## AS-T Biology to B.S. Biology: Molecular Biology Concentration 2022-2023

This pathway is for students who have completed an AS-T in Biology with IGETC for STEM, and have sent official degree verification to CSUMB. The CSUMB pathway includes 6 units of lower-division GE (based on IGETC for STEM), the CSU American Institutions requirement, and 9 units of upper-division GE.

Transfer students who did not complete an Associate for Transfer in Biology should meet with the Biology academic advisor to update their individualized pathway in the "My Learning Plan" degree planner in Oasis.

Fall Junior Courses (15 units)	Course or GE Title	Units	GE/Major
BIO 330 or BIO 332 or BIO 341 or BIO 370	Physiology or Evolutionary Biol course	3	Conc
STAT 250	Applied Stats for Science & Tech	4	Major
CHEM 211 & CHEM 211L	Organic Chemistry I	3+2	Major
SL 210S or SBS 212S or HCOM 260S	D-Civics/SL course to complete American institutions and IGETC GE	3	DCSL, US2,3
Spring Junior Courses (13 units)	Course or GE Title	Units	GE/Major
BIO 311	Genetics	4	UDB, core
CHEM 310	Biochemistry I	3	Conc
BIO 320 or BIO 322	Microbiology or Plant Pathology	4	Rsch Meth #1
BIO 301	Research & Tech Writing in Biology	2	GWAR, Core
Fall Senior Courses (17 units)	Course or GE Title	Units	GE/Major
BIO 378S or BIO 379S	Biology-related service learning	3	UDSL, Major
BIO 320, 322, 330. 332, 341, 344L, 370, 380,410,412, 413,414,421,430,444,461,or CHEM 350, CHEM 410, or MSCI 331	Additional Molec Biol core course not counted previously for other requirement	4	Conc
BIO 320 or 322 or 344L or 380 or 425 or 430 or 444 or 461 or CHEM 310L or CHEM 350	Additional BIO Research Methods	4	Rsch Meth #2
Group A Elective	Major elective from Group A	3	Conc
Lower-division GE area C and World Culture and Language requirement	Language other than English	3	C2, WCL
Spring Senior Courses (15 units)	Course or GE Title	Units	GE/Major
Group A Elective	Major elective from Group A	3	Conc
Upper-division Arts or Humanities	UD C	3	UDC
HCOM 353 or SBS 350	UD Social Science US history and CSUMB ethnic studies requirement	3	UDD, US1, ES*
BIO 412 or 413 or 414 or CHEM 410 OR BIO 492 and one of (BIO 410 or 421 or 425 or 444 or 461) OR MSCI 410 and BIO/MSCI 430 OR	Integrative Learning (Constant)		
BIO 491 <i>and</i> 3 units of (BIO 397 or 494 or 497 or RSCH 394)	Integrative Learning (Capstone) course or course combination	3-5	Conc
Electives as needed to reach 120 units	As needed to reach 120 units	1-3	Elective if needed
	Total Molec Biol AS-T pathway:	60	

<sup>\*</sup>Note: Transfer students with catalog rights to a GE catalog prior to fall 2021 must complete CSUMB's Ethnic Studies (ES) requirement.