



# Program Approval Form

For approval of new programs and deletions or modifications to an existing program.

Registrar.

**Action Requested:**

Create New (SCHEV approval required except for concentration, minors, and certificates)  
 Delete Existing  
 Modify Existing (check all that apply)  
 Title (SCHEV approval required except for concentration, minors, certificates)  
 Degree Requirements  Admission Standards  
 Application Requirements  
 Other Changes: \_\_\_\_\_

**Type (Check one):**

B.A.  B.S.  Minor  
 Undergraduate Certificate  
 M.A.  M.S.  M.Ed.  
 Ph.D.  Graduate Certificate  
 Concentration  
 Other: \_\_\_\_\_

**College/School:**  **Department:**   
**Submitted by:**  **Ext:**  **Email:**

**Effective Term:** Fall  **Please note:** For students to start a new degree, minor, certificate or concentration, the program must be fully approved, entered into Banner, and published in the University Catalog.

**Justification:** (attach separate document if necessary)

	Existing	New/Modified
<b>Program Title:</b> (Required) Use title to identify subject matter. Do not include name of college/school or department.	BS Medical Technology	BS Medical Technology
<b>Concentration Title(s):</b>		
<b>Admissions Standards / Application Requirements:</b> (Required only if different from those listed in the University Catalog)		
<b>Degree Requirements:</b> Consult University Catalog for models, attach separate document if necessary using track changes for modifications		See attached
<b>Courses offered via Distance:</b> (if applicable)		
<b>TOTAL CREDITS REQUIRED:</b>		

## Approval Signatures

Department \_\_\_\_\_ Date \_\_\_\_\_ College/School \_\_\_\_\_ Date \_\_\_\_\_ Provost's Office \_\_\_\_\_ Date \_\_\_\_\_  
*Required for Undergraduate Programs Only*

If this program may impact another unit or is in collaboration with another unit at Mason, the originating department must circulate this proposal for review by those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

Unit Name	Unit Approval Name	Unit Approver's Signature	Date

**For Graduate Programs Only**

Graduate Council Member \_\_\_\_\_ Provost Office \_\_\_\_\_ Graduate Council Approval Date \_\_\_\_\_

Justification

### **Justification**

The core biology curriculum has not been thoroughly revised since 1989. The intent of the new curriculum is to achieve the following goals: 1) Dispense with old fashioned organismal approaches in favor of an integrated approach to biology reflecting recent advances in our understanding of the evolution of life, the molecular basis of evolution, and advances in our understanding of genetics and cell biology; 2) Equip students with statistical tools early in their course work and apply these tools in subsequent core courses; 3) Provide small group work through recitation sections that will allow more writing and encourage more quantitative approaches in the core courses; 4) Develop a new two semester laboratory based Anatomy and Physiology sequence for Biology and Medical Technology majors to meet the requirements of professional schools; and 5) Simplify the graduation requirements.

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## Medical Technology, BS

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### Banner Code: SC-BS-MTCH

This program requires the equivalent of three years of full time preprofessional study at the college level preceding a senior year of professional education in an affiliated school of medical technology. All affiliated schools are accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

Responsibility for applying to schools of medical technology and gaining admission rests with the student; however, guidance is provided by the Medical Technology Coordinator. Admission to medical technology schools is selective, so candidates should strive for strong academic standing. Students who fail to gain admission to a NAACLS-approved school are unable to complete the degree program. Such students may transfer to the biology major without loss of credits.

Application to medical technology schools should be initiated about a year before the desired entrance date. This fact, coupled with the large number of required courses in the preprofessional curriculum, makes it imperative that students in the program consult regularly with the Medical Technology Coordinator or her designee. All medical technology majors and prospective majors are urged to enroll in MTCH 200 as early as possible. This course provides information on the profession, as well as the educational demands placed on candidates.

Students should be aware that the senior year spent off campus requires special interpretation of university policies. Transfer students must present at least 16 credits of 300- to 400-level biology or chemistry course work taken at Mason. No unsatisfactory grades (less than C) may be presented for courses in the senior year of professional study. Transfer students entering with more than 45 transfer credits are often unable to complete the preprofessional phase of their program in the usual three years of full-time study.

Senior students are registered at the university through special procedures. For details, consult the program director.

Students must fulfill all [requirements for bachelor's degrees](#) including [university general education requirements](#)\*. In addition, students must complete MTCH 200 and present the following courses in their biology coursework and supporting requirements with a minimum GPA of 2.00. A C or better must be earned in BIOL 213 in order to advance to other major requirements. Students may repeat BIOL 213 once and a second time only with permission of the Director of the Biology Program. Medical Technology majors must earn a minimum grade of C in all biology core courses listed below. Through the course work below, majors satisfy the university-wide general education requirements in natural science, quantitative reasoning, and information technology proficiency.

**\*Note:** Because of the extensive professional education requirements stipulated by NAACLS, students majoring in medical technology are exempt from the university-wide general education requirement in the fine arts.

## Degree Requirements

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### Biology:

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#### 12 credits of biology core courses:

- BIOL 213 - Cell Structure and Function Credits: 4
  - BIOL 214 - Introduction to Biostatistics Credits: 4
  - BIOL 311 - General Genetics Credits: 4
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17 additional credits of MTCH and BIOL courses required for the medical technology degree:

- MTCH 200 - Introduction to Medical Technology Credits: 1
- BIOL 305 - Biology of Microorganisms Credits: 3
- BIOL 306 - Biology of Microorganisms Lab Credit: 1
- [BIOL 452 - Immunology](#) Credits: 3
- [BIOL 453 - Immunology Laboratory](#) Credits: 1
- BIOL 430 and 431 - Advanced Human Anatomy and Physiology I and II Credits: 8

### Chemistry:

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Minimum 18 credits, including:

- [CHEM 211 - General Chemistry](#) Credits: 4
- [CHEM 212 - General Chemistry](#) Credits: 4
- [CHEM 313 - Organic Chemistry](#) Credits: 3
- [CHEM 314 - Organic Chemistry](#) Credits: 3
- [CHEM 315 - Organic Chemistry Lab I](#) Credits: 2
- [CHEM 318 - Organic Chemistry Lab II](#) Credits: 2

#### 3-4 credits of Mathematics chosen from:

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- MATH 108 Introductory Calculus with Business Applications Credits: 3 (transfer students only)
- [MATH 111 - Linear Mathematical Modeling](#) Credits: 3
- [MATH 113 - Analytic Geometry and Calculus I](#) Credits: 4
- [MATH 114 - Analytic Geometry and Calculus II](#) Credits: 4

#### Computer skills (one of the following)

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- CDS 130 - Computing for Scientists Credits: 3
  - [IT 103 - Introduction to Computing](#) Credits: 3

### **Professional Study:**

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30 credits of professional study during the senior year are awarded for clinical education at an affiliated school of medical technology. The distribution of credits in these courses varies with the school of medical technology. No more than 30 professional credits may be applied toward the degree.

Courses that may be awarded for the clinical year include:

- [MTCH 401 - Orientation to the Problems and Practices of the Clinical Laboratory](#) Credits: 1-2
- [MTCH 402 - Clinical Hematology and Coagulation](#) Credits: 1-8
- [MTCH 403 - Clinical Microscopy](#) Credits: 1-3
- [MTCH 404 - Serology and Immunohematology](#) Credits: 1-7
- [MTCH 405 - Clinical Microbiology](#) Credits: 1-8
- [MTCH 406 - Clinical Chemistry](#) Credits: 1-10

### **Notes:**

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Students are encouraged to elect additional basic science courses during their preprofessional years. Recommended courses are BIOL 483, 484, and 485; CHEM 321; and PHYS 243, 244, 245, and 246.

### **Writing-Intensive Requirement**

Mason requires all students to complete at least one course designated as “writing intensive” in their majors at the 300 level or above. Students majoring in Biology fulfill this requirement by successfully completing BIOL 308. Medical Technology majors fulfill the requirement by completing BIOL 453.

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