

SCIENCE, TECHNOLOGY, ENGINEERING & MATH

EXPLORE YOUR FUTURE WITH THE FOUNDATION HIGH SCHOOL PROGRAM

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CAN YOU
IMAGINE
YOUR FACE
HERE?



CHEMICAL TECHNICIAN

Jobs projected in Texas by 2022:
6,960

You will need:
an Associate degree

Typical starting pay is:
\$28,976 a year

Typical overall pay is:
\$51,556 a year
Turnover: Low

FIGURING OUT what you want to do when you grow up is a challenge, but boy is it worth it! With the Foundation High School Program's endorsement options, you have the opportunity to explore classes and fields of study that interest you TODAY so you can find your dream job TOMORROW. In many of these courses, you will even get to experience what it's like to work in the jobs that interest you.

Remember: YOU HAVE OPTIONS, probably more than you have ever considered. Maybe you're interested in the medical field, but not sure if you want to be a medical doctor. You could also consider being a Registered Nurse, Medical Lab Technologist, or Nutritionist. Did you know some medical field jobs only require a two-year college degree and certification? Yep, like Cardiovascular Technologist, Veterinary Technician, Diagnostic Medical Sonographer, and Physical Therapy Assistants, just to name a few.

So go exploring! Research your endorsement and career interest options before deciding which paths to pursue. The decisions you make about your education today will affect how well you enjoy your job in the future, how much money you earn, your future lifestyle, and so much more. So think it through, plan your future, and have fun!

WHAT IS THE FOUNDATION HIGH SCHOOL PROGRAM??

The **Foundation High School Program** is a detailed plan of 22 credits that you and all your classmates will have to earn in order to graduate from high school. See page 4 for details.

An **endorsement** is something you can add to your high school diploma to show your knowledge and/or skills gained in one of five broad subject matter areas: STEM, Arts and Humanities, Business and Industry, Public Services, and Multidisciplinary Studies. To get an endorsement, you must complete a logical sequence of specific courses approved by your district.

If you have questions about which endorsement would be best for you, talk to your school Counselor!



HOW ABOUT HERE?



ARCHITECT
Jobs projected in Texas by 2022: 11,190
You will need: a Bachelor's degree
Typical starting pay is: \$47,497 a year
Typical overall pay is: \$79,959 a year
Turnover: Low

APP DEVELOPER
Jobs projected in Texas by 2022: 50,780
You will need: a Bachelor's degree
Typical starting pay is: \$63,432 a year
Typical overall pay is: \$97,035 a year
Turnover: Very Low



So ... you think you might want to select the Science, Technology, Engineering and Math Foundation High School Program endorsement option? Awesome! Browse through some of the data for job titles found under the STEM endorsement in this booklet to help you decide if this is the right educational and career path for you. For more information on jobs in this career field, you can:

1. Call our **24-hour Hotline at 1-800-822-PLAN (7526)**
2. Go to the Texas CARES website and search the World of Work at www.TEXASCARESONLINE.com
3. Visit the LMCI website to see what available products may best serve your needs: www.LMCI.STATE.TX.US

We hope that by learning all you can about potential careers in the fields that interest you, you will be empowered to find a career that you love, and that also pays for you to live the way you want once you are living on your own. So enjoy this booklet, explore some options, and don't hesitate to talk to your parents, family, friends, teachers, counselors, and us at the Texas Workforce Commission if you have questions about your career goals.

STEM occupations can be found in all of the following Achieve Texas career clusters.



Sample STEM Occupations by Emphasis

Science

Astronomers	Biochemists/ Biophysicists	BioMedical Researcher
Cellular Biologists	Chemists	Environmental Scientists
Food Scientists	Forensic Scientists	Foresters
Geneticists	Hydrologists	Meteorologists
Microbiologists	Soil Conservationists	Space Scientists

Technology

App Developers	Computer Engineers	Computer Hardware Engineer
Computer Network Architects	Computer Network Specialists	Computer Programmers
Computer Research Scientists	Computer Systems Analyst	Database Administrators
Graphic Designers	Information Security Analyst	Multi-Media Animators
Network Administrators	Software Developers	Web Developers

Engineering

Aerospace Engineers	Automotive Engineers	Chemical Engineers
Civil Engineers	Drafters	Electrical Engineers
Industrial Engineers	Marine Architects	Mechanical Engineers
Mining Engineers	Nuclear Engineers	Petroleum Engineers
Product Safety Engineers	Robotics Engineers	Solar Energy Engineers

Mathematics

Accountant	Actuaries	Auditors
Biostatisticians	Budget Analysts	Cartographers
Credit Analysts	Economists	Financial Managers
Loan Officers	Mathematical Technicians	Mathematicians
Math Teacher	Revenue Agents	Statisticians

Health Science

Anesthesiologists	Chiropractors	Dental Hygienists
Family Practitioner	Health Service Manager	Medical Lab Technician
Medical Records Technician	Medical Sonographers	Nutritionists
Optometrists	Pharmacists	Physical Therapists
Registered Nurses	Surgeon	Veterinary Technologist

Keep in Mind

The career titles listed above are just a fraction of the possible occupation opportunities available within this endorsement area, so be sure to visit TWC's AutoCoder website to find other job titles that may interest you: <http://autocoder.lmci.state.tx.us>.

- Just enter a job title or a description in the appropriate search box, and you will get a list of the most common title matches.
- Click on the title that best matches the job that interests you, and a catalog of other, closely-related (or interchangeable) job titles will appear.

Your FOUNDATION Graduation Requirements

Here's what every Texas student needs to graduate under the Foundation High School Program. Remember that your school district has the authority to establish requirements in addition to the state minimums for graduation. Check with your school Counselor for more information.

<u>FOUNDATION HIGH SCHOOL PROGRAM</u>		Distinguished Level	Performance Acknowledgments
Subject	Standard Credits Needed	Credits Needed	
English <ul style="list-style-type: none"> • English I, II, and III • Advanced English Course 	4	4	Students can earn one or more Performance Acknowledgments, in addition to any graduation program they follow, for any of the areas listed below. (Please talk to your school Counselor for specific guidelines for each category.) <ul style="list-style-type: none"> • Dual Credit course • Advanced Placement or International Baccalaureate exam performance. • Bilingualism and biliteracy • Earning a nationally or internationally recognized business or industry certification or license • PSAT, ACT-PLAN, SAT, or ACT score
Mathematics <ul style="list-style-type: none"> • Algebra I • Geometry • Advanced Math Course 	3	4 All Foundation Program requirements, plus Algebra II	
Science <ul style="list-style-type: none"> • Biology • IPC or advanced science course • Advanced science course 	3	4 All Foundation Program requirements, plus an advanced science class based on endorsement selection	
Social Studies <ul style="list-style-type: none"> • U.S. History • U.S. Government (1/2 credit) • Economics (1/2 credit) • World History or Geography 	3	3	
Physical Education	1	1	
Languages other than English <ul style="list-style-type: none"> • Two credits in the same language • Two credits from Computers Science I, II, and III 	2	2	
Fine Arts	1	1	
Electives Classes available for electives will be based upon the endorsement options selected by the student.	5	7	
Speech Demonstrated proficiency	0	0	
Total Credits		22	26

Your STEM Endorsement Options

Students interested in earning the **STEM** endorsement have several options. You will need to successfully complete **Algebra II**, **Chemistry**, and **Physics**, and choose one of five options to earn your remaining **STEM** endorsement credits. You can:

1. Complete consecutive levels [For example: **Principles of Engineering** followed by **Introduction to Engineering Design** or **Medical Terminology** followed by **Pharmacology**] of four or more Career Technical Education (CTE) courses with the first two being from the same career cluster.
 - a. The third CTE credit must be from an advanced course
 - b. The fourth CTE credit must come from a class in the **STEM** career cluster
2. Complete four credits from the following **Computer Science** course options:
 - a. **Fundamentals of Computer Science**
 - b. **Computer Science I, II, and III**
 - c. **AP Computer Science**
 - d. **IB Computer Science, Standard Level**
 - e. **IB Computer Science, Higher Level**
 - f. **Discrete Mathematics for Computer Science**
 - g. **Digital Forensics**
 - h. **Game Programming and Design**
 - i. **Mobile Application Development**
 - j. **Robotics Programming and Design**
 - k. **Independent Studies of Technology Applications**
3. Complete a total of five mathematics credits by completing:
 - a. **Algebra I**
 - b. **Geometry**
 - c. **Algebra II**
 - d. Any two additional courses in which **Algebra II** is a prerequisite
4. Complete a total of five science credits by completing:
 - a. **Biology**
 - b. **Chemistry**
 - c. **Physics**
 - d. Any two additional science courses
5. Successfully complete **Algebra II**, **Chemistry**, **Physics**, and:
 - a. Three additional credits from no more than two of the areas listed in options 1 - 4.



**WHAT
ABOUT
HERE?!?**

DENTAL HYGIENIST

Jobs projected in Texas by 2022:
16,030

You will need: an Associate degree

Typical starting pay is: \$59,783 a year

Typical overall pay is: \$71,977 a year

Turnover: Low

VETERINARIAN

Jobs projected in Texas by 2022: 5,060

You will need:

a degree from an accredited college of veterinary medicine, AND a state license

Typical starting pay is:

\$57,896 a year

Typical overall pay is:

\$105,619 a year

Turnover: Average

LAB TECHNICIAN

Jobs projected in Texas by 2022:

15,530

You will need:

an Associate degree

Typical starting pay is:

\$26,303 a year

Typical overall pay is:

\$37,975 a year

Turnover: Low



**ANYWHERE
HERE?**



PHARMACIST

Jobs projected in Texas by 2022:

24,650

You will need:

a professional degree

Typical starting pay is:

\$96,964 a year

Typical overall pay is:

\$118,871 a year

Turnover: Low

The Real Deal

Using Labor Market Statistics to Filter through Career Options

It is important to think about how much money you'll earn in any given occupation. But you should consider many other labor market statistics to help you make informed choices.

Check out the information and numbers below for a few jobs in the Science, Technology, Engineering and Math fields to see other important statistics you can discover on the Texas CARES website. Use this information to help you determine what's important to you in a career.

Computer-Controlled Machine Tool Operator

You will: operate computer-controlled machines or robots to perform one or more machine functions on metal or plastic work pieces.

- Manufacturing industries employ almost all of these workers.
- Workers learn in apprenticeship programs, informally on the job, and in secondary, vocation, or postsecondary schools.
- Expect stiff competition for these jobs.

Projected Texas employment for 2022	13,710
Education needed	High School diploma, on-the-job training
2014 Average Annual Wage	\$38,293
Turnover	Very Low

Registered Nurse

You will: Assess patient health problems and needs, plan and administer nursing care to ill, injured, convalescent, or disabled patients, and more.

Licensing or registration required.

- The largest healthcare occupation, with 2.7 million jobs nationwide.
- About 60 percent of jobs are in hospitals.
- Depending on specialization, may require as little as an Associate degree or as advanced as a Master's.
- Excellent opportunities, may vary by employment and geographic location.

Projected Texas employment for 2022	242,860
Education needed	Associate Degree or higher
2014 Average Annual Wage	\$68,584
Turnover	Very Low

Civil Engineer

You will: Plan, design and oversee construction and maintenance of structures and facilities like roads, railroads, airports, bridges and more.

- Bachelor's degree is sufficient for most starting positions, but some research positions may require a graduate degree.
- Starting salaries are among the highest of all college graduates.
- Continuing education is needed for engineers to keep up with technological advancements.

Projected Texas employment for 2022	30,540
Education needed	Bachelor's Degree
2014 Average Annual Wage	\$100,325
Turnover	Low

**WANT INFORMATION ON
MORE JOBS?**

Check out
www.TEXASCARESONLINE.com
to learn about hundreds
more STEM careers!

EXPLORE YOUR FUTURE!

ENVIRONMENTAL SCIENTIST

Jobs projected in Texas by 2022: 7,300

You will need:

preferably a Master's degree, Bachelor's
degree minimum

Typical starting pay is: \$44,872 a year

Typical overall pay is: \$77,484 a year

Turnover: Low



TEXAS WORKFORCE COMMISSION
Labor Market and Career Information
101 E. 15th St, Room 0252
Austin, TX 78778-0001
866-938-4444 toll free
Fax: 512-936-3208
www.texasrealitycheck.com
www.texasworkforce.org
email: lmci@twc.state.tx.us

Equal Opportunity Employer/Program. Auxiliary aids and services are available upon request to individuals with disabilities. Relay Texas: 800-735-2989 (TTY) and 711 (Voice).

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