

**Liberal Studies Major with  
Science Emphasis (60-63 units)**

All courses, except LS 498, must be taken for a letter grade and cannot be taken CR/NC.

**Table 1: Core Subject Area - Liberal Studies (4 units total)**

CODE	COURSE INFORMATION	Term	Grade
Pre-major or Major	<b>Introduction to Liberal Studies</b> (3 units) LS 300 (field experience required) (prerequisite – ED 200)		
Major only	<b>Assessment in Liberal Studies</b> (1 unit) LS 498 (prerequisite: LS 300)		

**Table 2: Core Subject Area - Math and Science (10 units total)**

CODE	COURSE INFORMATION	Term	Grade
Major only	<b>Statistics and Probability in Elementary</b> (3 units) Math 312 (prerequisite – LS Math Proficiency Assessment)		
Major only	<b>Special Topics in Algebra, Geometry and Problem Solving</b> (3 units) Math 313 (prerequisite – LS Math Proficiency Assessment)		
Major only	<b>Processes and Inquiry in the Physical Sciences</b> (4 units) PHYS 412		

**Table 3: Core Subject Area - Social and Behavioral Science (3 units total)**

CODE	COURSE INFORMATION	Term	Grade
Pre-major or Major	<b>Linguistics and English</b> (3 units) LING 420		

**Table 4: Core Subject Area - Humanities (18 units total)**

CODE	COURSE INFORMATION	Term	Grade
Major only	<b>Children’s Literature</b> (3 units) ENGL 306A ( <i>must</i> be taken concurrently with ENGL 306W)		
Major only	<b>Advanced Composition</b> (3 units – grade of “C” or better satisfies GVAR) ENGL 306W ( <i>must</i> be taken concurrently with ENGL 306A)		
Pre-major or Major	<b>United States History for Teachers</b> (3 units) HIST 413 (prerequisite: WPA score of 8 <i>or</i> RWS 280/281 with a “C” or better)		
Major only	<b>World History</b> (3 units) HIST 411		
Pre-major or Major	<b>Visual/Performing Arts or Education</b> - choose <i>one course</i> from the following list: Art 387 or <del>Dance 302</del> or Music 343, or *Education 451/SPED 527 [SPED 527 by petition]:		
Pre-major or Major	<b>Visual/Performing Arts or Education</b> - choose <i>a second course</i> from the following list: Art 387 or <del>Dance 302</del> or Music 343, or *Education 451/SPED 527 [SPED 527 by petition]:		

\*only one ED/SPED class, not both, can be used in these areas [NOTE: SPED 500 is pre/co-requisite for SPED 527]

**Table 5: Science Focus Classes (17-19 units total)**

CODE	COURSE INFORMATION	Term	Grade
Pre-major or Major	<b>Physical Science</b> [Physics & Chemistry] (3 units) Natural Science100 [NOTE: this class is included in the lower division sequence, not the upper division]		
Pre-major or Major	<b>Grammar &amp; Usage for Writers</b> [required <i>only</i> for students who score <i>below</i> 8 on the WPA] (3 units) LING 253/RWS 253 (same class cross listed)		
Pre-major or Major	<b>Earth Science: Process and Inquiry</b> (4 units) GEOL 412		
Pre-major or Major	<b>Field Experience in Science</b> (1 unit) TE 211B		
Pre-major or Major	<b>Biology</b> – choose (A) or (B) below (3-4 units) A) BIOL 101 & BIOL 101L <i>or</i> B) BIOL 319 <i>or</i> BIOL 324 <i>or</i> BIOL 327		
Pre-major or Major	<b>Chemistry of Earth Science</b> (choose <i>one</i> class – 3-4 units) CHEM 100 [see adviser about units] or GEOL 303 [not recommended for students pursuing middle school]		

**Table 6: Science Option Classes (7-9 units total)**

	COURSE INFORMATION	Term	Grade
Pre-major or Major	<b>Physics</b> (3 units) PHYS 180A [recommended prerequisite: PHYS 412]		
Pre-major or Major	<b>Chemistry</b> (3 -5 units) CHEM 130 (3 units) or CHEM 200 (5 units) [prerequisite: CHEM 100]		
Pre-major or Major	<b>Physics</b> (1 unit) PHYS 182A [recommended co-requisite: PHYS 180A]		

**Table 7: Electives (e.g. credential program prerequisites)**

	COURSE INFORMATION	Term	Grade

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**Underlined upper division classes** are *not* open to Liberal Studies *pre*-majors. Footnotes in the *Class Schedule* contain information on enrollment restrictions for courses – please read them carefully when searching for classes.

**Table 8: Suggested Upper Division Course Sequence - Junior Year**

Junior Semester I	Units	Junior Semester II	Units
Intro. to Liberal Studies: LS 300 (field experience)	3	Topics in Elementary Math: Math 313	3
World History for Teachers: HIST 411	3	Chemistry: CHEM 130 or CHEM 200	3-5
*Visual/Performing Arts or Education	3	Introduction to Linguistics: LING 420	3
CHEM 100 or GEOL 303	4-3	Earth Science: GEOL 412 (spring only)	4
Grammar/Usage: LING/RWS 253 (if required)	0-3	Science Field Experience: TE 211B (spring)	1
<b>or</b>			
*Biology (if LING/RWS 253 is waived)	0-4	***remember international experience***	
	<b>15-17</b>		<b>14-16</b>

\*See reverse for choices.

**Table 9: Suggested Upper Division Course Sequence - Senior Year**

Senior Semester I	Units	Senior Semester II	Units
Senior Assessment: LS 498 (CR/NC only)	1	American History for Teachers: History 413	3
Statistics & Probability: Math 312	3	*Visual/Performing Arts or Education	3
Children’s Literature: English 306A	3	Physics: PHYS 180A <b>and</b> 182A	4
<b>and</b>		Elective (e.g. credential program prereq.)	3
Advanced Composition: English 306W	3	*Biology (if not completed earlier)	0-3
Process and Inquiry in Physics: PHYS 412	4	<b>or</b>	
		Elective (e.g. credential program prereq.)	0-3
	<b>14</b>		<b>16</b>

\*See reverse for choices.

NOTE: Natural Science 100 is a required LS major class, but it appears in the lower division sequence, not here.

**Liberal Studies with a Science Emphasis and Middle School Teaching**

Middle School Teaching with a Multiple Subject Credential: Students who complete the requirements for the Liberal Studies major with an Emphasis in Science, and subsequently earn a CA multiple subjects credential, qualify to teach both elementary school **and** science in middle school—provided they earn a C or better in each science course (see advisor). See Introductory Subject Matter Authorization (ISMA) in Science under Career Paths at [libst.sdsu.edu](http://libst.sdsu.edu) for more details.

Middle School with a Single Subject Credential: Very capable students may prefer to earn the slightly more desirable single subject credential in Foundational Level General Science (FLGS) as a pathway to teaching science in middle school. Students in the Liberal Studies Science Emphasis must choose BIOL 101 + 101L, CHEM 100, and CHEM 200 instead of the alternative courses, complete a satisfactory assessment portfolio, earn at most one grade below a C in their science courses, and either complete a single subject credential program or add a single subject authorization to their multiple subject credential by completing TE 914 on teaching single subject science. See Foundational Level General Science (FLGS) under Career Paths at [libst.sdsu.edu](http://libst.sdsu.edu) for details.

**Credential Program Testing Requirements and Prerequisite Courses**

- All multiple subject credential programs in California require both **CBEST** and **CSET**
- SDSU’s credential programs have additional course prerequisites. Please consult the Liberal Studies website for more information: [http://libst.sdsu.edu/advising/credential\\_program.html](http://libst.sdsu.edu/advising/credential_program.html)

**Table 10: Advising Notes**

Date	Adviser	Notes