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 Science Academy is for YOU!

• Physician
• Surgeon
• Dentist
• Veterinarian
• Nurse
• Medical Technologist
• Biomedical Engineer
• Pharmacist
• Forensic Scientist
• Medical/Research Scientist
• Radiologist
• And many more!

Explore
Question
Discover
Solve

Red River Technology Center does not discriminate on the basis of race, color, national origin, sex, gender, age or qualified disability in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of their operations. For special accommodations, contact the counselor.

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!**

---

**Principles of the Biomedical Sciences**

Through exciting “hands-on” projects and problems, students are introduced to the field of biomedical sciences. 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 including homeostasis, metabolism, inheritance, feedback systems and defense against disease are embedded throughout the course.

**Human Body Systems**

Students will be engaged in activities to better their understanding of basic human physiology, especially in relationship to human health. Students will use a variety of monitors to examine the human body both at rest and under stress in order to observe the interactions between the various body systems. Students will use LabVIEW® software to design and build systems to monitor body functions.

**Medical Interventions**

Student projects will investigate various medical interventions that extend and improve quality of life including gene therapy, pharmacology, surgery, prosthetics, rehabilitation, and supportive care. Students will study the design and development of various existing medical interventions. Using 3-D imaging software and current scientific research, students design a product that can be used as a medical intervention.

**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 or business community.

---

<table>
<thead>
<tr>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Lead the Way Courses</strong></td>
<td><strong>Project Lead the Way Courses</strong></td>
</tr>
<tr>
<td>Principles of Biomedical Sciences</td>
<td>Medical Interventions</td>
</tr>
<tr>
<td>Human Body Systems</td>
<td>Biomedical Innovation</td>
</tr>
<tr>
<td><strong>Math/Science Courses</strong></td>
<td><strong>Math/Science Courses</strong></td>
</tr>
<tr>
<td>Anatomy and Physiology</td>
<td>AP Statistics</td>
</tr>
<tr>
<td>Trigonometry / Pre-Calculus</td>
<td>AP Biology</td>
</tr>
</tbody>
</table>

Students will earn eight total credits.