# CLINICAL AND TRANSLATIONAL SCIENCE, M.S.

## **Program Description**

The Clinical and Translational Science (CTS) Department in the Marshall University Joan C. Edwards School of Medicine offers a Master of Science (M.S.) degree in Clinical and Translational Science. The goal of this program is to equip physicians in-training and other biomedical scientists with the information and training they need to translate basic clinical advances into improved patient care that will enhance the quality of life for patients in the Appalachian region, particularly southern West Virginia.

Students will receive a core education in clinical trial design, epidemiology, statistics, informatics, and translational research (21 credit hours). Students will also receive in-depth training (22 credit hours) in one of the CTS areas of emphasis: Clinical Trials, Clinical Research, or Clinical Informatics.

Graduates of this program in the Clinical Trials area of emphasis will be able to lead clinical trials of new drugs and procedures in West Virginia, particularly in its rural regions. They also will be strong applicants for positions in schools of medicine and medical centers that have clinical and translational science centers. Clinical Research graduates can apply to doctoral programs in medicine or other health-related fields having a superior background in basic science, epidemiology, informatics, and statistics. Clinical Informatics graduates will have a background in bioinformatics, computer programming, and clinical trials design, thus making them strong candidates for positions in schools of medicine, medical centers, and the health care industry.

#### Admission Requirements Clinical and Translational Science M.S. Admission Policy

Applicants must meet the admission requirements of both Marshall University Graduate Admissions as outlined on their website www.marshal/.edu/graduate/admissions/how-to-apply-for-admission (http://www.marshall.edu/graduate/admissions/how-to-applyfor-admission/) - and the Marshall University Joan C. Edwards School of Medicine Clinical and Translational Science Department Admissions Committee. Interested persons should visit https:// jcesom.marshall.edu/research (https://jcesom.marshall.edu/research/), e-mail mubiomed@marshall.edu and/or call 304-696-3365.

#### **Minimum Admission Requirements**

- A baccalaureate degree from an accepted, accredited college or university. The degree must be completed prior to matriculation.
- Successful completion, with a grade of *C* or better, of one year of general biology, physics, general chemistry, and organic chemistry, all with associated laboratories. Successful completion of undergraduate courses in biochemistry and cell biology are highly recommended but not required.
- A recommended minimum Grade Point Average (GPA) of 3.0.
- A recommended minimum GPA of 3.0 in combined science and math courses.

- Official transcript from degree granting institution/s; other transcripts may be required.
- Departmental materials: three recommendations, program online form, written statement addressing educational and career goals, CV/résumé.

Applications are accepted on a rolling basis and are reviewed until the class is filled. Applications are only considered once we have received all required documentation. Applications will be considered until June 30, if openings are available. International applicants must meet the International deadline of March 15. The Clinical and Translational Sciences M.S. program is highly competitive thus early applications provide the best chance for acceptance.

Entrance into the Clinical and Translational Science M.S. program is restricted to fall semester only.

#### Who Should Apply

- Undergraduates.
- Medical students at an LCME-accredited U.S. medical school with a current GPA of at least a 3.0.
- Postgraduate medical residents or fellows who have an M.D. or D.O. with a graduating GPA of 3.0 or better (equivalent GPA for foreign medical graduates).
- Ph.D.'s in biomedical sciences or Pharm.D.'s with graduating GPAs of 3.0 or better.

Medical students will apply to the program during their third year of training. After completing the requirements for the M.S. degree, students will finish the fourth year of medical school.

Medical residents and fellows who are admitted into this program will need to integrate coursework into a reduced clinical workload, thus extending their postgraduate medical education by two years.

### Program Requirements Duration of the Program

Students will attend full-time and complete the requirements for the Master of Science degree in two years. This includes attending during the summer between years one and two.

#### **Degree Requirements**

All students are required to meet the general requirements of the university for receipt of a master's degree. A minimum of 36 credit hours is required for a non-thesis degree. For the CTS master's, students must complete the core classes (21 credit hours) and the courses within their chosen

Course Requirements

Code	Title	Credit Hours
CTS 600	Epi Used in Med Research	3
CTS 610	Study Design & Stats	3
CTS 614	Online Survey Tools	3
CTS 620	Basic Research Operations	3
CTS 630	Fundamentals of Team Science	2
CTS 635	Writing and Peer Review	1
BMR 680	Seminar <sup>1</sup>	2
BMR 660	Communication Bio Sci I	1

Total Credit Hours		21
2 hours any CTS or BMR journal club		
BMR 661	Communication Bio Sci II	1

<sup>&</sup>lt;sup>1</sup> Taken twice (1 hr. x 2).

of emphasis (22 credit hours). In addition, all students must pass a written and/or oral comprehensive exam.

- Clinical Informatics (http://catalog.marshall.edu/graduate/ programs-az/medicine/clinical-translational-science-ms/clinicalinformatics/)
- Clinical Research (http://catalog.marshall.edu/graduate/programsaz/medicine/clinical-translational-science-ms/clinical-research/)
- Clinical Trials (http://catalog.marshall.edu/graduate/programs-az/ medicine/clinical-translational-science-ms/clinical-trials/)