



Student Health Requirements

Master of Arts, Biomedical Sciences Program

All students in medically related programs, just as physicians in practice, are required to be current with required immunizations and must do everything possible to prevent the spread of communicable disease. While the presence of a chronic disease does not affect admission to the college, student participation in clinical training is subject to the policies of the affiliated private hospitals where program students may train. Students who have a chronic disease that may be considered communicable or who have questions regarding immunizations should contact the Office of Clinical Affairs for further information.

On notice of acceptance, students are required to obtain a physical examination, performed by a physician, which will assist in identifying any health needs that should be addressed prior to patient contact. In addition, accepted students are required to update all immunizations required by program policies. Immunization status for some communicable diseases will require a titer to prove immunity.

Student health forms (physical exam and immunization records) must be returned to the Student Health Coordinator in the Master of Arts in Biomedical Sciences Program Office either via email or fax (**see contact information on the Accepted Student webpage*) by the dates specified in program admission policies in order to maintain acceptance status.

It is important that the student verifies that all forms are filled out completely and that they are dated and signed by a physician. Incomplete or unsigned forms will not be accepted and failure to meet the required deadlines could affect your ability to matriculate or engage in program educational experiences.

The physical examination form and the immunization requirements forms may be found on the MABS Accepted Student website for prospective and newly accepted students.

History and Physical Examination Requirement

Each student must have a comprehensive history and physical examination performed by a licensed osteopathic or allopathic physician. This exam must be completed after the date of acceptance and before matriculation. This examination must establish and the examining physician must verify that the student's health status is adequate to meet the demands of the curriculum as defined by the health and technical requirements for admission, education and graduation detailed in the student handbook. Students must return this form, signed by the physician, to the clinical affairs office.

Immunization Requirements

Regulatory and legislative authorities require that students demonstrate immunization, immunity or protection from multiple contagious diseases before being allowed to participate in clinical experiences at the institutions utilized by the program for the education of its students. Bluefield College requires that students meet all immunization requirements prior to matriculation and must maintain compliance with these requirements throughout the program. Descriptions of immunization requirements are found on subsequent pages of this document which specifically addresses Varicella, Measles, Mumps, Rubella, Hepatitis B, Hepatitis C, Tuberculosis, Influenza and Pertussis.

This information follows the latest recommendations set forth by the Center for Disease Control (CDC) and the Advisory Committee on Immunization Practices (ACIP), the United States Prevention Task Force (USPTF), and those required by the specific state in which the student is training.

Students will be notified of any changes to immunization policies and will be required to comply with these changes upon receipt of notice from program administration.

Important Notes Regarding Vaccination Requirements:

- 1. Immunization or student health requirements may not be waived for religious or personal preferences.**
- 2. Students will not be allowed to participate in any patient care activities, including but not limited to early clinical experiences, health outreach events, regional/international mission trips and clinical rotations, until all immunization requirements have been met.**
- 3. Inability to participate in clinical experiences due to noncompliance with the immunization policies may result in failure of a course, academic probation, promotion board hearing, delay in graduation or even dismissal from the program.**

All immunization requirements are described in detail below. All students must submit the 2-page VCOM immunization form documenting completion of all below requirements. **This 2-page form must be completed in its entirety and each page must be signed by a physician verifying the required information.**

Page 1 – Biomedical Sciences Program Immunization Form

Page 2 - Tuberculosis Screening/Testing Form

In addition, students are required to submit supporting documentation such as immunization records and titers.

1. Diphtheria, Pertussis and Tetanus

- a. All students must submit documentation (physician signature or vaccination record) of immunization with a *Tdap booster (Boostrix or Adacel) since the year 2005.
 - i. *Tdap is the one-time booster containing the acellular pertussis vaccine and is available only in the **Boostrix or Adacel** vaccines. This vaccine was released in 2005 and all students must demonstrate proof of immunization with this vaccine.
 - ii. Following the Tdap booster, a Td routine booster is required every 10 years.

2. Measles, Mumps, Rubella (MMR)

- a. Students must provide dates and verification (physician signature or vaccination record) of 2 MMR vaccinations, occurring at least 28 days apart.
 - i. If the student is able to provide an immunization record or physician signature verifying the dates of these 2 vaccinations, no titer will be required.
- b. Students that are unable to provide immunization records or physician signature verifying completion of the MMR series have 2 options:
 - i. Repeat the MMR series of 2 vaccinations at least 28 days apart and provide documentation verifying completion of the series.
 - ii. Obtain titers for measles, mumps and rubella
 1. If a student elects to obtain titers and they show evidence of non-immunity to any of the 3 components of the vaccine (measles, mumps or rubella), they will be required to repeat the MMR series of 2 vaccinations, at least 28 days apart. The exception is if there is only non-immunity to Rubella, only one MMR vaccination will be required.

3. Varicella

- a. Students must provide evidence of immunity verification (physician signature or vaccination records) through one of the three following methods:
 - i. Documentation of vaccination with 2 doses of varicella vaccine
 - ii. Laboratory evidence of immunity (antibody titers)
 - iii. Diagnosis or verification of a history of varicella or herpes zoster disease by a health-care provider
- b. Titers are not required if physician signature or records document vaccination with 2 doses of varicella vaccine or prior varicella or herpes zoster disease.

4. Hepatitis B Immunization and Titers

- a. Students must provide dates and verification (physician signature or vaccination records) of completing a Hepatitis B vaccination series consisting of three (3) hepatitis B injections. Injections are generally given at 0, 1 and 6 month intervals which means injection two would be given 1 month following injection one, and injection three would be given 6 months following injection one.
- b. If a student does not have all 3 vaccines complete at the time of matriculation, **they must have at least received their first injection and be in the process of completing the subsequent two injections and titer following the above schedule.** (To ensure accuracy, antibody titer testing should be performed 4-8 weeks following the 3rd and final injection in the series.)
- c. In addition, **all students must provide verification of antibody titers (Surface Antibody, HBsAb)** demonstrating immunity to Hepatitis B. A copy of the titer lab results should be provided to the Student Health Coordinator for the Biomedical Sciences Program.
- d. Students who attain protective immunity (by evidence of titer) to Hepatitis B after either the first vaccination series of 3 immunizations or second vaccination series of 3 immunizations (if needed), are considered immune, protected and free of Hepatitis B and therefore do not require additional testing for the disease.
- e. Students who do **not** demonstrate immunity through adequate titer levels (after **first** series)
 - i. Students who have received the initial series of Hepatitis B vaccines and do not seroconvert to demonstrate immunity will be required to repeat the complete series of three immunizations.
 - ii. Following completion of the repeat series of 3 Hepatitis B vaccinations, students must obtain another titer (Surface Antibody) to confirm immunity. To ensure accuracy, it is recommended that antibody titer testing be performed 4 – 8 weeks following the 3rd and final injection in the series.
 - iii. Students who still do not demonstrate immunity following the second Hepatitis B immunization series will be considered a vaccine non-responder and at risk for acquiring HBV.
- f. Students who do **not** attain immunity following completion of a **second** Hepatitis B immunization series (**additional testing required**)
 - i. Per CDC guidelines, any student who does not obtain protective immunity to Hepatitis B after a completion of 2 vaccination series (6 total immunizations) will also be required to obtain serologic testing for Hepatitis B infection.
 - a) Testing for Hepatitis B is accomplished through evaluation of **serum HBsAg** (Hepatitis B Surface Antigen) and **anti-HBc** (Total Hepatitis B core antibody).

1. Hepatitis B surface antigen (HBsAg) is a protein on the surface of HBV; it can be detected in high levels in serum during acute or chronic HBV infection. The presence of HBsAg indicates that the person is infectious. The body normally produces antibodies to HBsAg as part of the normal immune response to infection. HBsAg is the antigen used to make Hepatitis B vaccine.
 2. Total Hepatitis B core antibody (anti-HBc) appears at the onset of symptoms in acute Hepatitis B and persists for life. The presence of anti-HBc indicates previous or ongoing infection with HBV in an undefined time frame.
- b) Students who are required to obtain Hepatitis B testing must provide **results of both HBsAg and anti-HBc** to the Health Coordinator along with the confirmatory lab reports.
- c) **Results of Hepatitis B testing will not affect a student's matriculation status or offer of acceptance** but will provide valuable information to ensure proper patient care safeguards and adherence to CDC recommendations for the management of Hepatitis B virus-infected health care providers and students are followed. In addition, testing prior to matriculation provides a baseline status in regards to disease presence in the event that a student has an exposure incident during subsequent clinical activities.
- d) If testing for Hepatitis B infection is negative, the student will be considered non-immune to Hepatitis B and will then meet with the Associate Dean for Clinical Affairs. Current recommendations and additional education on universal precautions, risk avoidance and treatment options if exposed to HBV will be provided to the student. The student will sign documentation of informed consent to continue their education, acknowledging the medical risk and receipt of this information, but they will not be required to continue additional HBV immunizations. Please see the Hepatitis B Non-Immunity Policy in the Student Handbook for further information.

5. Hepatitis C Testing

- a. In order to protect all students and patients, and to ensure compliance with hospital liability recommendations, **all students are required to obtain Hepatitis C testing and provide test results prior to matriculation. Results will not affect a student's matriculation status or offer of acceptance**, but will provide valuable information to ensure proper patient care safeguards and adherence to CDC recommendations for the management of Hepatitis C virus-infected health care providers and students are followed. In addition, testing prior to matriculation provides a baseline status in regards to disease presence in the event that a student has an exposure incident during subsequent clinical activities.

- b. Testing for Hepatitis C may be accomplished by several methods with the most common method utilized for initial screening being the measurement of **anti-HCV**, which is a test to detect the presence of antibodies to the Hepatitis C virus.
- c. **Students must provide results of anti-HCV testing**
- d. If anti-HCV tests are positive, students will be required to obtain additional confirmatory testing and medical follow-up in accordance to CDC guidelines (<http://www.cdc.gov/hepatitis/HCV/HCVfaq.htm#section3>)

6. Tuberculosis (TB) Testing

Baseline TB screening is required for all medical students upon matriculation to VCOM and annually thereafter. There are **two acceptable methods for TB screening** and **all students must provide documentation of the results from ONE of the two methods:**

- i. **A two-step tuberculin skin test (TST)**
- ii. **An Interferon-Gamma Release Assay (IGRAs) blood test.**

If the initial TB screening is done with the Tuberculin Skin Test (TST), the student must have the Two-Step Method at baseline (described below) followed by a single-step annually. If the blood test, called Interferon-Gamma Release Assays (IGRAs) are used at initial screening for baseline measures, a two-step process is not required. Students should speak with their physician to determine which test is most appropriate for them.

Students must complete page 2 - Tuberculosis Screening/Testing Form in its entirety and have it signed by a physician or nurse.

- a. **Option 1: The Mantoux Tuberculin Skin Test (TST)**
 - i. The Mantoux TST is the standard method of determining whether a person is infected with *Mycobacterium tuberculosis*. The TST is performed by injecting 0.1 ml of tuberculin purified protein derivative (PPD) into the inner surface of the forearm. The skin test reaction should be read between 48 and 72 hours after administration. If the test is not read within 72 hours, the student will need to be rescheduled for another skin test.
 - ii. **Two-Step Method:** If TST is utilized as the TB screening test, the **“two-step method” is required**. If the first TST result in the two-step baseline testing is positive, the person is considered infected and should be evaluated and treated accordingly. **If the first test results is negative, the TST should be repeated in 1-3 weeks**. If the second test result is positive, the person is considered infected and should be evaluated and treated accordingly; if both steps are negative, the student is considered uninfected and classify the TST as negative at baseline testing.

1. **Note: Two-step Method is only used at the initial screening for a baseline measure – annual testing thereafter only requires a single PPD.**
2. When IGRAs are used for testing, there is no need for a second test.
3. Summary of 2-step TST testing – table below:

1 st TST Test	Negative	Repeat TST in 1-3 weeks
	Positive	Considered positive for infection
2 nd TST Test	Negative	Person probably does not have an infection Single PPD required annually moving forward
	Positive	Considered positive for infection

b. **Option 2: Interferon-Gamma Release Assays (IGRAs) blood test**

- i. TB blood tests (also called interferon-gamma release assays or IGRAs) measure how the immune system reacts to the bacteria that cause TB. Two IGRAs are approved by the U.S. Food and Drug Administration (FDA) and are available in the United States:
 1. **QuantiFERON®** - TB Gold In-Tube test (QFT-GIT)
 2. **T-SPOT®** TB test (T-Spot)
- ii. IGRAs are the preferred method of TB infection testing for the following:
 1. People who have received bacilli Calmette-Guérin (BCG). BCG is a vaccine for TB disease.
 2. People who have a difficult time returning for a second appointment to look for a reaction to the TST.
- iii. Results of IGRA's
 1. Positive IGRA: This means that the person has been infected with TB bacteria. Additional tests are needed to determine if the person has latent TB infection or TB disease.
 2. Negative IGRA: This means that the person's blood did not react to the test and that latent TB infection or TB disease is not likely.

c. **Special Situations – Prior BCG vaccination and Pregnancy**

- i. Testing for TB in BCG-Vaccinated Persons:
 1. Many people born outside of the United States have been BCG-vaccinated. **People who have had a previous BCG vaccine may receive a TB skin test.** In some people, BCG may cause a positive skin test when they are not infected with TB bacteria. If a TB skin test is positive, additional tests are needed. IGRAs, unlike the TB skin tests, are not affected by prior BCG vaccination and are not expected to give a false-positive result in people who have received BCG. **Students who have had a previous BCG vaccine must still be tested for TB with the TST or IGRAs.**
- ii. Pregnancy
 1. Pregnancy is not a contraindication for TB skin testing. **Pregnant and nursing students should be included in the same baseline and serial TB**

screening as all other health care workers. The TB blood test is currently not used in pregnant women.

d. Student with Positive TST or IGRA Testing:

i. Students with WRITTEN documentation of previous **positive** TST or TB Blood Test

1. If the date and result of the previous test are documented, these students do **not** need a repeat TST or TB blood test. If they have written documentation of the results of a chest radiograph indicating no active TB disease that is dated after the date of the positive TST or TB blood result, they do not need another chest x-ray unless symptoms or signs of TB disease develop or a clinician recommends a repeat chest radiograph. **These students do not require annual TST or IGRA testing, but must complete the TB Assessment Form annually, have it signed by a physician and return it to the Clinical Affairs Office.**
2. If the student does not have written documentation of a chest radiograph, they must obtain a chest radiograph prior to matriculation to exclude a diagnosis of infectious TB. The results/interpretation of this chest x-ray must be submitted to the office of Clinical Affairs.

ii. Students with a Newly Identified positive TST or TB blood result:

1. These individuals should be assessed by their physician for current TB symptoms and risk factors for progression to active TB disease.
2. In addition, they **must obtain a chest radiograph to exclude a diagnosis of active infectious TB disease and submit this documentation to the office of Clinical Affairs.**

e. Students with suspected or confirmed infectious TB:

- i. If infectious TB is confirmed, the student must be excluded from the clinical setting and will only be able to return when all the following criteria have been met:
 1. Three consecutive sputum samples collected in 8-24 hour intervals are negative, with at least one sample from an early morning specimen
 2. The person has responded to anti-TB treatment that will likely be effective (based on susceptibility results)
 3. The person is determined to be non-infectious by a physician knowledgeable and experienced in managing active TB disease

7. Influenza

- a. All students are required to provide the dates and verification (physician signature or vaccination records) of annual influenza vaccination.
- b. Students will be required to re-submit verification annually, and will not be allowed to participate in patient care activities without proof of vaccination.

Optional Vaccines and Testing

HIV Testing

Although not required, students are encouraged to obtain HIV testing prior to matriculation. Testing prior to matriculation provides students with their baseline status in regards to the presence of HIV infection which will be valuable in the event that a student has an exposure incident during subsequent clinical activities. **Students are not required to report the results of their testing.**

Optional Vaccines

The following vaccines are considered optional, however it is strongly advised that all students discuss the appropriateness of each of the following vaccinations with their primary physician, taking into account personal medical history, risk factors for contracting these diseases, and potential for international travel.

1. Polio
2. Hepatitis A
3. Meningococcal Disease
4. Yellow Fever
5. Typhoid Fever

Students who have obtained the above optional vaccinations should document the dates and provide verification (physician signature or vaccination records) on the immunization form in the space provided.

****Please turn in your forms to the Student Health Coordinator for the Master of Arts in Biomedical Sciences Program.** (See contact information on the Accepted Students webpage.)