), [BIOL 495](#) (3 units only), [BIOL 496](#) (2 units only), [BIOL 498](#) (2 units only), and [BIOL 499](#) (2 units only) may be applied toward the major. A minimum of eighteen (18) units in biology must be completed at Cal State San Marcos.

## General Education (51 Units)

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### General Education Requirements

## Preparation for the Major (41 Units)

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### Lower-Division Biology Courses (15 Units)

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- [BIOL 210 - Introduction to Cellular and Molecular Biology](#) Units: 4
- [BIOL 211 - Introduction to Organismal and Population Biology](#) Units: 4
- [BIOL 212 - Evolution](#) Units: 3
- [BIOL 215 - Experimental Design and Statistical Analysis](#) Units: 4

### Non-Biology Supporting Courses (26 Units)

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- [CHEM 150 - General Chemistry](#) Units: 4
  - [CHEM 160 - General Chemistry II](#) Units: 3
  - [CHEM 201 - Organic Chemistry](#) Units: 3
  - [CHEM 201L - Organic Chemistry Laboratory](#) Units: 2
  - [MATH 160 - Calculus with Applications, I](#) Units: 5
- ← Add CHEM 150L Units: 1

## Choose One of the Following Course Sequences:

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- [PHYS 101 - Introduction to Physics I](#) Units: 4
  - [PHYS 102 - Introduction to Physics II](#) Units: 4
- or
- [PHYS 205 - Physics for the Biological Sciences I](#) Units: 4



**BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES**

General Education*	51
Preparation for the Major*	41
Core Requirements	17
Concentration Requirements	19

**Students must take a sufficient number of elective units to bring the total number of units to a minimum of 120\*\***

\*Nine (9) lower-division GE units in Area B (Math and Science) are automatically satisfied by courses taken in Preparation for the Major.

\*\*Students who plan on applying to graduate or professional school are strongly recommended to take MATH 162 as an elective.

**Preparation for the Major**

Lower-Division Biology Courses (15 units)	
BIOL 210	4
BIOL 211	4
BIOL 212	3
BIOL 215	4

Non-Biology Supporting Courses (26 units)	
CHEM 150 + 150L	5
CHEM 160	3
CHEM 201	3
CHEM 201L	2
MATH 160	5

Choose one of the following course sequences:	
PHYS 101	4
PHYS 102	4
or	
PHYS 205	4
PHYS 206	4

**Core Requirements**

Upper-Division (17 units)	
BIOL 351	5
BIOL 352	4
BIOL 353	4
BIOL 354	4

**Molecular and Cellular Biology Concentration Requirements**

Upper-Division (19 units)	
Select three of the following courses	
(at least one must have a lab):	
BIOL 356	10-12
BIOL 357	
BIOL 365++	
BIOL 367	
BIOL 368/368L	
BIOL 370/370L	
BIOL 452	
BIOL 477/477L	
BIOL 480	
BIOL 503	
BIOL 504+	
BIOL 520+	
BIOL 531++	
BIOL 532++	
BIOL 537+	
BIOL 540+	

+ With consent of faculty advisor.

++ Only one of these courses may be used to fulfill the Molecular and Cellular Biology Concentration Requirements.

Upper-Division Science Electives	7-9
from any biology courses numbered 355-599. In addition, with consent of advisor may include PSYC 461 (no BB credit) or one course from the following list which will count for BB and elective credit:	
CS 305, 311	
CHEM 341, 351, 401, 402, 404	
PHYS 440	
MATH 362, 374, 441, 448, 464	
<b>Other courses may be approved with faculty consent.</b>	

**Ecology Concentration Requirements**

Upper-Division (19 units)	
Select three of the following courses	
(at least one must have a lab):	
BIOL 365++	10-12
BIOL 379	
BIOL 380/380L	
BIOL 381/381L	
BIOL 382	
BIOL 383	
BIOL 384	
BIOL 386/386L	
BIOL 387/387L	
BIOL 388	
BIOL 389	
BIOL 390/390L	
BIOL 400/400L	
BIOL 420	
BIOL 463	
BIOL 502+	
BIOL 505+	
BIOL 513	
BIOL 531++	
BIOL 532++	
BIOL 533+	
BIOL 535+	
BIOL 536+	
BIOL 540	

+ With consent of faculty advisor.

++ Only one of these courses may be used to fulfill the Ecology Concentration Requirements.

**MINOR IN  
BIOLOGICAL SCIENCES**

Lower-Division (17 units)

	<b>Units</b>
CHEM 150 + 150 L	5
BIOL 210	4
BIOL 211	4
BIOL 215	4

Upper-Division (17 units)

	<b>Units</b>
BIOL 351	5
BIOL 352	4
BIOL 353	4
BIOL 354	4
<b>Total Units</b>	<b>34</b>



**Preparation**

Freshman applicants must complete a comprehensive pattern of college preparatory study totaling 15 units with a grade of C (2.0) or better. Transfer students entering at the junior and senior level will be expected to have completed the equivalent of lower-division requirements elsewhere, including two semesters of biology, four semesters of chemistry, two semesters of physics, one semester of college-level calculus, and one semester of statistics.

**Special Conditions for the Bachelor of Science in Biotechnology**

All courses counted toward the major, including Preparation for the Major courses, must be completed with a grade of C (2.0) or better. A minimum of eighteen (18) units in biotechnology must be completed at CSUSM.

Biotechnology majors are permitted to earn the Minor in Biology. Biotechnology majors also pursuing the Minor in Biology may use either Genetics (BIOL 352) or Comparative Animal Physiology (BIOL 353), but not both, to fulfill part of the 7 elective units required for the Biotechnology degree requirement. These students must also take 12 additional units in Biology, exclusive of coursework applied to the Major, in order to earn the Minor. Departmental advisors will provide information on recommended additional coursework.

**BACHELOR OF SCIENCE IN BIOTECHNOLOGY**

	<b>Units</b>
General Education*	51
Preparation for the Major*	35-36
Requirements for the Major*	49
<b>Total Required 120</b>	

\*Nine (9) lower-division GE units in Area B (Math and Science) are automatically satisfied by combinations of CHEM 150, MATH 160, and BIOL 211 when taken in preparation for the major. Three (3) lower-division GE units in Area D (Social Sciences) are automatically satisfied by either PSYC 100 or SOC 101, which are also required in preparation for the major. Three (3) upper-division GE units in Area BB (Mathematics and Natural Sciences) are satisfied by students taking either CHEM 351 or CHEM 341.

**Preparation for the Major**

(35-36 units)

CHEM 150 & 150L	5
CHEM 160	3
CHEM 201	3
CHEM 201L	2
CHEM 202	3
MATH 160	5
PHYS 205	4
PHYS 206	4
PSYC 100 or SOC 101	3-4
PHIL 315, 340, or 345	3

**Major Requirements**

Lower-Division (18 units)

ACCT 201	_____
ACCT 202	_____
BIOL 210	_____
BIOL 211	_____
BIOL 215	_____

Upper-Division (20 units)

BIOT 355	_____
BIOT 356	_____
BIOT 357	_____
BIOT 460	_____
CHEM 341 or CHEM 351	_____
MGMT 302	_____
MKTG 302	_____

Electives (At least 11 units)

Select any of the following for at least eleven total units:

BIOL 352	_____
BIOL 353	_____
BIOL 367	_____
BIOL 477	_____
BIOL 489	_____
BIOL 503	_____
BIOL 504	_____
BIOT 358	_____
BIOT 420	_____
BIOT 450	_____
BIOT 497	_____
BIOT 498	_____
CHEM 351L	_____
CHEM 352	_____
FIN 302	_____
MIS 411	_____
MIS 425	_____
MIS 426	_____
MGMT 415	_____
MGMT 452	_____
MGMT 461	_____
MIS 302	_____
OM 302	_____