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| **Transfer Model Curriculum (TMC) Template for Biology** | Template # 2014 |
| **CCC Major or Area of Emphasis:** Biology | Original: 02/01/2015 |
| **TOP Code:** 040100 |  |
| **CSU Major(s):** Biology |  |
| **Total Units:** 29 *(all units are minimum semester units)* |  |

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 TMC. If the course may be double-counted with either CSU-GE or IGETC, 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:

<http://extranet.cccco.edu/Divisions/AcademicAffairs/CurriculumandInstructionUnit/TransferModelCurriculum.aspx>

or the ASSIST website:

<http://web1.assist.org/web-assist/help/help-csu_ge.html>.

The units indicated in the template are the **minimum** semester units required for the prescribed course or list. All courses must be CSU 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 TMC 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;
* *CSU Baccalaureate Level Course List by Department* (***BCT***) for the transfer courses; and/or,
* *CSU GE Certification Course List by Area* (***GECC***).

The acronyms ***AAM, BCT,*** 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>.

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| **Associate in Science in Biology for Transfer Degree**  **College Name:** **Los Medanos College** | | | | | | |
| **TRANSFER MODEL CURRICULUM (TMC)** | | **COLLEGE PROGRAM REQUIREMENTS** | | | | |
| **Course Title (units)** | **C-ID Descriptor** | **Course ID** | **Course Title** | **Units** | **GE Area** | |
| **CSU** | **IGETC** |
| **REQUIRED CORE:** (8-12 units)  **Select 1 of 2 options** |  |  | | | | |
| **Option 1** |
| Biology Sequence for Majors (8) | BIOL 135S | BioSc-020  BioSc-021 | Principles of Biology: Cellular Processes  Principles of Biology: Organismal | 5  5 | B2,B3  B2,B3 | 5B  5B |
| **OR** |  |  | | | | |
| **Option 2** |
| Cell and Molecular Biology (4)  **AND** | BIOL 190 |  |  |  |  |  |
| Organismal Biology (4)  **OR**  Organismal Biology, Ecology and Evolution (8)  **OR**  Zoology/Animal Diversity and Evolution (4)  Botany/Plant Diversity and Ecology (4) | BIOL 140  **OR**  BIOL 130S  **OR**  BIOL 150  **AND**  BIOL 155 |  |  |  |  |  |
| **LIST A:** (21-22 units) |  |  | | | | |
| General Chemistry for Science Majors Sequence A (10) | CHEM 120S | Chem-025  Chem-026 | General College Chemistry  General College Chemistry | 5  5 | B1,B3  B1,B3 | 5A  5A |
| Single Variable Calculus I – Early Transcendentals (4)  **OR**  Single Variable Calculus I – Late Transcendentals (4)  **OR**  Calculus for Life and Social Sciences (3) | MATH 210  **OR**  MATH 211  **OR**  ***AAM*** | Math-050  OR  Math-037 | Calculus and Analytical Geometry I  Applied Calculus | 4  4 | B4  B4 | 2  2 |
| Algebra/Trigonometry-Based Physics A (4)  **AND**  Algebra/Trigonometry-Based Physics B (4)  **OR**  Calculus-Based Physics for Scientists and Engineers: A (4)  **AND**  Calculus-Based Physics for Scientists and Engineers: B (4)  **OR**  Algebra/Trigonometry-Based Physics: AB (8) | PHYS 105  **AND**  PHYS 110  **OR**  PHYS 205  **AND**  PHYS 210  **OR**  PHYS 100S | Phys-035  Phys-036  OR  Phys-040  Phys -041 | College Physics I  College Physics II  OR  Physics for Scientists and Engineers I  Physics for Scientists and Engineers II | 4  4  OR  4  4 | B1,  B3  B1,B3  OR  B1,B3  B1,B3 | 5A  5A  OR  5A  5A |
| **LIST B:** **Select one** (3-4 units)  Any course articulated as lower division preparation in the Biology major at a CSU. | ***AAM*** |  |  |  |  |  |
| **Total Units for the Major:** | **29** | **Total Units for the Major:** | | 32 |  | |
|  | | **Total Double-counted Units**  **(*The transfer GE Area limits must not be exceeded)*** | | | 9 | 10 |
| **\*General Education (CSU-GE or IGETC for STEM) Units** | | | **33** | **31** |
| **Elective (CSU Transferable) Units** | | | 4 | 7 |
| **Total Degree Units (maximum)** | | | **60** | |

**NOTES:**

1. **\*** This TMC presumes completion of IGETC or CSU-GE Breadth for STEM, allowing for completion of 6 units of non-STEM GE work after transfer.
2. Required Core Options 1 and 2 represent Options 1-4 on the TMC.
3. List B – Additional Major Preparation if possible based on unit limitation and required articulation exists (3-4 units).