



Northeast Technical High School's mission is to use career exploration and hands-on experiences to provide academic relevancy and promote life-long learning.

NTHS's courses are designed to help students explore various career clusters. In their simplest form, Career Clusters are groupings of occupations/career specialties used as an organizing tool for curriculum design and instruction. Occupations/career specialties are grouped into the Career Clusters based on the fact that they require a set of common knowledge and skills for career success. Career Clusters focus on a blend of technical, academic and employability knowledge and skills that prepare learners for a full range of occupations/career specialties.

Career Clusters also provide information to help you answer questions when planning for your future. Consider the following questions:

- Is the career a good match with your interests, aptitude and abilities?
- Is the career a good match with your values and goals?
- Where do you want to live?
- What would you really do on the job?
- What skills and knowledge are needed?
- What level of education is required?
- What kind of working environment would you like?
- What are the working hours?
- Will you travel for the job?
- What is the salary range?
- Does the career have a favorable outlook?

The Northeast Technical High School courses are listed alphabetically by program. The course information also can be found at www.northeasttechnicalhighschool.k12.sd.us. For more information on career clusters, see www.careerclusters.org, your high school career counselor or Mr. Bert Falak at NTHS.

Most NTHS courses offer a dual credit option. For an updated listing of these dual credit options, please visit the NTHS website or talk with your counselor.

Policy of Non-Discrimination:

It is the policy of the Northeast Technical High School not to discriminate on the basis of sex, race, color, national origin, creed, religion, marital status, status with regard to public assistance, age, or disability in education programs, activities, or employment policies as required by federal and state laws and regulations. Inquiries regarding compliance may be brought to the attention of the Center Director, 1311 Third Avenue Northeast, Watertown, SD 57201 (605-882-6380) or for additional information contact: Director of the Office of Civil Rights, Department of Health, Education & Welfare, Washington, D.C.

NTHS Course Summaries

NTHS Animal Science

Eligibility: 9-12

1 Credit Semester Course

Prerequisite: None

1. **Students will explore/learn** the basic background & social issues of animal science, anatomy/physiology, nutrition, reproduction, genetics, and animal health. Students will perform several necropsies to better understand animal anatomy.
2. **Skills acquired:** basic science and math skills will be used. Confidence with working with animals. Science of animals.
3. **Parents should know:** This is a basic introductory course to large animals. Students will work hands on with live animals and learn the science of taking care of them. By taking this course, students may participate in FFA.
4. **College Connections:** This course could lead students to various associates and bachelor's degrees: Large Animal Production, Vet Assistant (2 year), Vet Tech (4 year), and Animal Nutritionist.
5. **Career Connections:** Students will make connections to that of animal science specialists: such as Veterinarians, Zoologists, Livestock Producers, A.I. Specialist and Agriculture Teacher.
6. **Dual Credit:** 3 Technical College credits are available.

NTHS Plant Science

Eligibility: 9-12

1 Credit Semester Course

Prerequisite: None

1. **Students will explore/learn** the basic background of soils, hydroponics, and anatomy/physiology of plants, growing environments, plant reproduction, crop production & harvesting.
2. **Skills acquired:** Students will learn how to grow plants with or without soil and will understand the basic food production.
3. **Parents should know:** This is a basic introductory course. Students will work hands planting plants and learn the science of taking care of them. By taking this course, students may participate in FFA.
4. **College Connections:** This course could lead students to various associates and bachelor's degrees: Agronomist, soil specialist, Horticulture
5. **Career Connections:** Plant Science Specialists, such as Horticulturists, Agronomists, Greenhouse and Nursery Managers, Agriculture Teacher and Plant Research Specialists
6. **Dual Credit:** 3 Technical College Credits are available.

NTHS Wildlife & Fisheries

Eligibility: 9-12

1 Credit Semester Course

Prerequisite: None

1. **Students will explore/learn:** SD species identification, natural resources, soil & land resources, water basics, forestry and outdoor recreation activities.
2. **Skills acquired:** Same as above.
3. **Parents should know:** Students will participate in indoor and outdoor activities. Management of SD's wildlife & fisheries is critical to our future economic stability. By taking this course, students may participate in FFA.

4. **College Connections:** This course could lead students to various associates and bachelor's degrees: Wildlife management, Natural Resources & Technology (LATI)
5. **Career Connections:** This course will lead students to career(s) in Soil Tech, Water Tech, Natural Resources, Wildlife Biologist, Fish Technicians, Conservation Law Officer, and Zoologist.
6. **Dual Credit:** None

NTHS Companion Animal

Eligibility: 9-12 1 Credit Semester Course Prerequisite: None

1. **Students will explore/learn** the basic background & social issues, anatomy/physiology, animal handling, and animal health.
2. **Skills acquired:** Confidence with working with animals. First aid & CPR of pets.
3. **Parents should know:** This is a basic introductory course to small animals. Students will work hands on with live animals and will do volunteer work at the local humane society. By taking this course, students may participate in FFA.
4. **College Connections:** This course could lead students to various associates and bachelor's degrees in: Vet Assistant (2 year) and Vet Tech (4 year)
5. **Career Connections:** Veterinarians, Zoologists, Animal Handlers, Agriculture Teacher, and Animal Breeders.
6. **Dual Credit:** None

NTHS Auto I-Small Engine Mechanics/Intro to Automotive

Eligibility: 10-12 1 Credit Semester Course Prerequisite: None

1. **Students will learn/explore** general maintenance, repair of small engines, brakes, steering, suspension, tire repair, gasoline engines and electrical.
2. **Skills Acquired:** same as above.
3. **Parents should know:** that all students will be trained on all shop equipment, shop safety and will have to pass all safety tests with a 100%.
4. **College connections:** This course could lead students to various associate degrees: Automotive Technology, Diesel Technology, Custom Paint/Fabrication and High Performance Engine Machining.
5. **Career Connections:** Auto Service Technician, Diesel Service Technician, Auto Body Technician, High Performance Engine Technician and many other related fields.
6. **Dual Credit:** Pending
7. **Industry Recognized Credential:** None

NTHS Auto II-Maintenance & Light Repair

Eligibility: 10-12 1 Credit Semester Course Prerequisite: None

1. **Students will learn/explore** general maintenance, vehicles, brakes, steering, suspension, gasoline engines, electrical, heating, air conditioning, scan tools, transmissions and differentials.
2. **Skills Acquired:** same as above.
3. **Parents should know:** that all students will be trained on all shop equipment, shop safety and will have to pass all safety tests with a 100%.

4. **College connections:** This course could lead students to various associate degrees: Automotive Technology, Diesel Technology, Custom Paint/Fabrication and High Performance Engine Machining.
5. **Career Connections:** Auto Service Technician, Diesel Service Technician, Auto Body Technician, High Performance Engine Technician and many other related fields.
6. **Dual Credit:** Pending
7. **Industry Recognized Credential:** None

NTHS Principles of Biomedical Sciences

Eligibility: 10-12 1 Credit Semester Course Prerequisite: Math class in Same Year

1. **Students will explore/learn:** about health conditions, including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, infectious diseases and organ dissections.
2. **Skills Acquired:** general lab procedures, DNA analysis, how to use a microscope, plating and growing bacteria, and reading medical and autopsy reports.
3. **Parents should know** students will conduct advance labs that will prepare them for future health care classes.
4. **College Connections:** students will be introduced to many medical and lab procedures they will see in college such as Forensic Science labs, DNA analysis labs and heart disease labs.
5. **Career Connections:** Students take on the role of many health care professionals such as a Forensic Scientist, Medical Doctors, Medical Lab Technicians, Nurses and Crime Scene Investigator.
6. **Dual Credit** is offered as science elective credit through several colleges/universities. Credit eligibility is dependent on grade and End of Course exam.

NTHS Human Body Systems

Eligibility: 10-12 1 Credit Semester Course Prerequisite: Math class in Same Year

1. **Students will explore/learn:** how the human body: utilizes food, moves, protects us from disease or injury and communicates with the outside world.
2. **Skills Acquired** students will learn how to analyze: bones, DNA, a basis urinalysis, patient symptoms and microscope slides.
3. **Parents should know** students will learn about the human body through hands on labs that will allow them to experience real world scenarios.
4. **College Connections:** Pre-professional programs, Biology, Genetics, Forensics, Anthropology, Psychology, Pharmacy, Anatomy and Physiology.
5. **Career Connections:** students will take on the role of a Doctor, Nurse, Physical Therapist, Optometrist, Forensic Anthropologist, Medical Lab Technician, Pharmacist and Radiologist.
6. **Dual Credit** is offered as science elective credit through several colleges/universities. Credit eligibility is dependent on grade and End of Course exam.

NTHS Medical Intervention

Eligibility: 11-12 1 Credit Sem Course Prerequisite: Prin of BioMed or Human Body Systems

1. **Students will explore/learn:** how to prevent, diagnose and treat disease. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices and diagnostics.

2. **Skills Acquired:** Students practice problem solving with structured activities and progress of open-ended projects and problems that require them to develop plans, documentation, communication and other professional skills. Students develop public speaking skills.
3. **College Connections:** Students take on the role of biomedical professionals to analyze case information and diagnose and treat patients.
4. **Career Connections:** Students will explore: Immunology, Surgery, Genetics, Pharmacology, Medical Devices and Diagnostics.
5. **Dual Credit:** is offered as a science elective credit through several colleges/universities. Credit eligibility is dependent on grade and end of course exam.

NTHS Residential Construction

Eligibility: 11-12 2 Credits Full Year Course Prerequisite: None

1. **Students will learn/explore** basic carpentry (framing, sheet rocking, interior and exterior finishing, electrical, plumbing, and concrete).
2. **Skills acquired:** same as above.
3. **Parents should know** that all students will be trained on all power tools that are used in class and will have to pass all safety tests with 100%. Students will also take an OSHA 10 safety training program.
4. **College Connections:** This course could lead students to various associate degrees: Building Trades, HVAC, Electrical, Architectural Drafting; as well as various four-year Construction Management programs.
5. **Career Connections:** Framing or finish carpenter, cabinet making, electrician, plumber, architect, project manager, concrete, landscaping, HVAC, masonry, and many other related fields.
6. **Dual Credit:** 7.5 Technical College Credits are available.
7. **Industry Recognized Credentials:** OSHA 10-hour Construction Safety and Health

Cabinetmaking 1

Eligibility: 10-12 1 Credit Semester Course Prerequisite: None

1. **Students will learn/explore** basic cabinetmaking (safety, basic CAD drafting, materials, estimating, wood joints, project construction, finishing process, wood lathe projects). Students will build an individual final project that will be about the size of a nightstand.
2. **Skills acquired:** same as above.
3. **Parents should know** that all students will be trained on all hand tools, power tools, and stationary machines that are used in class and will have to pass all safety tests with 100%. Students will also take an introduction to OSHA 5hr safety training program (StartSafe. Stay Safe. ®). If students wish to keep the final project we ask that they pay for the materials needed to build the project.
4. **College Connections:** This course could lead students to various associate degrees: cabinetmaking, building trades, or any program related to the architecture and construction career cluster, as well as various four-year Construction Management programs.
5. **Career Connections:** Careers in the architecture and construction career cluster. Including cabinetmaking, framing or finish carpenter, architect, project manager, and many other related fields.
6. **Dual Credit:** 1 Technical College Credit is available.

NTHS Advanced Cabinetmaking

Eligibility: 10-12 1 Credit Semester Course Prerequisite: Cabinetmaking

1. **Students will learn/explore** advanced cabinetmaking (advanced machines, advanced project design, advanced wood joints, project construction, finishing process, wood lathe projects). Students will build an individual final project that is open to any project that is cabinet or furniture related.
2. **Skills acquired:** same as above.
3. **Parents should know:** that all students will be trained on all hand tools, power tools, and stationary machines that are used in class and will have to pass all safety tests with 100%. If students wish to keep the final project we ask that they pay for the materials needed to build the project.
4. **College Connections:** This course could lead students to various associate degrees: Cabinetmaking, building trades, or any program related to the architecture and construction career cluster, as well as various four-year Construction Management programs.
5. **Career Connections:** variety of careers in the architecture and construction career cluster. Including cabinetmaking, framing or finish carpenter, architect, project manager, and many other related fields.
6. **Dual Credit:** 2 Technical College Credits are available

NTHS Food and Nutrition

Eligibility: 9-12 .5 Credit Quarter Course Prerequisite: None

1. **Students will learn/explore** basic nutrition through class work and cooking (examples: peanut butter cookies, banana crisp, chicken couscous soup).
2. **Skills Acquired:** In addition to cooking, students will learn teamwork, time management, leadership, communication, problem solving, and sanitation skills.
3. **Parents should know:** Students will be trained in safe kitchen practices, including knife skills and will have to pass a safety test with 100%. Students are also required to have a completed guardian/student signed allergy form. Students will be exposed to a variety of foods and ingredients including peanuts, tree nuts, and flour products.
4. **College Connections:** This course could lead students to various associate degrees: culinary arts, pastry and baking, and other related fields. In addition, four-year degrees including food science, hospitality, dietician, family and consumer sciences education, and numerous other possibilities.
5. **Career Connections:** Executive chef, sous chef, health inspector, server, front of the house manager, back of the house manager, food artist, caterer and many other related fields.
6. **Dual Credit:** None

NTHS Cooking

Eligibility: 9-12 .5 Credit Quarter Course Prerequisite: None

1. **Students will learn/explore** through class work, and hands on experience with basic methods for cooking and baking food (examples: homemade macaroni, garlic biscuits, banana chocolate chip oatmeal muffins, etc.).
2. **Skills Acquired:** In addition to cooking and baking, students will learn teamwork, time management, leadership, communication, problem solving, and sanitation skills.

3. **Parents should know:** Students will be trained on safe kitchen practices and will have to pass a safety test with 100%. Students are also required to have a completed guardian/student signed allergy form. Students will be exposed to a variety of foods and ingredients including peanuts, tree nuts, and flour products.
4. **College Connections:** This course could lead students to various associate degrees: culinary arts, pastry and baking, catering and other related fields. In addition, four-year degrees including food science, hospitality, dietician, family and consumer sciences education, and numerous other possibilities.
5. **Career Connections:** Executive chef, sous chef, health inspector, server, front of the house manager, back of the house manager, food artist, caterer and many other related fields.
6. **Dual Credit:** None

NTHS Culinary Arts 1

Eligibility: 10-12 1 Credit Semester Course Prerequisite: None

1. **Students will learn/explore** a wide variety of topics including, but not limited to, mother sauces, soups, potatoes, and grains.
2. **Skills Acquired:** In addition to culinary arts, students will learn teamwork, time management, leadership, communication, multitasking problem solving, and sanitation skills.
3. **Parents should know:** Students will be trained on safe kitchen practices and will have to pass a safety test with 100%. Students are also required to have a completed guardian/student signed allergy form. Students will be exposed to a variety of foods and ingredients including peanuts, tree nuts, and flour products.
4. **College Connections:** This course could lead students to various associate degrees: culinary arts, pastry and baking, catering and other related fields. In addition, four-year degrees including: food science, hospitality, dietician, family and consumer sciences education, and numerous other possibilities.
5. **Career Connections:** Executive chef, sous chef, health inspector, server, front of the house manager, back of the house manager, food artist, caterer and many other related fields.
6. **Dual Credit:** None

NTHS Culinary Arts 2

Eligibility: 10-12 1 Credit Semester Course Prerequisite: Cul. Arts I or Food Nutrition

1. **Students will learn/explore** a wide variety of topics including, but not limited to, sandwiches, breakfast foods, desserts, global cuisine, and nutrition.
2. **Skills Acquired:** In addition to culinary arts students will learn teamwork, time management, leadership, communication, multitasking problem solving, and sanitation skills
3. **Parents should know:** Students will be trained on safe kitchen practices will have to pass a safety test with 100%. Students are also required to have a completed guardian/student signed allergy form. Students will be exposed to a variety of foods and ingredients including peanuts, tree nuts, and flour products.
4. **College Connections:** This course could lead students to various associate degrees: culinary arts, pastry and baking, catering and other related fields. In addition four-year degrees including: food science, hospitality, dietician, family and consumer sciences education, and numerous other possibilities.

5. **Career Connections:** Executive chef, sous chef, health inspector, server, front of the house manager, back of the house manager, food artist, caterer and many other related fields.
6. **Dual Credit:** None

NTHS Health Science

Eligibility: 11-12 1 Credit Semester Course Prerequisite: None

1. **Students will learn/explore** many of the 600 plus health care careers, learn the education needed, degree earned and their interest level in pursuing a healthcare career. The students will take numerous tours and have guest speakers in the classroom.
2. **Skills Acquired:** Ability to take a blood pressure, count a pulse and respirations, use a thermometer, measure height and weight, infection control, sterile techniques, patient care practices, military time, exploration of electronic medical records, sutures, injections and many more.
3. **Parents should know** that the student has the opportunity to shadow at the hospital after successfully completing HIPAA and Confidentiality training for about two weeks. Also, they will be able to become CPR/AED certified.
4. **College Connections:** This class could help lead a student to post-secondary education in the field of study for nursing, medical doctor, physician assistant, nurse practitioner, radiology, dentistry, optical careers, veterinary science, therapist, mental health, laboratory, paramedic/EMT, to name a few examples.
5. **Career Connections:** This class may help a student obtain employment in the healthcare field while going to school. The student could work to get certified as a nursing assistant, pharmacist technician, optical assistant, veterinary technician, medical office assistant, etc. Also, after obtaining a degree in any of the healthcare options, job opportunities are vast as there is a projected shortage in many of the healthcare fields.
6. **Dual Credit:** LATI .5 credit for the Basic Life Support CPR/AED
7. **Industry Recognized Credential:** CPR/AED/First Aid certification

NTHS Advanced Health Science

Eligibility: 11-12 1 Credit Semester Course Prerequisite: Health Science Careers

1. **Students will learn/explore** medical terminology and medical abbreviations with the option to take the class as a dual credit. Also, they will be able to do a 5 week field experience in the chosen health care career of their choice.
2. **Skills Acquired:** Ability to fluently use medical terminology and have more specific knowledge of the career chosen for their field experience.
3. **Parents should know** that the dual credit is an option for the Advanced Health Science course. Also, they should know that the last five weeks of class will be spent in a healthcare setting versus the classroom.
4. **College Connections:** This class could help lead a student to post-secondary education in the field of study for nursing, medical doctor, physician assistant, nurse practitioner, radiology, dentistry, optical careers, veterinary science, therapist, mental health, laboratory, paramedic/EMT, to name a few examples.
5. **Career Connections:** This class may help a student obtain employment in the healthcare field while going to school. The student could work to get certified as a nursing assistant, pharmacist technician, optical assistant, veterinary technician, medical office assistant, etc. Also, after obtaining a degree in any of the healthcare options, job opportunities are vast as there is a projected shortage in many of the healthcare fields.

6. **Dual Credit:** There is dual credit through Lake Area Technical Institute (1.5 credit) MA115. In addition, many universities accept the credit toward their medical terminology class or as an elective.
7. **Industry Recognized Credential:** None

NTHS Human Development-Preschool-School Age

Eligibility: 10-12 .5 Credit Quarter Course Prerequisite: None

1. **Students will learn/explore** the knowledge of physical, cognitive, and social development in children in preschool through school age.
2. **Skills acquired:** Interest in working with young children & soft skills
3. **Parents should know** that we will review confidentiality and students are expected to follow the guideline for confidentiality when they are out on job shadows and tours.
4. **College Connections:** Various associates and bachelor's degrees: Human Services, Psychology, Sociology, Social Work, Counseling, Elementary Education
5. **Career Connection:** Elementary Teacher, Social Worker, Daycare Provider (In home or center), Paraprofessional, Head start Educator
6. **Dual Credit:** Dual credit is offered through Lake Area Technical Institute (1 credit) however you will need to take both Human Development classes.
7. **Industry Recognized Credential:** None

NTHS Human Development-Early Childhood/Parenting

Eligibility: 10-12 .5 Credit Quarter Course Prerequisite: None

1. **Students will learn/explore** the knowledge of physical, cognitive, and social development in newborn babies through Preschool age.
2. **Skills acquired:** Interest in working with young children & soft skills
3. **Parents should know** that we will review confidentiality and students are expected to follow the guideline for confidentiality when they are out on job shadows and tours.
4. **College Connections:** Various associates and bachelor's degrees: Human Services, Psychology, Sociology, Social Work, Counseling, Early Childhood Education
5. **Career Connection:** Preschool/Kindergarten Teacher, Social Worker, Daycare Provider (In home or Center), Head start Educator, and Birth-3 Programs
6. **Dual Credit:** Dual credit is offered through Lake Area Technical Institute (1 credit) however you will need to take both Human Development classes
7. **Industry Recognized Credential:** None

NTHS Intro to Human Services

Eligibility: 10-12 .5 Credit Quarter Course Prerequisite: None

1. **Students will learn/explore** many different careers that deal with working with people. Human Services, Law and Public Safety, nonprofit organizations
2. **Skills acquired:** soft skills & enjoy working with people
3. **Parents should know** that we will review confidentiality and students are expected to follow the guideline for confidentiality when they are out on job shadows and tours.
4. **College Connections:** Various associates and bachelor's degrees: Human Services, Psychology, Sociology, Social Work, Criminal Justice, and Law Enforcement
5. **Career Connection:** Social Worker, Daycare Provider (In home or Center), Police Officer, Detective, Jailer, Educator, Counseling and working at Nonprofit organization
6. **Dual Credit:** None
7. **Industry Recognized Credential:** None

NTHS Leadership and Service

Eligibility: 11-12 .5 Credit Quarter Course Prerequisite: One other Human Service Course

1. **Students will learn/explore** careers that they will be working with people. They will explore a career of their choice with our field experience program.
2. **Skills acquired:** soft skills & enjoy working with people
3. **Parents should know** that we will review confidentiality and students are expected to follow the guideline for confidentiality when they are out on field experience and tours.
4. **College Connections:** Various associates and bachelor's degrees: Human Services, Psychology, Sociology, Social Work, Criminal Justice, and Law Enforcement
5. **Career Connection:** Social Worker, Daycare Provider (In home or Center), Police Officer, Detective, Jailer, Educator, Counseling and working at Nonprofit organization
6. **Dual Credit:** None
7. **Industry Recognized Credential:** None

NTHS Machine Tool Technology

Eligibility: 10-12 2 Credits Full Year Course Prerequisite: None

1. **Students will learn/explore** basic (precision measuring, blueprint reading, turning and milling theory and operations, machine tool lab).
2. **Skills acquired:** same as above.
3. **Parents should know** that all students will be trained on all machines and tools that are used in class and will have to pass all safety tests with 100%.
4. **College Connections:** This course could lead students to various associate degrees: Precision Machining, Computer Aided Design (CAD), Robotics, as well as various four-year Engineering programs.
5. **Career Connections:** Machinist, Tool Maker, Engineering, Computer aided design, Computer aided machining, CAM, Quality Assurance
6. **Dual Credit:** 4 Technical College Credits are available.
7. **Industry Recognized Credentials:** None

NTHS Introduction to Engineering

Eligibility: 9-12 1 Credit Semester Course Prerequisite: Algebra I

1. **Students will learn/explore:** Students are introduced to the Design process, applying engineering standards to identify and design solutions to a variety of real problems. They work both individually and in collaborative teams to develop and document design solutions using Engineering Notebooks and 3D modeling software.
2. **Skills acquired:** Problem solving, Computer 3D design, Organization, 3D printer experience, Blueprint reading
3. **Parents should know:** Students will be taken outside of their comfort zone with design challenges
4. **College Connections:** This course could lead students to an associates degree in Robotics, or bachelor's degrees in Aerospace, Agricultural, Biomedical, Chemical, Civil, Computer, Electrical, Electronics, Environmental, Health and Safety, Industrial, Materials, Marine and Ocean, Mechanical, Mining and Geological, Nuclear, and Petroleum Engineering.
5. **Career Connections:** This class ties into careers in every area of design. Carpenters, Interior Design, Fabrication, Drafters, Architects, Production Technicians and a variety of engineering careers (as listed above).

6. **Dual Credit** Technical College or University credits are available.
7. **Industry Recognized Credentials:** None

NTHS Principles of Engineering

Eligibility: 9-12 1 Credit Semester Course Prerequisite: Algebra I

1. **Students will learn/explore:** Students are introduced to the design process, applying engineering standards to identify and design solutions to a variety of real problems. They work both individually and in collaborative teams to develop and document design solutions using engineering notebooks and prototyping materials.
2. **Skills acquired:** Problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.
3. **Parents should know:** Students will be taken outside of their comfort zone with design challenges
4. **College Connections:** This course could lead students to an associates degree in Robotics, or bachelor's degrees in Aerospace, Agricultural, Biomedical, Chemical, Civil, Computer, Electrical, Electronics, Environmental, Health and Safety, Industrial, Materials, Marine and Ocean, Mechanical, Mining and Geological, Nuclear, and Petroleum Engineering
5. **Career Connections:** Robotic Technicians, or a variety of engineering careers (as listed above.).
6. **Dual Credit:** Technical College or University Credits are available.
7. **Industry Recognized Credentials:** None

NTHS Civil Engineering and Architectural Engineering

Eligibility: 10-12 1 Credit Sem Course Prerequisite: Alg I & Either Intro to Eng or Prin of Eng

1. **Students will learn/explore** Students will use the design process and applying engineering standards to identify and design solutions to complex real problems that are associated with residential, commercial and civil projects. They work both individually and in collaborative teams to develop and document design solutions using engineering notebooks and 3D architectural design software.
2. **Skills Acquired:** Problem solving, computer design, organization, blueprint reading, and surveying field work.
3. **Parents should know:** Students will be taken outside of their comfort zone with design challenges
4. **College Connections:** This course could lead students to an associates degree in Robotics, or bachelor's degrees in Aerospace, Agricultural, Biomedical, Chemical, Civil, Computer, Electrical, Electronics, Environmental, Health and Safety, Industrial, Materials, Marine and Ocean, Mechanical, Mining and Geological, Nuclear, and Petroleum Engineering.
5. **Career Connections:** This class ties into careers in every area of design. Carpenters, Interior Design, Fabrication, Drafters, Architects, Production Technicians and a variety of engineering careers (as listed above).
6. **Dual Credit** University Credits are available.
7. **Industry Recognized Credentials:** None

NTHS Digital Electronics

Eligibility: 10-12 1 Credit Semester Course Prerequisite: Algebra I

1. **Students will learn/explore:** Students will use the design process and applying engineering standards to identify and design solutions to complex real problems that are associated with electrical circuits in a DC environment. They work both individually and in collaborative teams to develop and document design solutions using engineering notebooks and electronic components.
2. **Skills acquired:** Students study topics such as combinational and sequential logic and are exposed to circuit design tools used in industry, including logic gates, integrated circuits, and programmable logic devices.
3. **Parents should know:** Students will be taken outside of their comfort zone with design challenge.
4. **College Connections:** This course could lead students to associates degrees in Robotics, Energy Operations, Energy Technology, Electronic Systems Technology, or bachelor's degrees in Aerospace, Civil, Computer, Electrical, Electronics, Industrial, Materials, Mechanical, and Nuclear Engineering
5. **Career Connections:** Robotic Technicians, Electrical Technicians, or a variety of engineering careers (as listed above.).
6. **Dual Credit:** Technical College or University Credits are available.
7. **Industry Recognized Credentials:** None

NTHS Welding

Eligibility: 10-12 1 Credit Semester Course Prerequisite: None

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NTHS Advanced Welding

Eligibility: 10-12 1 Credit Semester Course Prerequisite: Welding

1. **Students will learn/ explore** basic welding skills (Gas Tungsten Arc Welding, Shielded Metal Arc Welding, and Gas Metal Arc Welding), blueprint reading, welding symbols, math, and troubleshooting of welding equipment.
2. **Skills acquired:** Students shall be able to weld Gas tungsten, gas metal, shielded arc welding, along with blueprint reading welding symbols and troubleshooting all basic welder problems.
3. **Parents should know:** All students shall have safety training, and training on all equipment and hand tools. Students will pass a safety test with a score of 100%.
4. **College Connections:** This course could lead to various associate degrees in welding, Business Management, Sales, and some bachelor's degrees in Metallurgy, inspectors and educating areas.
5. **Career Connections:** Welding manufacturing, personal business, teaching, sales, repair and many more.
6. **Dual Credit:** 8.5 Technical College credits are available
7. **Industry Recognized Credential:** None

NTHS Exploratory Courses

NTHS Business Tech

Eligibility: 9-10

.5 Credit Quarter Course

Prerequisite: None

1. **Students will learn/ explore** the basic background of careers in Finance, Government & Public Administration, Business, Management & Administration, Marketing, Sales & Service, Arts, A/V Tech and Communications.
2. **Skills acquired:** basic business and technology skills, building confidence by working on hands on projects pertinent to jobs in the various career clusters.
3. **Parents should know:** that this is an exploration course that gives students exposure to a wide variety of different career paths; allowing them to experience a wide variety of careers with potential to take more in-depth classes at Northeast Technical High School.
4. **College Connections:** Students will identify post-secondary paths that could lead to various associates and bachelor's degrees: Political Science, Finance, Public Administration, Business Administration & Management, Human Resources Management.
5. **Career Connections:** Students will make a connection with business in the community through tours and informative guest speakers that have real world experience in the career clusters that are covered.
6. **Dual Credit:** None
7. **Industry Recognized Credential:** None

NTHS Science Tech

Eligibility: 9-10

.5 Credit Quarter Course

Prerequisite: None

1. **Students will learn/ explore** the basic background of careers in Health Science, STEM, Ag, Food and Natural Resources.
2. **Skills acquired:** basic understanding of science and technological careers, working on different hands on projects pertinent to jobs in the various career clusters.
3. **Parents should know:** that this is an exploration course that gives students exposure to a wide variety of different career paths; allowing them to experience a wide variety of careers with potential to take more in-depth classes at Northeast Technical High School.
4. **College Connections:** Students will identify post-secondary paths that could lead to various associates and bachelor's degrees: Chemistry, Biology, Environmental Science, Mathematics, Physics, Public Health, Agriculture and Natural Resources.
5. **Career Connections:** Students will make a connection with business in the community through tours and informative guest speakers that have real world experience in the career clusters that are covered.
6. **Dual Credit:** None
7. **Industry Recognized Credential:** None

NTHS Working with People

Eligibility: 9-10

.5 Credit Quarter Course

Prerequisite: None

1. **Students will learn/ explore** the basic background of careers in Human Services, Education & Training, Hospitality & Tourism, Law, Public Safety, Corrections & Security.
2. **Skills acquired:** basic understanding of careers in the areas of Working with People, working on hands on projects pertinent to jobs in the various career clusters.

3. **Parents should know:** that this is an exploration course that gives students exposure to a wide variety of different career paths; allowing them to experience a wide variety of careers with potential to take more in-depth classes at Northeast Technical High School.
4. **College Connections:** Students will identify post-secondary paths that could lead to various associates and bachelor's degrees: Corrections, Law, Education, Hospitality, Public Health, Health Services.
5. **Career Connections:** Students will make a connection with business in the community through tours and informative guest speakers that have real world experience in the career clusters that are covered.
6. **Dual Credit:** None
7. **Industry Recognized Credential:** None

NTHS Careers that Build

Eligibility: 9-10 .5 Credit Quarter Course Prerequisite: None

1. **Students will learn/ explore** the basic background of careers in Architecture & Construction, Manufacturing, Information Technology, Transportation, Distribution & Logistics.
2. **Skills acquired:** basic understanding of careers in the areas of Careers that Build, working on different hands on projects pertinent to jobs in the various career clusters.
3. **Parents should know:** that this is an exploration course that gives students exposure to a wide variety of different career paths; allowing them to experience a wide variety of careers with potential to take more in-depth classes at Northeast Technical High School.
4. **College Connections:** Students will identify post-secondary paths that could lead to various associates and bachelor's degrees: Architecture, Design, Construction, Construction Management, Manufacturing, Information Technology, Transportation, Distribution & Logistics.
5. **Career Connections:** Students will make a connection with business in the community through tours and informative guest speakers that have real world experience in the career clusters that are covered.
6. **Dual Credit:** None
7. **Industry Recognized Credential:** None