

# Medical Diagnostics (MDD) Major

## Curriculum for 2021-2022 Academic Year

120 Credits & ≥2.0 Cumulative GPA Required for Graduation

### University Requirements:

- ENGL110 Seminar in Composition\*
- Multicultural Requirement 3 cr \_\_\_\_\_ (may simultaneously satisfy breadth or 2<sup>nd</sup> writing)
- First Year Seminar (FYS) 0-4 cr (UNIV101)
- Discovery Learning Experience (DLE) 3 cr (satisfied by MMSC462)
- Capstone Experience (satisfied by MMSC462)
- University Breadth Requirements\* (these must be from **four different areas of study**/course rubrics)
  - Creative Arts & Humanities\* 3 cr \_\_\_\_\_
  - History & Cultural Change\* 3 cr \_\_\_\_\_
  - Social & Behavioral Sciences\* 3 cr \_\_\_\_\_
- Math, Natural Science & Technology\* 3 cr (satisfied by ≥ C- in BISC207 or 208, CHEM103 or 104)

### MAJOR REQUIREMENTS:

- Second Writing Requirement (after 45 credits completed; must be designated in term taken; may also be breadth)
- Mathematics (one of the following; MATH114, 115, 117, 221 or 241; MATH115 required for PHYS201)
- English Course: any ENGL course ≥200 (may simultaneously satisfy breadth or 2<sup>nd</sup> writing)
- Additional Breadth
  - Either Creative Arts & Humanities or History & Cultural Change 3 cr \_\_\_\_\_
  - Social & Behavioral Sciences 3 cr \_\_\_\_\_

### Core \* (70 credits; minimum grade of C- required in all MMSC courses):

- |  |  |
|--|--|
| <input type="checkbox"/> BISC207 Introductory Biology I:4              | <input type="checkbox"/> MMSC407 Clin Physiological Chem I: 3              |
| <input type="checkbox"/> BISC208 Introductory Biology II: 4            | <input type="checkbox"/> MMSC409 Immunohematology I: 2                     |
| <input type="checkbox"/> BISC300 Introduction to Microbiology: 4       | <input type="checkbox"/> MMSC420 Immunohematology II: 2                    |
| <input type="checkbox"/> CHEM103/133 or 107 Gen Chem/for Life Sci I: 4 | <input type="checkbox"/> MMSC423 Hematology I: 2                           |
| <input type="checkbox"/> CHEM104/134 or 108 Gen Chem/for Life Sci II:4 | <input type="checkbox"/> MMSC428 Medical Microbiology: 3                   |
| <input type="checkbox"/> CHEM214 Elem Biochem:3 <b>OR</b>              | <input type="checkbox"/> MMSC433 Hematology II: 2                          |
| <input type="checkbox"/> CHEM527 Intro Biochemistry: 3                 | <input type="checkbox"/> MMSC436 Clin Physiological Chem II: 3             |
| <input type="checkbox"/> CHEM321 Organic Chemistry I: 3                | <input type="checkbox"/> MMSC438 Diagnostic Bacteriology & Medical         |
| <input type="checkbox"/> CHEM325 Organic Chemistry Lab I: 1            | Mycology: 2  |
| <input type="checkbox"/> CHEM322 Organic Chemistry II: 3               | <input type="checkbox"/> MMSC462 Interdis. Healthcare Perspectives: 3      |
| <input type="checkbox"/> CHEM326 Organic Chemistry Lab II: 1           | <input type="checkbox"/> MMSC490 Clinical & Molecular Cell Bio: 3 **       |
| <input type="checkbox"/> MMSC100 Intro to Med Lab Sciences: 1          | <input type="checkbox"/> MMSC491 Human Molecular Genetics: 3 **            |
| <input type="checkbox"/> MMSC200 The Language of Medicine: 3           | <input type="checkbox"/> STAT200 Basic Statistical Practice: 3 or STAT408  |
| <input type="checkbox"/> MMSC360 Clinical Immun & Medical Virology: 3  | Statistical Research Methods: 3  |
| <input type="checkbox"/> MMSC402 Body Fluid Analysis: 1                | <input type="checkbox"/> ≥ 120 credits/2.0 Cum GPA required for graduation |

### Science Sequence (8 or 12 credits). Complete one of the following sequences:

#### Option 1 (recommended for PA school):

- KAAP309 Human Anatomy & Physiology I: 4
- AND**
- KAAP310 Human Anatomy & Physiology II: 4

#### Option 2 (recommended for medical school):

- BISC276 Human Physiology: 4 **AND**
- PHYS201/221L Introductory Physics I: 4 **AND**
- PHYS202/222L Introductory Physics II: 4

Student Name: \_\_\_\_\_ Student Signature: \_\_\_\_\_

MMSC Program Director: \_\_\_\_\_ Date: \_\_\_\_\_

√ - indicates that this requirement will be satisfied by a course within the required major/core courses

\* ≥ C- required

\*\* may substitute sequence of BISC401 (3) AND BISC403 (3) for MMSC490 (3) AND MMSC491 (3) listed above

Please note: in order to be positioned competitively for admission to medical, dental and PA programs as well as most other medical/healthcare professional or grad programs, a minimum cumulative undergraduate GPA of 3.0 will likely be required, with many programs well in excess of that. Students are advised to confirm admission requirements at your specific program(s) of interest.

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#### Suggested MDD Academic Program Sequence

Consult with your advisor for possible alternative sequencing and term availability of courses. MMSC course term availability listed below is proposed for the 2020-21 academic year but is subject to change. Refer to Course Descriptions at <https://udapps.nss.udel.edu/CourseDescription/> for associated course Prerequisites and Corequisites.

#### First Year

30 credits

##### FALL – 16 credits

BISC207 Intro Biology I: 4  
CHEM103/133 or 107 Gen Chemistry: 4  
Mathematics: 3  
MMSC100 Intro to Med Lab Science: 1  
UNIV101 First Year Experience: 1  
Breadth Requirement \_\_\_\_\_ / \_\_\_\_\_: 3

##### SPRING – 14 credits

BISC208 Intro Biology II: 4  
CHEM104/134 or 108 Gen Chemistry: 4  
ENGL110 Seminar in Composition: 3  
MMSC200 The Language of Medicine: 3

#### Second Year

30 credits

##### FALL – 15 credits

MMSC270 Med Micro/Infect Dis or BISC300 Intro Micro: 4  
CHEM321 Organic Chemistry I: 3  
CHEM325 Organic Chem I Lab: 1  
PHYS201/221L Introductory Physics I: 4 **OR**  
KAAP309 Human Anatomy & Physiology I: 4  
Breadth Requirement \_\_\_\_\_ / \_\_\_\_\_: 3

##### SPRING – 15 credits

BISC276 Human Physiology: 4 or Elective (if choosing  
KAAP309 and KAAP310 sequence)  
CHEM322 Organic Chemistry II: 3  
CHEM326 Organic Chem II Lab: 1  
PHYS202/222L Introductory Physics II: 4 **OR**  
KAAP310 Human Anatomy & Physiology II: 4  
Multicultural: 3

#### Third Year

30 credits

##### FALL – 14 credits; MMSC courses below Fall only

CHEM214 Elem Biochem: 3 or CHEM527 Intro Biochem; 3  
MMSC360 Clinical Immunology & Medical Virology: 3  
MMSC402 Body Fluid Analysis: 1  
MMSC490 Clin & Molecular Cell Biology: 3 **OR**  
BISC401 Molecular Biology of the Cell: 3\*\*  
STAT200 Basic Statistical Practice or  
STAT408 Statistical Research Methods: 3  
Elective: 1

##### SPRING – 16 credits; MMSC courses below Spring only

MMSC407 Clinical Physiological Chemistry I: 3  
MMSC409 Immunohematology I: 2  
MMSC423 Hematology I: 2  
MMSC428 Medical Microbiology: 3  
MMSC491 Human Molecular Genetics: 3 **OR**  
BISC403 Genetics: 3\*\*  
Breadth Requirement \_\_\_\_\_ / \_\_\_\_\_: 3

#### Fourth Year

30 credits

##### FALL – 15 credits; MMSC courses below Fall only

MMSC420 Immunohematology II: 2  
MMSC433 Hematology II: 2  
MMSC436 Clinical Physiological Chemistry II: 3  
MMSC438 Diagnostic Bacteriology & Med Mycology: 2  
Elective: 3  
Breadth Requirement \_\_\_\_\_ / \_\_\_\_\_: 3

##### SPRING – 15 credits; MMSC course below Spring only

ENGL200 or higher: 3  
MMSC462 Interdisciplinary Healthcare Perspectives: 3  
Second Writing Requirement: 3  
Elective: 3  
Breadth Requirement \_\_\_\_\_ / \_\_\_\_\_: 3

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**Total of 120 credits**

Students are strongly advised to refer to their **Degree Audit** regularly (accessed via UDSIS) to confirm progressive completion of graduation requirements as designated in the UD online Undergraduate Catalog. Med Diagnostics 21-22 program requirements can be found at [https://catalog.udel.edu/preview\\_program.php?catoid=47&pooid=34739&returnto=8860](https://catalog.udel.edu/preview_program.php?catoid=47&pooid=34739&returnto=8860). Please be sure to select the correct academic year for your program requirements.

\*\* may substitute sequence of BISC401 (3) AND BISC403 (3) for MMSC490 (3) AND MMSC491 (3) listed above