Master of Science

Molecular Diagnostics and Precision Medicine (MS)

The discipline of molecular diagnostics includes all tests and methods to identify disease, a predisposition for a disease, diagnosis and prognosis of disease, and potential responses to drug therapy by analysis of an individual's DNA, RNA, and proteins. The field is the fastest growing segment of clinical diagnostic testing as molecular techniques become standard practice in medicine. Precision medicine requires the application of molecular information to enable new approaches to the detection and treatment of complex diseases. This program is designed to prepare students for possible careers in industry, academic, and/or clinical settings within molecular diagnostics and precision medicine.

Students will acquire the advanced knowledge required to complete high-complexity testing with a master's degree in Molecular Diagnostics & Precision Medicine.

Admission Criteria

For U.S. students

- A baccalaureate degree in biology, chemistry, medical laboratory science, health sciences, or related health and scientific disciplines, from a regionally accredited institution of higher education is required.
- A GPA of at least 2.7 on a 4.0 scale in the last 60 credits completed.
- Two (2) letters of recommendation.
- A personal statement describing how the Molecular Diagnostics & Precision Medicine (M.S.) program will enhance the applicant's academic and/or professional career goals.
- Current resume/CV documenting professional experience and educational achievements.
- Official transcripts from all colleges/universities attended. Ensure the degree conferral date is listed on the awarding institution's transcript. **Please note: Transcripts must be sent to GradCAS only. GradCAS only accepts electronic transcripts from Credentials Solutions, Parchment, and National Student Clearinghouse. If your school does not offer either of these services, your transcript must be sent via mail.**

Below are three ways to send your transcripts.

- Credentials Solutions (http://www.transcriptsplus.net/order/)
- Parchment (https://www.parchment.com/students/order-status/)
- National Student Clearinghouse (https://www.studentclearinghouse.org/)

To send transcripts to GradCAS by mail, after you enter each institution in GradCAS, download a transcript request form. Fill out and send the transcript request form to the institution registrar, asking them to mail the transcript to the address below:

GradCAS Transcript Processing Center
P.O. Box 9217
Watertown, MA 02471

For international students

- A baccalaureate degree in biology, chemistry, medical laboratory science, health sciences, or related health and scientific disciplines from a regionally accredited institution of higher education is required.
- A GPA of at least 2.7 on a 4.0 scale in the last 60 credits completed.
- Three letters of recommendation.
- Test of English as a Foreign Language (TOEFL) - Minimum scores:
  - Paper 550,
  - Computer 213,
  - iBT 80
  - TOEFL School Code is B886
- A personal statement describing how the Molecular Diagnostics & Precision Medicine (M.S.) program will enhance the applicant's academic and/or professional career goals.
- Current resume/CV documenting professional experience and educational achievements.
- Official transcripts from all colleges/universities attended. Ensure the degree conferral date is listed on the awarding institution's transcript. In cases where a non-U.S. grading system has been used, verification must be provided by one of the following services:
  - World Education Services (https://www.wes.org/) (WEC)
  - Educational Credential Evaluators (https://www.ece.org/ECE/) (ECE)
  - GradCAS will ONLY accept the evaluation report from the credentialing agency. Do not send your foreign transcript to GradCAS.
  - All foreign transcript evaluations from the credentialing agency must be sent directly to GradCAS to the following address:

GradCAS Transcript Processing Center
PO Box 9217
Watertown, MA 02471

- **Translation:** If the academic institution that you attended does not issue documents in English, the credentialing agency will require that you submit a word-for-word translation of your transcripts. You can contact University Language Services (http://www.universitylanguage.com/) to submit your transcript for translation and instruct them to send the translated transcript to the credentialing agency you choose.
- **Transcript Evaluation:** International students whose native language is not English may contact one of the following credentialing agencies to submit transcripts for official evaluation: WES (http://www.wes.org/) or ECE (https://www.ece.org/). Instruct the credentialing agency to send the official evaluation (and translation) directly to GradCAS. You must provide both a course-by-course evaluation report along with an overall GPA calculation. Evaluations are mandatory even for transcripts from institutions that report grades in English. This provides the school with a U.S. credit equivalency and allows the transcripts to be reviewed accurately. WES and ECE are preferred credentialing services. If you wish to select a company other than these, please hpadmissions@evms.edu first.

International students must abide by all U.S. Immigration laws throughout their enrollment in the program. This includes, but is not limited to, qualifying and obtaining a proper visa prior to attendance. For further information, please contact Human Resources (evmshr@evms.edu) at 757-446-6043.

The Molecular Diagnostics & Precision Medicine (M.S.) (https://www.evms.edu/education/masters_programs/molecular_diagnostics_precision_medicine/) curriculum will consist of online asynchronous didactic courses, hybrid courses consisting of online asynchronous didactic instruction, and in-person laboratory, laboratory rotations, and practicum.

The rotations and practicum can be completed at ODU/EVMS laboratories or at student arranged off-site locations (e.g. current employer) with approval of the program director and agreement of the institution.

In all, 21 credit hours of didactic/laboratory training will be combined with 21 credit hours of independent laboratory rotations and practicum.

Course Sequence

Term 1 Fall		**9**
MDPM 500	Prin Molecular Diagnostics	
MDPM 501	Molecular Diagnostics Lab	

MDPM 698	Molecular Diagnostics Lab	
Term 2 Spring		**9**
MDPM 600	Adv Clin Molecular Diagnostics	
MDPM 601	Adv Molecular Diagnostics Lab	
MDPM 698	Molecular Diagnostics Lab	
Term 3 Summer		**6**
MDPM 620	Human Subjects Reg and Ethics	
MDPM 669	Molecular Diagnostics Pract	
Term 4 Fall		**9**
MDPM 640	Molecular Cytology & Histology	
MDPM 669	Molecular Diagnostics Pract	
MDPM 720	Genomics and Bioinformatics	
Term 5 Spring		**9**
MDPM 669	Molecular Diagnostics Pract	
Total Credit Hours		**42**