Pre-Engineering 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 Pre-Academy may be for YOU!

Engineering Careers are Available in...
• Aerospace
• Bioengineering/Biomedical
  • Chemical
  • Civil
• Computer Science
• Electrical and Electronic
• Environmental
• Industrial and Manufacturing
  • Materials
  • Mechanical
• And many more!

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 at 580-255-2903, ext. 230. Visit www.rrtc.edu for graduation rates, median student debt and more information. DRUG FREE WORKPLACE
Students in the Pre-Engineering Academy will study pre-engineering through Project-Lead-the-Way® curriculum that introduces them to concepts and principles of engineering with a strong emphasis on the development of problem solving skills. The students will learn how engineers apply math, science, and technology to solve problems. The curriculum has been developed with the goal of preparing students to successfully advance to the college level. Students will take four Project-Lead-the-Way® courses and four advanced science and math courses as listed in the curriculum to the right.

Students also have the opportunity to participate on the area F<sub>AST</sub>® Robotics team. Students work together to create a viable robot that meets certain criteria and can preform particular functions.

**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 Pre-Engineering Academy!

**Introduction to Engineering Design**
Students will enhance problem-solving skills through a design development process. Specialized computer software will be utilized for students to create and analyze models.

**Principles of Engineering**
Students will explore technology systems and manufacturing processes through theoretical and hands-on problem solving activities. Students will also identify career possibilities and address the social and political consequences of technology changes.

**Engineering Specialization Course - Digital Electronics**
Students will learn applied digital logic using electronic logic circuits that they design and then test using digital logic modeling technology.

**Engineering Design and Development**
This is the capstone course in the Pre-Engineering Academy. Students will research and formulate the solution to an engineering question. They will utilize the skills gained from their previous courses and consult with a community mentor to create and defend written reports in an oral presentation to a panel of outside reviewers.

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**Grade 11**

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<th>Project Lead the Way Courses</th>
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<tbody>
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<td>Introduction to Engineering Design*</td>
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<td>Principles of Engineering*</td>
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<td>Math/Science Courses</td>
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<td>Trigonometry / Pre-Calculus</td>
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<td>Physics</td>
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**Grade 12**

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<tr>
<td>Engineering Specialization Course - Digital Electronics</td>
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<td>Advanced Placement Calculus</td>
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*Meets OHLAP Computer Science Requirements.

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Red River Technology Center...Taking dreams and building realities.