Biomedical Science Academy

For more information
580-255-2903 Ext. 230
Toll-free at 1-888-607-2446
www.rrtc.edu

If You like...
• Asking questions and seeking answers
• Solving problems and making discoveries
• Designing experiments and collecting data
• Building models and creating projects
• Utilizing teamwork and exhibiting leadership

If You are...
• Good at mathematics and science
• Creative, innovative and inquisitive
• Interested in technology and its applications
• Highly motivated and willing to work
• Preparing for a 4-year college or graduate degree
• Interested in challenging courses and college credit opportunities

Then... the Biomedical Academy may be for YOU!

If You are considering a career as a...
• Physician
• Surgeon
• Dentist
• Veterinarian
• Nurse
• Medical Technologist
• Biomedical Engineer
• Pharmacist
• Forensic Scientist
• Medical/Research Scientist
• Radiologist
• And many more!

www.pltw.org

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DRUG FREE WORKPLACE
Biomedical Science is a broad field encompassing many different medical and health care disciplines. These include biochemistry, biomedical engineering, forensics, immunology, microbiology, pharmacology, physiology, radiological sciences, and many more. In fact, the opportunities vary so greatly that no matter what your personality type or where your interests lie, there is a Biomedical Science career for you.

So, how do You get there?

1. Tell your counselor you want in this academy (as early as the 8th grade)!
2. Take the classes your counselor recommends!
3. Keep those grades up!
4. Do your best on all standardized tests!
5. During your sophomore year, complete the application to the Biomedical Science Academy!

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People working in Biomedical Science seek to understand the chemistry and biology of life in order to better diagnose, treat and prevent disease, improve health, and ease pain and suffering. This includes not only doctors and nurses, but scientists, engineers, administrators and technicians.

Students have the opportunity to participate in the Health Occupations Students of America (HOSA) student organization. Some HOSA activities include: leadership, community service, and competitive events.

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What is Biomedical Science?

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Principles of the Biomedical Sciences
Through exciting “hands-on” projects and problems, students are introduced to the field of biomedical science. Students will investigate the human body systems and various health conditions in order to determine the factors that led to the death of a fictional person. Key biological concepts embedded throughout the course include: homeostasis, metabolism, inheritance, feedback systems and defense against disease.

Human Body Systems
Students will be engaged in activities to better their understanding of basic human physiology, especially how the body systems work together to maintain homeostasis and good health. Students design experiments, investigate the structures and functions of body systems, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary actions, and respiratory operation.

Medical Interventions
Student projects will investigate various medical interventions that extend and improve quality of life. The course is a “How-To” manual for maintaining overall health and homeostasis in the body as students explore: how to prevent and fight infection; how to screen and evaluate the code in human DNA; how to prevent, diagnose and treat cancer; and how to prevail when the organs of the body begin to fail.

Biomedical Innovation
In this capstone course, students apply their knowledge and skills to answer questions or to solve problems related to the biomedical sciences. Students will design innovative solutions for the health challenges of the 21st century. They may consult with a mentor or advisor from a university, hospital, physician’s office or industry as they complete their work. Students are expected to present the results of their work to an adult audience, which may include representatives from the local health care, business and collegiate communities.

Grade 11

- Principles of the Biomedical Sciences
- Human Body Systems
- Math/Science Courses
  - Anatomy and Physiology
  - Trigonometry / Pre-Calculus

Grade 12

- Medical Interventions
- Biomedical Innovation
- Math/Science Courses
  - AP Statistics
  - AP Biology

Students will earn eight total credits.