Baccalaureate Degree Program Application

A. BDP Application Instructions and Specifications

The following instructions prescribe the content needed for the submission of a Baccalaureate Degree Program application to be considered for the first application cycle of 2022. All questions must be answered and all requested data must be supplied. You are encouraged to save your application content in a separate document and to copy/paste narrative portions of the application within this online application.

As you are completing this form, you can save your work and return to complete later. To do so, the form contains a “Save and Continue” phrase located at the top right portion of each page. In order to save information on a specific page, you must advance to the next page and click the “Save and Continue” phrase. Follow the instructions on the screen.

Required BDP Documentation Per Education Code
As specified in Education Code Section 78042 of Article 3 of Chapter 1 of Part 48 of Division 7 of Title 3, Baccalaureate Degree Program applicants are required to submit the following documentation:

1. Has your district submitted evidence of approval to offer the proposed baccalaureate degree programs through the Accrediting Commission for Community and Junior Colleges (ACCJC)?

☐ Yes ☒ No

2. Is a system in place for the district to maintain separate records for students who are enrolled in courses classified in the upper division and lower division of the proposed baccalaureate degree program?

☒ Yes ☐ No

3. Will students in the proposed baccalaureate degree program be reported as a community college student for enrollment in a lower division course and as a baccalaureate degree program student for enrollment in an upper division course?

☒ Yes ☐ No

B. Baccalaureate Degree Program Application

This page collects the required documentation needed for proposed Baccalaureate Degree Programs.

As specified in Education Code Section 78042 of Article 3 of Chapter 1 of Part 48 of Division 7 of Title 3 and the California Community Colleges Chancellor's Office Program and Course Approval Handbook, 7th Edition, all Baccalaureate Degree Program applicants are required to submit the following documentation:

4. Program Goals and Objectives – Please submit documentation regarding unmet workforce needs specifically related to the subject area of the proposed baccalaureate degree program. Documentation may address transfer preparation. Refer to the California Community Colleges Chancellor's Office Program and Course Approval Handbook, 7th Edition, pp. 93-95 for a discussion of Labor Market Information analysis and considerations.

The Bureau of Labor Statistics (BLS) *Occupational Outlook Handbook* projects 11% job growth among clinical laboratory technician and technologist occupations between 2020 and 2030. This accounts for 36,500 additional job openings nationwide for clinical laboratory technologists and technicians, not including vacancies due to retirements or resignations. This growth rate is faster than the average projected growth rate among all occupations.[1] The BLS also indicates that the aging population is expected to lead to a greater need to diagnose medical conditions through laboratory procedures. Furthermore, the American Society for Clinical Pathology's (ASCP) latest vacancy survey (2018) revealed vacancies in the field were at their highest levels since the organization began the survey.[2] The increased demand and growing vacancies emphasize the importance of recruiting highly qualified histotechnologists, an occupation that requires a baccalaureate degree.

Mt. San Antonio College (Mt. SAC) is located in eastern Los Angeles County, where San Bernardino, Orange, and Los Angeles Counties converge. Commuter students from these counties, as well as nearby Riverside County, enroll at Mt. SAC. In addition, graduates of the histotechnology program are employed by hospitals and medical facilities in these counties. The following table shows the projected need for clinical laboratory technologists and technicians in these counties, as well as California as a whole, in the coming years. In this region, the demand for these occupations is projected to grow by 17.8% by 2028 (based on 2018 benchmark data), an increase of 2,280 positions, with the highest growth in Orange County. In fact, the Mt. SAC region will account for 41% of the projected statewide growth in this occupational area.

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[1] Bureau of Labor Statistics, U.S. Department of Labor. (2021). Occupational outlook handbook*: Clinical laboratory technologists and technicians*. https://www.bls.gov/ooh/healthcare/clinical-laboratory-technologists-and-technicians.htm

[2] Garcia, E., Kundu, I., Kelly, M., & Soles, R. (2019). The American Society for Clinical Pathology's 2018 vacancy survey of medical laboratories in the United States. *American Journal of Clinical Pathology, 152*(2), 155-168. https://doi.org/10.1093/ajcp/aqz046

Regional and Statewide Occupational Projections of Employment in Clinical Laboratory Technologists and Technicians, 2018-2028[3]					
Area	Employment		Change		Total Job Openings
	Est.	Proj.	#	%	
Los Angeles County	8,500	9,870	1,370	16.1	7,160
Orange County	2,580	3,180	600	23.3	2,410
Riverside & San Bernardino Counties*	1,740	2,050	310	17.8	1,500
California	28,500	34,000	5,500	19.3	25,200

Note: The EDD combines Riverside and San Bernardino Counties into a single metropolitan statistical area for this report.

The Bureau of Labor Statistics (BLS) groups all clinical laboratory technologists and technicians together into a single occupational category. The ASCP's April 2021 report, "The Clinical Laboratory Workforce: Understanding the Challenges to Meeting Current and Future Needs," explains that this broad group of occupations as defined by BLS shows the national average for annual salaries ranges from $30,920 to $81,530. However, this category encompasses occupations that may require anywhere from on-the-job training all the way up to a master's degree with specialized certifications.[4] California's Employment Development Department (EDD) also groups this wide range of occupations into a single category.

The ASCP conducts regular wage surveys of those practicing in the field. These survey results provide greater context to the potential earnings of histotechnologists. The most recent survey, "2019 Wage Survey of Medical Laboratories in the United States," revealed that the national average hourly wage for staff-level histotechnicians (AS degree-level) is $27.60. To advance up the ranks among histotechnicians, most facilities desire histotechnicians who hold baccalaureate degrees. A supervisor-level histotechnician earns an average hourly wage of $33.78, while histotechnician managers earn an average hourly wage of $43.51/hour. One should note that California pays the highest wages among histotechnicians of any state, with an average rate across all levels of $37.52/hour. The potential wage gains for histotechnologists in California who hold a bachelor's degree is greater than anywhere else in the country.[5]

[3] California Employment Development Department, Labor Market Information Division. (2020). *2018-2028 occupational employment projections: Clinical laboratory technologists and technicians*. https://www.labormarketinfo.edd.ca.gov/data/employment-projections.html

[4] Garcia, E. C., Kundu, I., Kelly, M. A., Guenther, G. A., Skillman, S. M., & Frogner, B. K. (2021). *The clinical laboratory workforce: Understanding the challenges to meeting current and future needs*. American Society for Clinical Pathology and Center for Health Workforce Studies. https://ascpcdn.s3.amazonaws.com/static/ISTP/ASCP_UW_Clinical+Laboratory+Workforce_Report_2021.pdf

[5] Garcia, E., Kundu, I., & Fong, K. (2020). American Society for Clinical Pathology's 2019 wage survey of medical laboratories in the United States. *American Journal of Clinical Pathology, 155*(5), 649-673. https://doi.org/10.1093/ajcp/aqaa197

In addition, Mt. SAC's various employer partners, many of whom sit on the program's industry advisory committee, have also expressed support for a baccalaureate degree program and the need for highly trained histotechnologists. While facilities hire individuals with associate degrees for histotechnician positions, career advancement to supervisor positions is limited to those who hold a baccalaureate degree. Those who do not require a baccalaureate degree consider both a BS and histotechnology (HTL) certification as preferred qualifications among applicants. Please see attached letters of support.

5. Expertise, Resources, and Student Interest – Please submit documentation of the district's expertise, resources, and student interest to offer a quality baccalaureate degree program in the proposed field of study.

In 2001, Mt. San Antonio College (Mt. SAC) embarked on the development of an Associate of Science (AS) Degree in Histotechnology. Twenty years later, Mt. SAC is the only college in California that offers an AS Degree in Histotechnology. The program prepares students for entry-level employment as histotechnicians in a variety of settings, including clinical, veterinary, forensic, marine biology, and research laboratories. It also serves as a pathway for career advancement in specialized areas in histotechnology. The program stresses histotechnology theory, practical application, and the development of job skills. It is designed to enhance the ability of students to reason, understand, and apply correct principles of histotechnology by teaching analytical and critical thinking skills as opposed to rote learning. In addition to lecture and laboratory classes on campus, students participate in work experience in affiliate histology laboratories.

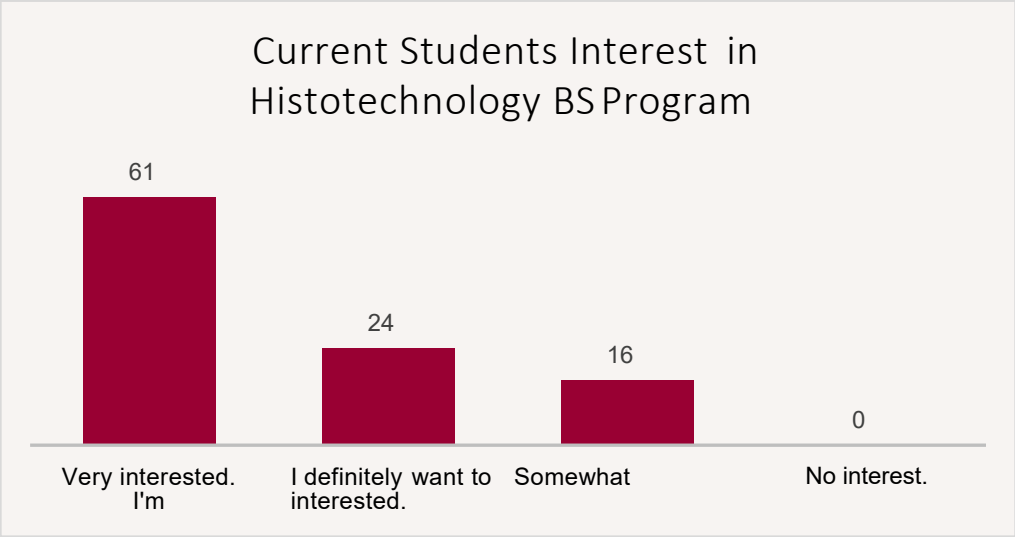
Under the direction of Jennifer MacDonald, HT (ASCP), and with a strong and active industry advisory committee, the program has become one of the largest histotechnology programs in the country. With a cumulative pass rate of 90% on the ASCP histotechnician certification exam on the first attempt (compared to the national rate of 77%[7]) and a long wait list each year, the program is in great demand. It supplies many of the region's hospitals and research institutions with well-trained, competent histotechnicians. The following table provides the number of Associate of Science Degrees in Histotechnology awarded in the past five years at Mt. SAC.

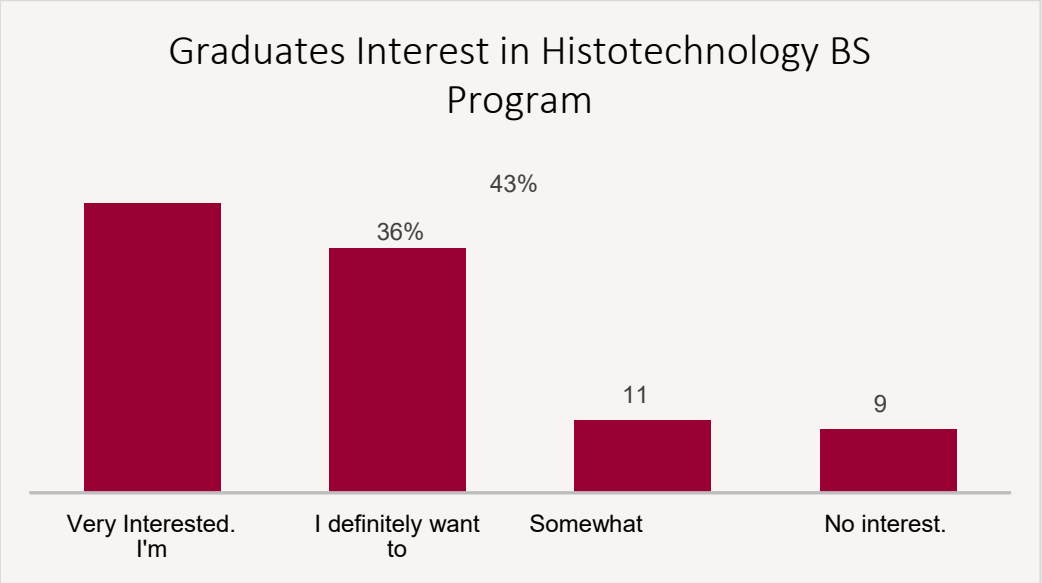
Histotechnology AS Degrees Awarded at Mt. SAC[6]	
Year	**#**
2016-17	23
2017-18	17
2018-19	19
2019-20	11
2020-21	26
Five-year Total	*96*

[6] Mt. San Antonio College. (2021). *Argos report*.
[7] American Society for Clinical Pathology. (2021). *ASCP Board of Certification 2020 examination statistics for ASCP credential*. https://www.ascp.org/content/docs/default-source/boc-pdfs/boc_statistical_reports/exam-stats-2020.pdf?sfvrsn=4

Since January 2005, the Mt. SAC histotechnician program has met the certification requirements mandated by the ASCP Board of Registry. Applicants who wish to take the ASCP Board of Registry exam for histotechnician certification must either complete a histotechnician training program accredited by the NAACLS or achieve an associate degree and have one year of experience in a histotechnology laboratory. The histotechnician training program at Mt. SAC was awarded NAACLS accreditation in 2003. Graduates of this program meet the certification requirements mandated by the ASCP. During the latest accreditation cycle in 2020, the histotechnology program received the maximum ten-year accreditation.

In the fall of 2021, the program director surveyed current students and graduates of the AS in Histotechnology Program at Mt. SAC. Among current students who responded to the survey, 100% indicated some level of interest in the proposed baccalaureate, with 61% of students “very interested.” Similarly, among program graduates, 91% of respondents indicated some level of interested in a BS degree program at Mt. SAC, with with 43% “very interested.” Among these same graduate respondents, 52% stated that the lack of a bachelor’s degree has prevented them from career advancement. Moreover, 52% of graduate respondents indicated that they had been turned down for a job or did not apply for a job because the position required a bachelor’s degree. Students have expressed a desire for a baccalaureate degree program in histotechnology in order to gain additional relevant skills in the field and improve their ability to advance within the profession.





Mt. SAC has a long and solid history of implementing local, state, and federal initiatives that require extensive planning, curriculum development, program implementation, and establishing and reporting on benchmarks. While the college has never piloted a baccalaureate degree, it has created numerous new associate degree programs that address emerging needs and industry demands. We also have worked with university partners to develop transfer programs that enable Mt. SAC students to fast-track to a baccalaureate degree while completing coursework on the Mt. SAC campus or online. Such collaborations include BS Degrees in Health Care Management, Radiological Sciences Management and Education, and Aviation Management with Southern Illinois University, and a BS Degree in Nursing with Mount St. Mary's University.

The lead faculty members in the curriculum development and implementation of the proposed BS program are Jennifer MacDonald and Dr. Carmen Rexach. These and other faculty members involved in the program have worked at the department, college, and state levels to determine transfer pattern course articulation, determine course outline comparison and evaluation, write curriculum, and revise curriculum. Since 2001, Ms. MacDonald HT (ASCP) has coordinated the histotechnician program at Mt. SAC, teaching all histotechnology courses and leading the efforts to secure NAACLS accreditation. Prior to her career in education, Jennifer was the Anatomic Pathology Manager at San Antonio Community Hospital. She obtained her degree in Canada where she worked in all areas of the clinical laboratory, including histology.

Dr. Rexach holds an undergraduate degree from UCLA, a Master's Degree in the Pathophysiology of Human Disease from CSU Stanislaus, and a Ph.D. in Infectious Diseases Epidemiology from UC Davis, where she conducted research in Clostridium difficile colitis in pediatric patients. She is a member of the Infectious Diseases Society of America, where she sits on the Public Health Advisory Committee, a member of the American Academy of Clinical Anatomists, American Society for Microbiology, the American Public Health Association, and various international organizations supporting

research and clinical practice in infectious diseases. During her tenure at Mt. SAC, she authored the AS Degree in Public Health and the program's nine courses, as well as courses in pathophysiology, immunology, and genetics. She is also the author of the Certificate in Human Prosection. Together with Virginia Pascoe, she developed and maintains a cadaver lab on campus which provides prosected anatomical specimens for demonstration in the many sections of lower division anatomy we offer each term. Dr. Rexach was recognized by the American Medical Student Association (AMSA) as the recipient of the Women Leaders in Medicine Award in 2018.

Other esteemed faculty include Elizabeta Boyer Meyer, PhD and Carola Wright, PhD. Dr. Meyer holds two PhD's from Michigan State University; one in Biochemistry and the other in Toxicology from Michigan State University, and completed an NIEHS pre-doctoral fellowship 1991-1997. She has taught upper division courses in Biochemistry lecture and lab at MSU & CSU Fullerton, and courses in genetics for majors and non-majors. She has been a faculty member at Mt SAC since 2001, where her assignments include Anatomy, Physiology, and Cell and Molecular Biology, both lecture and lab, and genetics lecture. She has completed graduate level coursework in Human Prosection, Clinical Veterinary Toxicology, Pathology, Pathophysiology and Biochemistry.

Dr. Wright holds an undergraduate degree in Pharmacology from Germany and a Ph. D. in Biological Sciences from UCI Irvine, Department of Physiology and Biophysics. She has completed extensive graduate course work in the field of medical physiology, cell physiology, molecular biology and biochemistry and conducted research resulting in 4 publications in the American Journal of Physiology – cell physiology. Significant histology, including processing and staining of muscle cells, was an intricate part of her research, which she has continued during sabbatical leave. At MT SAC she has taught general biology for majors and non-majors, cell and molecular biology, microbiology and histotechnology.

The college is committed to providing the resources to make this program successful. Dr. Bill Scroggins, President & CEO, has encouraged this application, and his Cabinet has unanimously endorsed it. Do we want to include a table listing all of the individuals involved in the planning/preparation of the application?

Include a description of the resources (positions, etc.) that the college will commit to the program. Maybe reference the latter section that will provide more detail?

Mt. SAC maintains one of the most well-equipped, dedicated student histotechnology laboratories in the nation. It includes: 24 microtomy equipped workstations with microtomes and flotation baths, eight extra microtomes and flotation baths, six embedding stations, an automated stainer, an automated coverslipper, two grossing centers, a tissue processor, three cryostats, two chemical fume hoods, two automated cassette labelers, two slide labelers, a digital microscope, an antigen decloaker for immunohistochemistry stains, three drying ovens (one is high-capacity), heating plates and surface thermometers for *in situ* hybridization, two water baths, 26 student

microscopes, one teaching microscope, microscope projection equipment, two paraffin dispensers, four dedicated staining stations, humidity chambers for immunohistochemistry staining, a centrifuge, and a cytocentrifuge. As needed when the BS program grows, the college will expand the laboratory space and equipment with growth funds, instructional equipment allocations, new resource allocations, grant requests, and/or enhanced partnerships with employers.

The existing AS Degree Program in Histotechnology is highly successful, with a 90% success rate on the first attempt at certification among program graduates, a long wait list, and a demand from graduates and employers for baccalaureate-level training, validated by labor market data. The college has faculty with a wealth of experience, administrative support from the highest level, existing resources and a commitment to expand those resources to grow the BS program, and robust student support services.

Mt. SAC Library supports students with online and face-to-face reference services, one-on-one research consultations, transferrable credit classes, and an array of course-integrated and drop-in information literacy instruction. The Library provides 24/7 support and access to online resources. Robust resources currently available to support Histotechnology include access to general academic and specialized databases, more than **??** eBooks, and streaming videos. The library subscribes to databases and journals which include nearly **??** e-journals to support the subjects covered in this degree. Many of our existing resources collected to meet the needs of lower-division curriculum will also support the BS program. The college is committed to supporting the addition of library resources as necessary to support upper division curriculum. Academic support centers such as the Technical Education Resource Center (TERC) and the STEM Center are also widely used by histotechnology students.

Mt. SAC and the program are in excellent standing with their accrediting bodies. The college also has highly qualified faculty to teach the discipline-specific courses as well as any potential upper-division general education courses that may be developed. Mt. SAC is well-positioned to offer a baccalaureate degree program and looks forward to this potential opportunity.

6. Similar Programs at Other Colleges in Service Area – Please submit a written statement supporting the necessity of a four-year degree for the proposed baccalaureate degree program in the local community or region of the district.

Mt. SAC offers the only histotechnology associate degree program in the state. Merritt College, in Oakland, also offers a histotechnician certificate of achievement program. These are the only two programs among California's community colleges that have received accreditation by the NAACLS. While the program at Mt. SAC is in high demand, graduates are limited in their options for career advancement in the histotechnology profession. Only a handful of baccalaureate programs in histotechnology exist in the entire United States, none of which are located in California or even west of Texas. (See https://www.naacls.org/Find-a-Program.aspx for a searchable database of accredited histotechnology programs.)

In order to meet the statewide demand, with the encouragement of the program's advisory committee, the program director has contacted local universities to inquire about a joint program that would allow students completing their training at Mt. SAC to obtain a baccalaureate degree in histotechnology, a degree needed for top-level positions in the field. At different points over the past 14 years, she has approached California State Polytechnic University, Pomona, California State University (CSU), Dominguez Hills, University of California (UC), Irvine, and Loma Linda University. No UC, CSU, or private university has demonstrated an interest in adding a baccalaureate degree in histotechnology to their offerings. Please see attached letters of support from CSUs and UCs.

A baccalaureate degree program at Mt. SAC would help to address the demand to fill the projected 25,200 job openings for clinical laboratory technologists/technicians throughout the state in the coming decade.

C. Baccalaureate Degree Program Application (Cont.)

7. Catalog Description – Please include program requirements, prerequisite skills or enrollment limitations, student learning outcomes, and information relevant to the proposed baccalaureate degree program's goal(s).

The Bachelor of Science in Histotechnology Program at Mt SAC prepares students for a career in medical diagnostics by training them to prepare and evaluate tissues on a macroscopic and microscopic level and by developing strong supervisory and leadership skills necessary for high level management positions in a laboratory setting. In addition to performing complex tissue specimen preparations in the laboratory, students will complete courses in biochemistry, microbiology, anatomy and physiology, advanced histotechnology, histology and cytology, pathophysiology and anatomic pathology, advanced microscopy, and medical ethics. Clinical rotations and work experience provide opportunities to apply these skills, while courses in laboratory management, leadership, and professionalism will prepare them for supervisory and management positions. Completion of this program prepares students for certification by the American Society of Clinical Pathologists (HTL Exam).

BS Histotechnology SLO's

1. Students will demonstrate competence and skill in all aspects associated with and practiced in a contemporary histotechnology laboratory.
2. Students will be able to prioritize and perform laboratory testing.
3. Students will be able to troubleshoot instrumentation problems and resolve-staining inconsistencies.
4. Students will be able to organize, supervise, and manage laboratory personnel and effectively manage a histotechnology laboratory.
5. Students will be able to implement quality control standards.
6. Students will be able to correlate clinical data with laboratory findings.
7. Students will be able to maintain accurate and complete records and communicate effectively orally and in writing with members of the health care team.
8. Students will be able to apply safety and government regulations and standards as applied to the histotechnology laboratory.
9. Students will demonstrate professional conduct and engage in continuing education and professional development.

8. Program Requirements – Please include a description of the proposed baccalaureate degree program's course requirements, faculty, facilities, and sequencing that reflects program goals. The GE pattern and the calculations used to reach the degree total must be shown following the program requirements table.

The following table shows the curriculum plan for the proposed Bachelor of Science Degree in Histotechnology.

Courses for BS Degree in Histotechnology Jan 2022

First Year			
Term	**Course #**	**Course Name**	**Units**
Summer	MATH 71	Algebra	*
Fall	MATH 110	Elementary Statistics	3
Fall	CHEM 10	General Chemistry for Allied Health Majors	5
Fall	HT 1	Intro to Histotechnology (8 wks)	1
Fall	HT 2	Scientific Basics for Histotechnicians	3
Fall	Lower Division GE (1)		3
Winter	Lower Division GE (2)		3
Winter	Lower Division GE (3)		3
Spring	BIOL 4	Biology for Majors	4
Spring	CHEM 20	Intro to Organic and Biochem	5
Spring	HT 12	Beginning Histotechniques	5
Spring	Lower Division GE (4)		3
Summer	ANAT 35	Anatomy	5
**Completion of MATH 71 or satisfactory score on the mathematics placement exam required for enrollment in the BS degree program.*			
Second Year			
Term	**Course #**	**Course Name**	**Units**
Fall	MICR 1	Principles of Microbiology	5
Fall	HT 10	Histology	5
Fall	HT 14	Advanced Histotechniques	5
Fall	Lower Division GE (5)		3
Winter	HT17	Clinical Rotations (work experience)	2
Winter	Lower Division GE (6)		3
Spring	ANAT 36	Physiology	5
Spring	HT16	Immunohistochemistry	3/4
Spring	Biol 8	Cellular and Molecular Biology	4
Spring	Lower Division GE (7)		3
Spring	Lower Division GE (8)		3

Summer	HT I7	Clinical Rotations (work experience)	2
Summer	Lower Division GE (9)		3

***Successful completion of all lower division AS degree requirements and admission to the BS in Histotechnology program are required for all upper division courses.**

Third Year			
Term	**Course #**	**Course Name**	**Units**
Fall	HT 300	Applied Immunology	3
Fall	Chem 300	Biochemistry	3
Fall	HT 302	Pathological basis of clinical medicine	2
Fall	HT 312	Ethics & professional development in the lab	3
Fall	Upper Division GE		3
Winter	Upper Division GE		3
Spring	HT 320	Anatomical Pathology lecture1	3
Spring	HT 322	Anatomical Pathology lab I	2
Spring	HT 308	Essentials of Hematology	3
Spring	HT330	Forensic Histopathology*	3
**See suggestions for electives following these tables.*			

Fourth Year			
Term	**Course #**	**Course Name**	**Units**
Summer	Upper Division GE		3
Fall	HT 424	Anatomical Pathology lecture 2*	3
Fall	HT 426	Anatomical Pathology lab 2*	2
Fall	HT 404	Cytology and Histopathology	3
Fall	HT 432	Histotechnology applications in research	3
Winter	Upper Division GE		3
Spring	HT 406	Pathobiology of cancer and angiogenesis*	3
Spring	HT440	Advanced microscopy*	5
Spring	HT 410	Laboratory Management	2
Spring	HT 399	Special topics in Histotechnology	1
**Electives in the major*			

Requirements for Degree:

Completion of the lower division AS in Histotechnology courses

Application and admission to BS program

Completion of courses as indicated below:

- Total number of lower division units in major = 63
- Total number of lower division GE units in 5 subject areas = 27-28
- Total number of upper division units in the major 28-31
- Total number of upper division electives in the major (choose 3) = 8-10
- Total number of upper division required units in the major (28-31 + 8 -10) = 36-41
- Total number of upper division GE required = 9 units

Total number of units for the degree = 63+ (27-28) +(36-41) + 9 = **135-141**

Electives within the major may include (choose 3):

Forensic Histopathology
Anatomical Pathology II
Anatomical Pathology Lab II
Pathobiology of Cancer and Angiogenesis
Advanced Microscopy

In addition to the program-specific coursework, students will also complete the general education requirements, including the following. Note that the requirements for Area B will be met with the program coursework.

- Area A: The English Language and Critical Thinking (9 units)
- Area B: The Physical Universe and Life (9 units)
- Area C: Arts, Literature, Philosophy and Foreign Languages (9 units)
- Area D: Social, Political, and Economic Institutions and Behavior; Historical Background (9 units)
- Area E: Lifelong Understanding and Self Development (3 units)

9. Administrative Plan – Please submit the administrative plan for the proposed baccalaureate degree program, including, but not limited to, the governing board of the district's funding plan for its specific district.

Mt. San Antonio College's strong current and projected financial position will provide sufficient financial resources to support baccalaureate program planning, implementation, curriculum development, and professional development. New curriculum will be created through the college's curriculum development and approval process managed by the Educational Design Committee and overseen by the Curriculum and Instruction Council. These shared governance bodies provide for the academic integrity and quality of all new courses and programs. Mt. SAC's Professional and Organizational Development (POD) team will seek funding as necessary to provide additional or specialized training for the baccalaureate program.

The Histotechnology Associates degree program is equipped to meet the resource requirements for a Histotechnology Baccalaureate degree program. As mentioned earlier, Mt. SAC maintains one of the most well-equipped, dedicated student histotechnology laboratories in the nation. It includes: 24 microtomy equipped workstations with microtomes and flotation baths, eight extra microtomes and flotation baths, six embedding stations, an automated stainer, an automated coverslipper, two grossing centers, a tissue processor, three cryostats, two chemical fume hoods, two automated cassette labelers, two slide labelers, a digital microscope, an antigen decloaker for immunohistochemistry stains, three drying ovens (one is high-capacity),

heating plates and surface thermometers for *in situ* hybridization, two water baths, 26 student microscopes, one teaching microscope, microscope projection equipment, two paraffin dispensers, four dedicated staining stations, humidity chambers for immunohistochemistry staining, a centrifuge, and a cytocentrifuge. As needed when the BS program grows, the college will expand the laboratory space and equipment with growth funds, instructional equipment allocations, new resource allocations, grant requests, and/or enhanced partnerships with employers.

In order to ensure student in the program have appropriate student support services to maximize student success, Mt. San Antonio College has ample support staff in the areas of financial aid and scholarships, career exploration and internships, ACCESS, and tutoring including the TERC or STEM Center. Mt. SAC students receive support in admissions, evaluation, counseling, and tutoring to provide critical elements to student success, including completion of the matriculation process,

D. Baccalaureate Degree Program Application (Cont.)

10. Master Planning – Explain how the proposed baccalaureate degree program fits into the mission, curriculum, and master planning of the college and higher education in California. Please submit documentation that verifies how your district maintains the primary mission of the California Community Colleges specified in paragraph (3) of subdivision (a) of Section 66010.4 of article 2 of chapter 2 of division 5 of title 3 of the California Code of Regulations. As part of a proposed baccalaureate degree program, your district shall demonstrate how its mission provides a high-quality undergraduate education at an affordable price for students and the state.

The proposed baccalaureate degree program provides students with a degree which leads directly to high wage employment and the status of a Bachelor's degree which fulfills the college mission to "to support and empower all students in achieving their educational goals in an environment of academic excellence. Specifically, the College is committed to providing quality education, services, and workforce training so that students become contributing members of a diverse, sustainable, global society. The College pledges to serve students so that they may achieve their full educational potential for lifelong learning, for attaining associate degrees and certificates, for employment, and for the completion of career and transfer pathways. The College will carry out this commitment by providing an engaging and supportive teaching and learning environment for students of diverse origins, experiences, needs, abilities, and goals. The College is dedicated to serving our community through improving economic achievement, advancing civic engagement, enhancing personal well-being, developing critical thinking, and enriching aesthetic and cultural experiences." Students who complete the baccalaureate program in Histotechnology will be prepared to enter the workforce at a high level of compensation, improving their socio-economic standing and providing them with a stable career path. These outcomes directly meet the mission of Mt. San Antonio College.

The baccalaureate program dovetails seamlessly with the A.S degree program in Histotechnology at Mt. SAC. Students who complete the lower division A.S. degree have met the GE requirements and science specific requirements which prepare them for the upper division courses needed to complete the B.S. degree requirements. Mt. SAC has existing curriculum for the A.S. program, and is building on the already created upper division course work—both in the discipline and G.E.s to allow students to complete a strong baccalaureate program. The curriculum at both levels is guided by standards set by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) and professional level competencies set by the American Society of Clinical Pathology.

The baccalaureate program in Histotechnolgy is a featured goal of the 2018 Mt. San Antonio College Master Plan update. The college has been planning to apply for, and support if awarded, the ability to offer a B.S. in Histotechnology. Planning for Institutional Effectiveness (PIE) has included support for this new program since 2017. The college has positioned itself to present a strong case for this application. Included in the planning is recognition of additional resources needed to support the program, including faculty, staff, equipment, and classroom/lab space. Curriculum supported in the Master Plan of 2018, has already been developed. If our application is accepted, Mt. SAC has planned and is ready to fully support the implementation of a Baccalaureate program.

AB 927 provides the opportunity for California Community Colleges to offer Baccalaureate Degrees in areas which are not currently served by Cal State Universities or the University of California System, particularly where there is high demand in the workforce for trained personnel to meet labor market needs. No other program exists in California, at UC or Cal State, or even private universities to meet the labor marked need that this Baccalaureate Degree in Histotechnology will meet. Our graduates will be in high demand, employable, and ready to fulfill the primary mission of California Community College and higher education as outlined below.
A Primary mission of the California Community Colleges is to advance California's economic growth and global competitiveness through education, training, and services that contribute to continuous work force improvement. Mt. San Antonio College's Baccalaureate Degree program in Histotechnology will be only the 5th such program in the nation. No other Baccalaureate program in Histotechnology exists within California. Creating this program will address both the economic growth of California and our global competitiveness by providing trained members of the workforce who are not found elsewhere in the state or region. Healthcare in California requires trained histotechnicians at both the technician (associate degree) and technologist (baccalaureate degree) levels. Our Associates and Bachelor's degree in Histotechnology will meet these needs for the state and region.

Tuition for the BS in Histotechnology would be approximately $11,000, compared to approximately $24,000 at a CSU and approximately $46,000 at a UC. This makes this

a much more streamlined affordable option for students obtaining a baccalaureate degree to advance their career in Histotechnology.

11. Enrollment and Completer Projections – Please submit annual enrollment projections for the proposed baccalaureate degree program.

The current program accepts 24 students per year, with zero attrition once students begin the second half of the program, and very little attrition overall. Many of these students will transition into the baccalaureate program as the survey indicates. Returning graduates will also populate the classes. The program classes typically fill within the first 24 hours of registration. We anticipate similar enrollment in the baccalaureate degree program.

12. Place of Program in Curriculum/Similar Programs – Please explain how the proposed baccalaureate degree program fits in the college's existing program inventory.

Students can begin their natural sciences journey through our dual enrollment program serving 29 local high school students. Students enrolled in the current associate degree program can transition smoothly into the baccalaureate degree program. Graduates of the program will also be able to transition into the program. Mt. SAC students currently enrolled in a medical/science major can apply for the BS degree in Histotechnology.

E. Baccalaureate Degree Program Application (Cont.)

13. Program Transitions or Transfer – Please describe how the proposed baccalaureate degree program allows for students to transition to associate degree programs and transfer to other four-year institutions if needed.

Students who complete the AS degree in Histotechnology are prepared to enter the workforce at entry level positions. They can also apply for admission into the BS program or transfer to a four-year school without much additional coursework.

Students who enter the Histotechnology baccalaureate program upon completion of the AS degree in Histotechnology will have completed substantial GE requirements and a broad spectrum of introductory science courses. With that background, transferring to either CSU of UC campuses in a wide variety of science disciplines would require minimal additional coursework.

Students who enter the Histotechnology baccalaureate program can easily transition to the AS program if they have not previously completed it.

Students who change their major or educational goal can utilize all of the GE and many of the science courses taken in either the AS or BS program in support of their new education goal.

14. Board of Governors Fee Waiver – Please submit documentation of your district's written policy that requires all potential students who wish to apply for a Board of Governors Fee Waiver pursuant to Section 76300 to complete and submit either a Free Application for Federal Student Aid or a California Dream Act application in lieu of completing the Board of Governors Fee Waiver application.

Please see attached Mt. SAC Administrative Procedure AP 5130 Financial Aid.

15. California State University and the University of California Consultation – Please submit documentation of consultation with the California State University and the University of California regarding collaborative approaches to meeting regional workforce needs.

Mt. San Antonio College has collaborated with the Willed Body Program at UCI for more than 10 years. They provide anatomical pathology/cadaver specimens for our prosection program, a program unique to undergraduate programs in community colleges. Our program also has clinical affiliation agreements with UCI and UCLA to provide work experience rotations in the AP and research laboratories.

Letters of support are attached.

Several Faculty from neighboring schools (CSU, UC) are interested in joining our advisory committee for the HTL program.

16. California State University and the University of California Non-duplication – Please submit documentation that the proposed baccalaureate degree program or program curricula is not already offered by the California State University or the University of California.

At the current time there are no Histotechnology baccalaureate degrees in California. Nationwide there are only 4 programs that offer this degree, Barry University, Miami Shores FL., University of Mississippi, Jackson MS., University of Texas MD Anderson Cancer Center, Houston TX., and West Virginia University, Morgantown WV. (source NAACLS.org)

See attached documents.

F. College/District Contact Information

This page collects information on college contacts

17. District/College Contact Information

District Name:
College Name:
Address:
City:
State:
Zip:

College Contact Completing the Application First Name:
College Contact Completing the Application Last Name:
College Contact Completing the Application Title:
College Contact Completing the Application Email Address:
College Contact Completing the Application Phone Number:
College Contact Completing the Application Mobile Phone:

College President First Name:
College President Last Name:
College President Phone:
College President Email:
College President Signature Block:
College President Date Block:

Chief Instructional Officer First Name:
Chief Instructional Officer Last Name:
Chief Instructional Officer Phone:
Chief Instructional Officer Signature Block:
Chief Instructional Officer Date Block:

Academic Senate President First Name:
Academic Senate President Last Name:
Academic Senate President Phone:
Academic Senate President Email:
Academic Senate President Signature Block:
Academic Senate President Date Block:

Curriculum Chair First Name:
Curriculum Chair Last Name:
Curriculum Chair Phone:
Curriculum Chair Email: