

**Career Clusters and Pathways:  
Desert Pride Academy  
2009-2010**



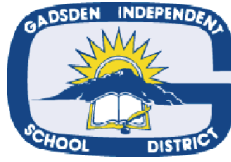
**Students of Desert Pride Academy:  
Discover Your Future!**

**Career Connections  
and  
Course Descriptions**

**DRAFT—  
DO NOT REPRODUCE**

**Cynthia Nava**

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## **GADSDEN INDEPENDENT SCHOOL DISTRICT PRE-REGISTRATION INFORMATION**

Dear Parents,

We encourage you to review this handbook, along with A Guide to Career Clusters and Pathways, with your son/daughter concerning the requirements and course offerings, and then assist your child in developing a schedule for next year.

Students who plan to enroll in the Gadsden Independent School District should check this handbook carefully before completing the pre-registration work sheet. This handbook contains information concerning registration and graduation requirements, and A Guide to Career Clusters and Pathways contains descriptions of each course taught in the high schools. Information regarding college requirements, college tests, financial aid, scholarships, and career objective plans may be acquired from your counselor.

Students should be very careful in their selection of courses. Choice of courses at this time will determine the master schedule to be devised for the next school year. Requests will determine what courses will be offered and the number of class sections for each course. Careful course selection helps the student obtain the courses wanted.

Parents, you are encouraged to use this pre-registration handbook and the Guide to discuss and assist your child in the selection of courses. Your involvement in this process of course selection will greatly aid your child in making appropriate choices for their academic program toward graduation. Please feel free to call the school if you desire further information.

Sincerely,

Cynthia Nava,  
Superintendent



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## Planning Your Future: Career Pathways

This guidebook is designed to help you select courses during your high school years that will support your future education and employment plans. The majority of employment opportunities that provide people with a "living wage" require specific skills and education beyond high school. Determining which direction to go is not always easy, and at the end of your 12<sup>th</sup> grade year you will have lots of options. A way to look at this process is to imagine a highway system. Presently, the road has been pre-planned for you and you have had very little choice in what route you take to complete this first leg of the journey. You begin school in kindergarten and then you complete at 12<sup>th</sup> grade. After graduation, the road branches off in many directions. Consider them on-ramps to a new horizon of opportunity. There is a road leading to a 4-year university, another to the military or to a Community College. Once you leave high school, there are plenty of options, and you may find that you get on and off the "educational on-ramp" at many times in your life.

Another choice that you may make many times in your life is deciding what you want to do with your life in terms of your career. The world of work is divided into sixteen broad categories called clusters, such as Education and Training or Human Services. With each cluster there are pathways or different categories that employ people in different occupations. For example, in Education and Training there are three pathways: Administration and Administrative Support, Professional Support Services, and Teaching/Training. Within the Teaching/Training pathway there are careers such as elementary teachers, coaches, and child care workers. This guide contains information about all sixteen clusters and which courses are offered at one or more of the high schools that you can take to start working towards your future occupation. Some even offer the opportunity to earn credentials while you are still in high school that can help you get a job when you graduate. Other clusters have pathways that connect you to the Dona Ana Branch Community College while you are still in high school and allow you to get an early start on the advanced education you will need for your career choice.

To help you decide on your "pathway" there are several tools that are available to you. First of all, your I-CAT advisor will guide you through the process of exploring and selecting a career cluster and pathway, in addition to helping you with Pre-Registration. Another tool is the *Career Cruising*<sup>™</sup> online program, available at school or at home: [www.careercruising.com](http://www.careercruising.com). *Career Cruising*<sup>™</sup> provides a Career Matchmaker, a section for exploring careers, another for exploring colleges and universities, and a Career Portfolio Tool, which allows you to store your interest inventory, build a resume, and document all your school, volunteer, and extracurricular activities. Finally, there is the One-Stop Career Center, which has plenty of information about different career options; what type of education, degree and/or certification is required; salaries; and future forecasts for employment.






This book is organized according to the sixteen clusters described on the next two pages, with course descriptions for each cluster. If you want to find a course quickly, check the back of the book for the index. It will tell you where you can find a specific course.

Take your time and make good decisions when you choose your courses. You can always change your pathway or cluster. Part of being a high school student is about exploring options. The intention of this book is to give you some ideas to think about as you continue your journey towards a productive and fulfilling life.



## The Sixteen Career Clusters

	<p>The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.</p>
	<p>Careers in designing, planning, managing, building and maintaining the built environment.</p>
	<p>Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.</p>
	<p>Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy.</p>
	<p>Planning, managing and providing education and training services, and related learning support services.</p>
	<p>Planning, services for financial and investment planning, banking, insurance, and business financial management.</p>
	<p>Executing governmental functions to include Governance; National Security; Foreign Service; Planning; Revenue and Taxation; Regulation; and Management and Administration at the local, state, and federal levels.</p>
	<p>Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.</p>
	<p>Hospitality &amp; Tourism encompasses the management, marketing and operations of restaurants and other foodservices, lodging, attractions, recreation events and travel related services.</p>
	<p>Preparing individuals for employment in career pathways that relate to families and human needs.</p>
	<p>Building Linkages in IT Occupations Framework: For Entry Level, Technical, and Professional Careers Related to the Design, Development, Support and Management of Hardware, Software, Multimedia, and Systems Integration Services.</p>
	<p>Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.</p>
	<p>Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.</p>

 <p><b>Marketing, Sales &amp; Service</b></p>	<p>Planning, managing, and performing marketing activities to reach organizational objectives.</p>
 <p><b>Science, Technology, Engineering &amp; Mathematics</b></p>	<p>Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.</p>
 <p><b>Transportation, Distribution &amp; Logistics</b></p>	<p>Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.</p>

## Courses Required For Graduation

The following courses are required for all students to meet New Mexico and District graduation requirements

### 9th Grade Required Courses

English 1	Algebra 1	Integrated Science 1	US Government and Economics	Physical Education/ Health 1	Foreign Language
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**COURSE NUMBER/TITLE:** 10014144/10012152/ **English 1** (*English1*)

**PREREQUISITE/GRADE:** None/ Grades 9, 10, 11, 12

**CREDIT:** 1

Build on your prior knowledge of good writing elements, especially word choice and conventions, to create narrative, expository, persuasive, and analytical/evaluative essays. Examine the elements of persuasion used in the media. Use reading, writing, speaking, and listening to explore the major genres and themes of literature.

**COURSE NUMBER/TITLE:** 20314131/20312111/ **Algebra 1** (*Algebra1*)

**PREREQUISITE/GRADES:** None/ Grades 9, 10, 11, 12

**CREDIT:** 1

Study the properties and operations of the real number system; evaluate rational algebraic expressions; solve and graph first degree equations and inequalities; translate word problems into equations; factor polynomials; and solve simple quadratic equations.

**COURSE NUMBER/TITLE:** 17414113/17412113/ **Integrated Science 1** (*IntegSci1*)

**PREREQUISITE/GRADES:** None/ Grades 9, 10, 11, 12

**CREDIT:** 1

Use scientific processes, technology, and reasoning to investigate properties and structure of matter; energy transformation and transfer; motion; ecosystems; cell structure and function; energy in earth systems; and geochemical cycles.

**COURSE NUMBER/TITLE:** 27394142/27392142/ **US Government and Economics** (*USGovt/Econ*)

**PREREQUISITE/GRADES:** Teacher, counselor recommendation / Grades 9, 10, 11, 12

**CREDIT:** 1

Prepare to be informed citizens. Study the structure of national, state and local U.S. government, the principles of market economics, and discuss contemporary U.S. issues.

**COURSE NUMBER/TITLE:** 23054110/23052110/ **Physical Education 1** (*PhysEdHealth1*)

**PREREQUISITE/GRADES:** None/ Grades 9, 10, 11, 12

**CREDIT:** 1

Participate in various physical activities to help develop fitness and personal health awareness.

**COURSE NUMBER/TITLE:** 12524101/12522101/ **Spanish Non-Native Speakers 1** (*SpanNonNativ1*)

**PREREQUISITE/GRADES:** None/ Grades 9, 10, 11, 12

**CREDIT:** 1

Learn the basic skills – listening, speaking, reading, and writing – and the basic structures of Spanish within a cultural context, with emphasis placed on oral and written communication skills.

**COURSE NUMBER/TITLE:** 12714101/12712101/ **Spanish for Native Speakers 1** (*SpanNatiSpk1*)

**PREREQUISITE/GRADES:** None/ Grades 9, 10, 11, 12

**CREDIT:** 1

Reinforce, support, and enhance your native speaking knowledge. Also, learn Spanish grammar through literature and composition. **Taught in Spanish ONLY**

**COURSE NUMBER/TITLE:** 12724101/12742101/ **Spanish for Native Speakers 2** (*SpanNatiSpk2*)

**PREREQUISITE/GRADES:** Spanish for Native Speakers I/ Grades 9, 10, 11, 12

**CREDIT:** 1

Reinforce and expand your native-speaker knowledge of the Spanish language, with emphasis on the study of Spanish grammar through literature and composition. **Taught in Spanish ONLY**



## 10th Grade Required Courses

English 2	Geometry	Integrated Science 2	New Mexico History and Geography	Foreign Language
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**COURSE NUMBER/TITLE:** 10024144/10022152/ **English 2** (English2)

**PREREQUISITE/GRADE:** English 1, or Honors English I/ Grades 9, 10, 11, 12

**CREDIT:** 1

Learn about the alternate aims and audiences of informational and argumentative writings through questioning, analysis, and evaluation; apply to your own writing of problem/solution, argumentative, and critical essays. Study literature of various genres, developing the skills to determine the author's intent and to recognize the techniques used to achieve that goal; apply these techniques in your own speaking and writing.

**COURSE NUMBER/TITLE:** 20344130/20342110/ **Geometry** (Geometry)

**PREREQUISITE/GRADES:** Algebra I/ Grades 9, 10, 11, 12

**CREDIT:** 1

Through an abstract, formal approach, study properties of plane and solid figures; deductive methods of reasoning and use of logic; geometry as an axiomatic system including the study of postulates, theorems, and formal proofs; rules of congruence, similarity, parallelism, and perpendicularity; and rules of angle measurement in triangles, including trigonometry, coordinate geometry, and transformational geometry.

**COURSE NUMBER/TITLE:** 17414114/17412114/ **Integrated Science 2** (IntegSci2)

**PREREQUISITE/GRADE:** Integr. Sci. 1/ Grades 10, 11, 12

**CREDIT:** 1

Use scientific processes, technology, and reasoning to investigate chemical reactions; waves; biodiversity; genetics, biological evolution; characteristics and evolution of earth; and scale and contents of the universe.

**COURSE NUMBER/TITLE:** 27174142/27172142/ **New Mexico History** (NMHistory)

**PREREQUISITE/GRADES:** None/ Grades 9, 10, 11, 12

**CREDIT:** 1

Become more knowledgeable and aware of the cultural, economic, and political history of New Mexico and its geographical connections. Analyze the role that New Mexico plays in national and international arenas.

**COURSE NUMBER/TITLE:** 12724101/12722101/ **Spanish for Native Speakers 2** (SpanNatiSpk2)

**PREREQUISITE/GRADES:** Spanish for Native Speakers I/ Grades 9, 10, 11, 12

**CREDIT:** 1

Reinforce and expand your native-speaker knowledge of the Spanish language, with emphasis on the study of Spanish grammar through literature and composition. **Taught in Spanish ONLY**

**COURSE NUMBER/TITLE:** 12534101/12532101/ **Spanish Non-Native Speakers 2** (SpanNonNativ2)

**PREREQUISITE/GRADES:** Spanish Non-Native Speakers 1/ Grades 9, 10, 11, 12

**CREDIT:** 1

Develop communicative skills (with an emphasis on sustained communication, both oral and written) and increase your appreciation for the culture of Spanish-speaking countries, while experiencing the use of Spanish both in classroom management and in teaching concepts.

**COURSE NUMBER/TITLE:** 12734101/12732101/ **Advanced Spanish for Native Speakers 3** (AdvSpanNat3)

**PREREQUISITE/GRADES:** Spanish Native Speakers 2/ Grades 9, 10, 11, 12

**CREDIT:** 1

Develop your advanced home/heritage language skills (reading, writing, listening and speaking) using literature, composition, public speaking, performance, and presentation. Study the cultures and traditions related to the target language at the regional, national and international levels. **Taught in Spanish ONLY**

**COURSE NUMBER/TITLE:** 12544101/ **Spanish 3** (Spanish3)

**PREREQUISITE/GRADES:** Span Non-Nat Speak 2, Span Nat Speak 2, or Adv. Span III/ Grades 10, 11, 12

**CREDIT:** 1

Continue to develop communicative skills, with an emphasis on sustained communication, both oral and written. Enhance your appreciation for the culture of Spanish speaking countries, while experiencing the use of Spanish both in classroom management and in teaching concepts.

## 11th Grade Required Courses

English 3	Algebra 2	Choice of <b>One</b> of the following: Integrated Science 3 - Biology Integrated Science 3 - Physics Integrated Science 3 - Chemistry	US History and Geography	Communication Skills Or 3rd Level of Modern Language
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**COURSE NUMBER/TITLE:** 10034145/10032153/ **English 3** (*English3*)

**PREREQUISITE/GRADE:** Grades 10, 11

**CREDIT:** 1

Continue to develop your writing and speaking skills, using clear, logical thinking, word choice, voice, and correct usage to write analytical and argumentative essays. Learn the techniques of writing research papers. Read and critically analyze works of literature, focusing on literary conventions and stylistic devices, in order to gain meaning, develop thematic connections, and synthesize ideas.

**COURSE NUMBER/TITLE:** 20414130/20412110/ **Algebra 2** (*Algebra2*)

**PREREQUISITE/GRADES:** Geometry/ Grade 10, 11, 12

**CREDIT:** 1

Learn field properties and theorems; set theory; operations with rational and irrational expressions; factoring of rational expressions; in-depth study of linear equations and inequalities; quadratic equations; solving systems of linear and quadratic equations; the complex number system; graphing of constant, linear, and quadratic equations; conic sections; properties of higher degree equations and operations with rational and irrational exponents.

**COURSE NUMBER/TITLE:** 17214124/ **Integrated Science 3 - Chemistry** (*IS3-Chem*)

**PREREQUISITE/GRADE:** Integrated Science 2, Algebra 1, / Grades 10, 11, 12

**CREDIT:** 1

Explore and extend chemistry concepts and topics studied in Integrated Science 1 and 2.

**COURSE NUMBER/TITLE:** 17314114/ **Integrated Science 3—Physics** (*IS3-Physics*)

**PREREQUISITE/GRADE:** Integrated Science 2., Algebra 2/ Grades 10, 11, 12

**CREDIT:** 1

Explore and extend physics concepts and topics studied in Integrated Science 1 and 2.

**COURSE NUMBER/TITLE:** 17114114/17112113/ **Integrated Science 3 - Biology** (*IS3-Biology*)

**PREREQUISITE/GRADE:** Integr. Sci. 1 & 2/ Grades 9, 10, 11, 12

**CREDIT:** 1

Explore and extend biological concepts and topics studied in Integrated Science 1 and 2.

**COURSE NUMBER/TITLE:** 27294142/27292142/ **U.S. History/Geography** (*USHistoryGeo*)

**PREREQUISITE/GRADES:** None/ Grades 9, 10, 11, 12

**CREDIT:** 1

Examine the history and impact of major eras, events, and individuals in United States History since the Civil War and Reconstruction. Included within this course is U.S. Geography to support geographical concepts as they relate to the understanding of the development of the United States.

**COURSE NUMBER/TITLE:** 10744255/10742152/ **Career Communications** (*CarCommunic*)

**PREREQUISITE/GRADE:** English 1, English 2

**CREDIT:** 1

Learn communication skills—reading, writing, speaking, and listening—with application to real-life situations in the world of work and study beyond high school. Write resumes, applications, business letters, and other practical forms. Give effective speeches and presentations that reflect your knowledge of the importance of purpose, audience, and appropriate voice. **[EITHER THIS COURSE OR LEVEL 3 OF A FOREIGN LANGUAGE CAN FULFILL COMMUNICATION SKILLS REQUIREMENT.]** (*NM 22-13-1.1 of the New Mexico Statutes*)

### 11th Grade Required Courses - Continued

English 3	Algebra 2	Choice of <b>One</b> of the following: Integrated Biology 3 Integrated Physics 3 Integrated Chemistry 3	US History and Geography	Communication Skills Or 3rd Level of Modern Language
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**COURSE NUMBER/TITLE:** 12734101/12732101/**Advanced Spanish for Native Speakers 3** (AdvSpanNat3)

**PREREQUISITE/GRADES:** Spanish Native Speakers 2/ Grades 9, 10, 11, 12

**CREDIT:** 1

Develop your advanced home/heritage language skills (reading, writing, listening and speaking) using literature, composition, public speaking, performance, and presentation. Study the cultures and traditions related to the target language at the regional, national and international levels. **Taught in Spanish ONLY**

**COURSE NUMBER/TITLE:** 12544101/ **Spanish 3** (Spanish3)

**PREREQUISITE/GRADES:** Span Non-Nat Speak 2, Span Nat Speak 2, or Adv. Span III/ Grades 10, 11, 12

**CREDIT:** 1

Continue to develop communicative skills, with an emphasis on sustained communication, both oral and written. Enhance your appreciation for the culture of Spanish speaking countries, while experiencing the use of Spanish both in classroom management and in teaching concepts.

### 12th Grade Required Courses

English 4			World History and Geography	
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**COURSE NUMBER/TITLE:** 10044145/10042154/ **English 4** (English4)

**PREREQUISITE/GRADE:** English 3, Honors English 3/ Grades 11, 12

**CREDIT:** 1

Synthesize composition and literature into a cohesive whole, writing critical and comparative literary analyses. Compose reflective writing/oral presentations that honestly and analytically describe thoughts and feelings about experiences and/or texts. Analyze the impact of the culture/period of history on a work of literature. Develop an individual research project and apply research techniques.

**COURSE NUMBER/TITLE:** 27064142/27062142/ **World History/Geography** (WorldHistGeo)

**PREREQUISITE/GRADES:** None/ Grades 9, 10, 11, 12

**CREDIT:** 1

Learn about the major eras and important turning points in world history from the Age of Enlightenment to the present. Study geographical concepts as they relate to the understanding of the changes throughout the world.

## Available Electives by Career Cluster

The following courses connect to one of the Sixteen Career Clusters that the Department of Labor uses to describe different occupational areas.

Agriculture and Natural Resources	Arts, AV Technology & Communication	Human Services	Health Services	Science, Technology, Engineering & Mathematics
Animal Science 1 & 2	Creative Writing	Life Skills	Anatomy & Physiology Physical Education 2	Environmental Science Astronomy

**COURSE NUMBER/TITLE:** 10214934/ *Creative Writing* (CreativeWrtg)

**PREREQUISITE/GRADE:** English II or Instructor's Approval; application required/ 10, 11, 12

**CREDIT** 1

Have fun learning to read and write poetry, short stories, plays, and magazine articles. Become a staff member of the Literary Magazine and develop an appreciation for various genres of literature while crafting/ revising your own personal voice and style of writing. Learn new computer skills, editing, design, and layout techniques. **Fund-raising and limited after-school commitment are required components.**

**COURSE NUMBER/TITLE:** 05134154/05132151/ *Life Skills* (LifeSkills)

**PREREQUISITE/GRADE:** None/ Grades 9, 10, 11, 12

**CREDIT** 1

Become a wise consumer and a productive adult. Learn to set goals, make decisions, and prioritize; manage money and time; deal with relationships; and develop yourself. Explore among the following: practical exercises on housing selection and furnishing, meeting transportation needs, food preparation, clothing and wardrobe building, in addition to specific topics, such as insurance, taxation, and consumer protection.

**COURSE NUMBER/TITLE:** 17134934/17132134/ *Anatomy/Physiology 1* (AnatomyPhys1)

**PREREQUISITE/GRADES:** Biology 1/ Grades 10, 11, 12

**CREDIT:** 1

Continue to explore and extend biological concepts studied in Integrated Science 1 and 2. Topics include cells and tissues and functional systems. Compare human anatomy to that of other mammals through virtual or hands-on mammalian dissection. Develop conduct, and share at least one individual experiment to investigate a concept or topic in depth. Concepts and terminology developed in the course provide a foundation for students interested in a medical or allied health field.

**COURSE NUMBER/TITLE:** 23054220/ *Physical Education 2* (PhysicalEd2)

**PREREQUISITE/GRADES:** Phys. Ed. 1, Instructor approval/ Grades 10, 11, 12

**CREDIT:** 1

Develop physical skills through individual, dual, and team activities.

## Available Electives by Career Cluster—Continued

The following courses connect to one of the Sixteen Career Clusters that the Department of Labor uses to describe different occupational areas.

Agriculture and Natural Resources	Arts, AV Technology & Communication	Human Services	Health Services	Science, Technology, Engineering & Mathematics
Animal Science 1 & 2	Creative Writing	Life Skills	Anatomy & Physiology Physical Education 2	Environmental Science Astronomy

**COURSE NUMBER/TITLE:** 17514914/ *Environmental Science* (EvironSci)

**PREREQUISITE/GRADE:** Biology 1/ Grades 10, 11, 12

**CREDIT** 1

Explore and extend environmental concepts studied in Integrated Science 1 and 2. Investigate human impact on ecosystems and propose solutions to problems. Examine current local and global issues such as recycling, water and air pollution, and conservation of living and non-living resources. Develop conduct, and share at least one individual experiment to investigate a concept or topic in depth.

**COURSE NUMBER/TITLE:** 17614914/17612114/ *Astronomy* (Astronomy)

**PREREQUISITE/GRADES:** Phys. Sci., Algebra I/ Grades 10, 11, 12

**CREDIT:** 1

Explore and extend space concepts studied in Integrated Science 1 and 2. Topics include the solar system; stars, galaxies, and interstellar bodies; and scientific theories about the origin and evolution of the universe. Develop conduct, and share at least one individual experiment to investigate a concept or topic in depth.

### Elective Courses

**COURSE NUMBER/TITLE:** 08214000/ *Student Aide* (StudentAide)

**PREREQUISITE/GRADE:** None/ Grades 12

**CREDIT** 1

Have the opportunity to work in one of several campus offices (front, attendance, guidance, athletic offices, in the library or audio-visual center, or with individual teachers), assisting the appropriate professionals with their duties.

**COURSE NUMBER/TITLE:** 08174100/ *Drivers Education-Classroom Only* (DriversEd)

**PREREQUISITE/GRADE:** Social Security Card/ Grades 9, 10, 11, 12

**CREDIT** 1

Become a safe driver on America's roadways by learning legal obligations and responsibility, rules of the world and traffic procedures, safe driving strategies and practices, and the physical and mental factors affecting the driver's capability (including alcohol and other drugs).

**COURSE NUMBER/TITLE:** 10094911/ *Read 180* (Read180)

**PREREQUISITE/GRADE:** None/ Grades 9-12

**CREDIT** 1

Improve your ability to read and comprehend material for all your classes.

**COURSE NUMBER/TITLE:** 10203900/ *Reading Intervention* (ReadIntervene)

**PREREQUISITE/GRADE:** None/ Grades 9-12

**CREDIT** 1

Improve your ability to read and comprehend material for all your classes.

**COURSE NUMBER/TITLE:** 08030000/08032000 *Study Skills* (StudySkills)

**PREREQUISITE/GRADE:** None/ Grades 9, 10, 11, 12

**CREDIT** 1

Prepare for High School success. Learn from one of the following areas: Reading, such as scanning, note-taking, and outlining; library and research skills; listening, note-taking, and vocabulary skills; and test taking skills.

**COURSE NUMBER/TITLE:** 16064130/ *Work Experience* (WorkExperien)

**PREREQUISITE/GRADE:** Administrator Approval/ Grades 11, 12

**CREDIT** 1

Apply and improve your workplace skills.

## Student Resource Courses - (Open via a student's I.E.P.)

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10092851 / **Language Arts Skills 1** (LASkills1)  
 10092051 / **Language Arts Skills 2** (LASkills2)

**COURSE NUMBER/TITLE:** 10092951 / **Language Arts Skills 3** (LASkills3)  
 10092000 / **Language Arts Skills 4** (LASkills4)  
 10092001 / **Language Arts Skills 5** (LASkills5)

PREREQUISITE/GRADES: None  
 CREDIT: **1**

Study basic language skills, integrating reading, and writing, speaking and listening. Other topics are dependent on individual abilities.

20112851 / **Math Skills 1** (MathSkills1)  
 20112051 / **Math Skills 2** (MathSkills2)

**COURSE NUMBER/TITLE:** 20112951 / **Math Skills 3** (MathSkills3)  
 20112000 / **Math Skills 4** (MathSkills4)  
 20112001 / **Math Skills 5** (MathSkills5)

PREREQUISITE/GRADES: None  
 CREDIT: **1**

Study general math topics, such as arithmetic using rational numbers, numeration systems and place value, basic geometry, and basic statistics, and apply these skills to real world problems and situations.

10092100 / **Life Skills Language Arts 1** (LfeLASkills1)  
 10092110 / **Life Skills Language Arts 2** (LfeLASkills2)

**COURSE NUMBER/TITLE:** 10092111 / **Life Skills Language Arts 3** (LfeLASkills3)  
 10092120 / **Life Skills Language Arts 4** (LfeLASkills4)  
 10092121 / **Life Skills Language Arts 5** (LfeLASkills5)

PREREQUISITE/GRADES: None  
 CREDIT: **1**

Study basic language skills, integrating reading, and writing, speaking and listening. Other topics are dependent on individual abilities.

20112101 / **Life Skills Math 1** (LfeMASkills1)  
 20112110 / **Life Skills Math 2** (LfeMASkills2)

**COURSE NUMBER/TITLE:** 20112011 / **Life Skills Math 3** (LfeMASkills3)  
 20112010 / **Life Skills Math 4** (LfeMASkills4)  
 20112810 / **Life Skills Math 5** (LfeMASkills5)

PREREQUISITE/GRADES: None  
 CREDIT: **1**

Study general math topics, such as arithmetic using rational numbers, numeration systems and place value, basic geometry, and basic statistics, and apply these skills to real world problems and situations.

## Student Resource Courses - (Open via a student's I.E.P.)

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**COURSE NUMBER/TITLE:** 23162110/ *Adaptive Physical Education (AdaptivePE)*  
**PREREQUISITE/GRADES:** None  
**CREDIT:** 1  
 Participate in physical activities adapted to meet your specific physical fitness needs. Meets high school graduation requirement

**COURSE NUMBER/TITLE:** 27392100/ *Community Social Studies 1 (CommSocStudy1)*  
 27292100/ *Community Social Studies 2 (CommSocStudy2)*  
**PREREQUISITE/GRADES:** None  
**CREDIT:** 1  
 Study basic community social studies, including history, geography, government and economics. Other topics are dependent on individual abilities.

**COURSE NUMBER/TITLE:** 17002100/ *Science Skills 1 (SciSkills1)*  
 17002102/ *Science Skills 2 (SciSkills2)*  
**PREREQUISITE/GRADES:** None  
**CREDIT:** 1  
 Study basic science topics, including biology, anatomy and physiology, earth and physical science. Other topics are dependent on individual abilities.

**COURSE NUMBER/TITLE:** 28032000/ *Community Living 1 (CommLiving1)*  
 28032001/ *Community Living 2 (CommLiving2)*  
 28032004/ *Community Living 3 (CommLiving3)*  
 28032005/ *Community Living 4 (CommLiving4)*  
 28032002/ *Community Living 5 (CommLiving5)*  
**PREREQUISITE/GRADES:** None  
**CREDIT:** 1  
 Special emphasis is put on the student's relationship to the surrounding community.

**COURSE NUMBER/TITLE:** 28052000/ *Communication Instruction 1 (CommInstruct1)*  
 28052001/ *Communication Instruction 2 (CommInstruct2)*  
 28052004/ *Communication Instruction 3 (CommInstruct3)*  
 28052005/ *Communication Instruction 4 (CommInstruct4)*  
 28052002/ *Communication Instruction 5 (CommInstruct5)*  
**PREREQUISITE/GRADES:** None  
**CREDIT:** 1  
 Special emphasis is put on increasing student communication skills.

**COURSE NUMBER/TITLE:** 28062000/ *Social Development Instruction 1 (SocialDevelop1)*  
 28062001/ *Social Development Instruction 2 (SocialDevelop2)*  
 28062004/ *Social Development Instruction 3 (SocialDevelop3)*  
 28062005/ *Social Development Instruction 4 (SocialDevelop4)*  
 28062002/ *Social Development Instruction 5 (SocialDevelop5)*  
**PREREQUISITE/GRADES:** None  
**CREDIT:** 1  
 Special emphasis is put on increasing student social development skills.

**COURSE NUMBER/TITLE:** 28042000/ *Mobility Instruction 1 (Mobility1)*  
 28042001/ *Mobility Instruction 2 (Mobility2)*  
 28042004/ *Mobility Instruction 3 (Mobility3)*  
 28042005/ *Mobility Instruction 4 (Mobility4)*  
 28042002/ *Mobility Instruction 5 (Mobility5)*  
**PREREQUISITE/GRADES:** None  
**CREDIT:** 1  
 Special emphasis is put on increasing student abilities to move about and communicate within their surrounding communities.

## Student Resource Courses - (Open via a student's I.E.P.)

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**COURSE NUMBER/TITLE:** 16032153/ *Career Exploration 1 (Careers 1) (CareerExp1)*

**PREREQUISITE/GRADES:** None

**CREDIT:** 1

Identify your personal goals, priorities, aptitudes, and interests and match them with your career interests. Identify future career possibilities by researching careers and training options of interest.

28082000/ *Work Study JTP 1 (WorkJTP1)*

28082001/ *Work Study JTP 2 (WorkJTP2)*

**COURSE NUMBER/TITLE:** 28082004/ *Work Study JTP 3 (WorkJTP3)*

28082005/ *Work Study JTP 4 (WorkJTP4)*

28082002/ *Work Study JTP 5 (WorkJTP5)*

**PREREQUISITE/GRADES:** None

**CREDIT:** 1

16062000/ *Work Study Campus 1 (WorkCampus1)*

16062140/ *Work Study Campus 2 (WorkCampus2)*

**COURSE NUMBER/TITLE:** 16062040/ *Work Study Campus 3 (WorkCampus3)*

16062100/ *Work Study Campus 4 (WorkCampus4)*

16062110/ *Work Study Campus 5 (WorkCampus5)*

**PREREQUISITE/GRADES:** None

**CREDIT:** 1

16062030/ *Work Experience 1 (WorkExp1)*

16062033/ *Work Experience 2 (WorkExp2)*

**COURSE NUMBER/TITLE:** 16062043/ *Work Experience 3 (WorkExp3)*

16062133/ *Work Experience 4 (WorkExp4)*

16062143/ *Work Experience 5 (WorkExp5)*

**PREREQUISITE/GRADES:** None

**CREDIT:** 1

**COURSE NUMBER/TITLE:** 08626000/ *Seminar (Gifted Elective) (Seminar)*

**PREREQUISITE/GRADES:** None

**CREDIT:** 1

Work with your peers to investigate areas of interest. Group objectives may include improvement of research and investigatory skills, presentation skills, interpersonal skills; group process skills, and problem solving and critical thinking skills. Seminars aimed at juniors and seniors often include a college and career exploration and planning component.



## Student Resource Courses - (Open via a student's I.E.P.)

### Center for Career and Technology Education Courses

**Important Note:** This information is for Special Education students who attend the **Center for Career and Technology Education (CCTE)** in El Paso, Texas. Students who are NOT SPED students are NOT to be enrolled in these courses under any circumstances.

Based on the Individualized Plan of Education (I.E.P.), some students attend the **Center for Career and Technology Education (CCTE)** in El Paso, Texas. The following matrix translates the CCTE's courses and programs to the New Mexico ADS course numbers. The intent of this matrix is to insure that students receive appropriate credits for courses they attend at CCTE and that their transcript clearly identifies the courses/programs they were enrolled in. The italicized abbreviations under the ADS course title are what will appear on the student transcript.

<b>CCTE Course Title</b>	<b>ADS Course</b>	<b>ADS Course Title</b>	<b>Maximum #</b>
<b>Medical Office</b>	15147252	Medical Office ( <i>MedOffice</i> )	4
<b>Health Science Technology</b>	15037252	Allied Health Occupations 1 ( <i>AlliedHealt1</i> )	4
	15037232	Allied Health Occupations 2 ( <i>AlliedHealt2</i> )	4
<b>Legal Office Man-</b>	25042150	Public Administration ( <i>PublicAdmin</i> )	4
<b>Law Enforcement</b>	25132150	Criminal Justice Assisting ( <i>CriminalJust</i> )	4
<b>Auto Collision Repair</b>	09422152	Automotive Body Repair and Refinishing 1	4
	09422150	Automotive Body Repair and Refinishing 2 ( <i>AutoBody2</i> )	4
<b>Automotive Technology</b>	09127250	Automotive Technology—Comprehensive 1 ( <i>AutoTechCom1</i> )	4
	09127230	Automotive Technology—Comprehensive 2	4
<b>Diesel Technology</b>	09157250	Diesel Mechanics--General 1 ( <i>DieselMech1</i> )	4
	09157230	Diesel Mechanics--General 2 ( <i>DieselMech2</i> )	4
<b>Fashion Design</b>	05112151	Fashion Design 1 ( <i>Fashion1</i> )	4
	05112150	Fashion Design 2 ( <i>Fashion2</i> )	4
<b>Advertising Design</b>	13232151	Commercial Art 1 ( <i>CommArt1</i> )	4
	13232150	Commercial Art 2 ( <i>CommArt2</i> )	4
<b>Cosmetology</b>	06032150	Cosmetology 1 ( <i>Cosmetology1</i> )	4
	06032130	Cosmetology 2 ( <i>Cosmetology2</i> )	4
<b>Nail Technician</b>	06062150	Cosmetology--Nail Technician 1 ( <i>NailTech1</i> )	4
	06062130	Cosmetology--Nail Technician 2 ( <i>NailTech2</i> )	4
<b>Culinary Arts</b>	05087250	Culinary Arts 1 ( <i>CulinaryArt1</i> )	4
	05087232	Culinary Arts 1 ( <i>CulinaryArt2</i> )	4

**Student Resource Courses - (Open via a student's I.E.P.)**

<b>CCTE Course Title</b>	<b>ADS Course Number</b>	<b>ADS Course Title</b>	<b>Maximum # of Credits</b>
<b>Hotel Restaurant Travel Management</b>	05287250	Hospitality, Tourism, and Recreation 1	4
	05287230	Hospitality, Tourism, and Recreation 2 (Hospitality2)	4
<b>Microcomputer</b>	03177250	Computer Technology (ComputerTech)	4
<b>Web Page Design</b>	03157230	Computer Graphics (ComGraphics)	4
<b>Telenetworking</b>	03187250	Network Technology (NetworkTech)	4
<b>Telecommunica-</b>	02767230	Web Page Design (WebPagDesign)	4
<b>Electrical Technology</b>	04422152	Electricity--Comprehensive 1 (ElectricCom1)	4
	04422132	Electricity--Comprehensive 2 (ElectricCom2)	4
<b>Engineering and Architectural Drafting</b>	07072151	CAD Design and Software 1 (CADDDesign1)	4
	07072150	CAD Design and Software 2 (CADDDesign2)	4
<b>Electronics Technology</b>	04527252	Electronics--General 1 (Electronics1)	4
	04527232	Electronics--General 2 (Electronics2)	4
<b>Machining Technology</b>	24027252	Machining 1 (Machining1)	4
	24027232	Machining 2 (Machining2)	4
<b>Robotics &amp; Automation</b>	16242152	Manufacturing Systems 1 (ManufacSys1)	4
	16242150	Manufacturing Systems 2 (ManufacSys2)	4
<b>CTED Piping Trades/Plumbing</b>	04382151	Plumbing 1 (Plumbing1)	4
	04382150	Plumbing 2 (Plumbing2)	4
<b>CTED Carpentry Technology</b>	04162151	Particular Topics in Carpentry 1 (PTCarpentry1)	4
	04162150	Particular Topics in Carpentry 2 (PTCarpentry2)	4
<b>CTED Major Appliance Technology</b>	16332150	Appliance Repair (ApplianceRep)	4
<b>CTED Food Production</b>	05122152	Advanced Foods (AdvFoods)	4
<b>CTED Marketing Dynamics</b>	18022150	Principles of Marketing (Marketing)	4
<b>CTED Computer Exploration</b>	16952150	Technology Education—Related Subjects (TechEdRelSub)	4
<b>CTED Building Maintenance I</b>	04732150	Building Maintenance I (BuildMaint1)	4
	04422132	Electricity--Comprehensive 2 (ElectricCom2)	4

# **Future Pathways to be Discovered**



## **Career Cluster Charts for:**

**Agriculture and Renewable Natural Resources**

**Architecture & Construction**

**Arts, AV Technology & Communication**

**Business Management & Administration**

**Education and Training**

**Finance**

**Government & Public Administration**

**Health Science**

**Hospitality and Tourism**

**Human Services**


**Information Technology**

**Law, Public Safety, Corrections & Security**

**Marketing, Sales & Service**

**Science, Technology, Engineering & Mathematics**

**Transportation, Distribution & Logistics**

	<p><b>The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.</b></p>
Pathways	Sample Career Specialties/Occupations
<b>Food Products and Processing Systems</b>	Agricultural Sales • Agricultural Communications Specialists • Business-Educators • Food Scientists • Meat Processors-Toxicologists • Biochemists-Nutritionists-Dieticians • Food Brokers-Food Inspectors • Meat Cutters-Meat Graders • Meat Science Researchers • Food Meal Supervisors • Cheese Makers • Microbiologists • Produce Buyers • Bacteriologists • Food & Drug Inspectors • Bioengineers • Biochemists • Food & Fiber Engineers • Food Processors • Storage Supervisors • Fieldman • Quality Control Specialists
<b>Plant Systems</b>	Bioinformatics Specialists • Plant Breeders and Geneticists • Biotechnology Lab Technician • Soil & Water Specialists • Crop Farm Managers • Agricultural Educators • Plant Pathologists • Aquaculturalists • Sales Representatives • Botanists • Tree Surgeons • Education & Extension Specialists • Agricultural Journalists • Commodity Marketing Specialists • Grain Operations Superintendents • Custom Hay/Silage Operators • Forest Geneticists • Golf Course Superintendents • Greenhouse Mangers • Growers • Farmers • Ranchers
<b>Animal Systems</b>	Agricultural Educators • Livestock producers • AI Technicians-Aquaculturalists • Animal Caretakers-Poultry Managers • Equine Managers-Veterinarians • Veterinary Assistants-Feedlot Specialists • Animal Scientists • Embryo Technologists • Livestock Buyers • Feed Sales Representatives • Vivarian Technicians • Wildlife Biologists • Livestock Geneticists • Animal Nutritionists • Dairy Producers • Livestock Inspectors • Feed Sales Specialists • Animal Health Salespersons • Meat Science Researcher • Reproductive Physiologists • Embryo Transfer Technicians • Pet Shop Operators • USDA Inspectors
<b>Power, Structural &amp; Technical Systems</b>	Machine Operators • Electronics Systems Technicians • Agricultural Engineers • Agricultural Extension Engineering Specialists • Heavy Equipment Maintenance Technicians • Recycling Technicians • Waste Water Treatment Plant Operators • Equipment/Parts Mangers • Welders • Machinists • Communication Technicians • Agricultural Applications Software Developers/Programmers • Database Administrators • Computer Service Technical Support Technicians • Information Lab Specialists • GPS Technicians • Remote Sensing Specialists
<b>Natural Resources Systems</b>	Cartographers • Wildlife Managers • Range Technicians • Ecologists Park Mangers • Environmental Interpreters • Fish and Game Officers Loggers • Forest Technicians • Log Graders • Pulp and Paper Manager Soil Geology Technician • Geologists • Mining Engineers Fisheries Technicians • Water Monitoring Technician • Hydrologists • Fish Hatchery Manager Commercial Fishermen • Fishing Vessel Operators • Vessel Crew
<b>Environmental Service Systems</b>	Pollution Prevention and Control Managers • Pollution Prevention and Control Technicians • Environmental Sampling and Analysis Scientists/Technicians • Health and Safety Sanitarians • Environmental Compliance Assurance Managers • Hazardous Materials Handlers • Hazardous Materials Technicians / Managers • Water Environment Managers • Water Quality Managers • Waste Water Managers • Toxicologists • Solid Waste Disposers / Recyclers • Solid Waste Technician • Solid Waste Managers • Solid Waste Specialists
<b>Agribusiness Systems</b>	Salesperson • Sales Manager • Banker/Loan Officer • Field Representative for Bank, Insurance Company or Government Program • Farm Investment Manager • Agricultural Commodity Broker • Agricultural Economist • Farmer /Rancher/Feedlot Operator • Farm Manager • Livestock Rancher / Breeder • Dairy Herd Supervisor (DHIA) • Agricultural Products Buyer • Animal Health Products Distributor • Livestock Seller • Feed and Supply Store Manager • Produce Commission Agent • Ag Lenders • Agricultural Chemical Dealer • Field Service Representative • Chemical Sales Representative
Cluster Knowledge and Skills	
❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking ❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork ❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills	



**Careers in designing, planning, managing, building and maintaining the built environment.**

Pathways	Sample Career Specialties/Occupations
<p><b>Design/ Pre-Construction</b></p>	<p>Architect • Architectural and Civil Drafter • Drafter • Regional and Urban Planner/Designer • Industrial Engineer • Materials Engineer • Mechanical Drafter • Environmental Designer • Civil Engineer (structural, geotechnical, transportation, etc.) • Programmer • Mechanical Engineer (HVAC, plumbing, fire protection, etc.) • Electrical Engineer (electronics, security, telecommunications) • Preservationist • Environmental Engineer (hydro engineering, acoustical, etc.) • Landscape Architect • Surveyor • Fire Prevention and Protection Engineer • Cost Estimator • Electrical and Electronic Engineering Technician • Civil Engineering Technician • Environmental Engineering Technician • Surveying and Mapping Technician •</p>
<p><b>Construction</b></p>	<p>General Contractor/Builder • Specialty Contractor • General Contractor/Builder • Specialty Contractor • Construction Engineer • Construction Manager • Superintendent • Project Manager • Construction Foreman • Estimator • Project Inspector • Manufacturer’s Representative • Sales and Marketing Manager • Equipment and Material Manager • Scheduler • Education and Training Director/Coordinator • Safety Director • Construction Inspector • Subcontractor • Preservationist • Service Contractor • Field Supervisor • Specialty Trades Subcontractor • Mason • Construction Craft Laborer • Iron/Metalworker (structural and reinforcing) • Carpenter • System Installer • Electrician • Boilermaker • Electronic Systems Technician • Sheetmetal Worker • Security and Fire Alarm Systems Installer • Concrete Finisher • Glazier • Tile and Marble Setter • Landscaper/Groundskeeper • Elevator Installer • Roofer • Painter • Explosives Worker • Plasterer/Drywall • Paperhanger • Insulation Worker • Drywall Installer • Plumber • Pipe Fitter • Millwright • Heating, Ventilation, Air Conditioning and Refrigeration Mechanic • Carpet Installer • Electrician • Steamfitter • Terrazo Worker and Finisher</p>
<p><b>Maintenance/ Operations</b></p>	<p>General Maintenance Contractor • Specialty Contractor • Construction Engineer • Construction Manager • Superintendent • Project Manager • Construction Foreman • Estimator • Facilities Engineer • Reliability Engineer • Environmental Engineer • Demolition Engineer • Project Inspector • Operating Engineer • Manufacturer’s Representative • Sales and Marketing Manager • Equipment and Material Manager • Scheduler • Maintenance Planner/Scheduler • Maintenance Estimator • Security Controls Manager • Preservationist • Remodeler • Safety Director • Construction Inspector • Subcontractor • Service Contractor • Field Supervisor • Specialty Trades Subcontractor • Mason • Iron/Metalworker (structural and reinforcing) • Carpenter • System Installer • Electrician • Boilermaker • Cost Estimator • Sheetmetal Worker • Security and Fire Alarm System Installer • Concrete Finisher • Glazier • Tile and Marble Setter • Hazardous Materials Remover • Landscaper/Groundskeeper • Elevator Installer • Paperhanger • Insulation Worker • Drywall Installer • Insulation Worker • Plumber • Pipe Fitter • Millwright • Heating, Ventilation, Air Conditioning and Refrigeration Mechanic • Carpet Installer • Electrician • Steamfitter • Terrazo Worker and Finisher • Refractory Technician • Hydro Testing Technician • Thermal Control Technician • Restoration Technician • Wastewater Maintenance Technician • Highway Maintenance Worker</p>
<p><b>Cluster Knowledge and Skills</b></p>	
<p>❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking ❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork ❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills</p>	



**Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.**

<b>Pathways</b>	<b>Sample Career Specialties/Occupations</b>
<b>Audio and Video Technologies</b>	Video Systems Technicians • Video Graphics, Special Effects, and Animation • Audio-Video Designers and Engineers • Technical Computer Support Technicians • State, Film, Video, and DVD Audio-Video System Service Technicians
<b>Printing Technologies</b>	Graphics and Printing Equipment Operators • Lithographers and Platemakers • Computer Typography and Composition Equipment Operators
<b>Visual Arts</b>	Commercial Photographers - Digital, Still, Video, Film • Interior Designers • Commercial/Residential and Home Furnishings coordinators • Graphic Designers • CAD Technicians • Fashion Illustrators • Textile Designers • Commercial Artists • Illustrators • Artists • Media Curators • Gallery Managers
<b>Performing Arts</b>	Production Managers • Digital, Video, Stage Cinematographers • Film/Video Editors • Dancers • Play Writers • Screen Writers • Screen Editors • Script Writers • Directors • Coaches, • Performers • Actors • Musicians • Make-Up Artists • Costume Designers • Stagecraft Designers • Lighters • Sets • Sound Effects • Acoustics • Painters
<b>Journalism and Broadcasting</b>	Audio/Video Operations • Control Room Technician • Station Mangers • Radio & TV Announcers • Publishers • Editors • Journalists • Reporters - Print, Broadcast, Other
<b>Telecommunications Technologies</b>	Telecommunication Technicians • Telecommunication Equipment • Cable, Line Repairers/Installers • Telecommunication Computer Programmers • Systems Analysts
<b>Cluster Knowledge and Skills</b>	
❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking ❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork ❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills	



**Business, Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy.**

Pathways	Sample Career Specialties/Occupations
<b>Management</b>	Entrepreneurs · Chief Executives · General Managers · Accounting Manager · Accounts Payable Manager · Assistant Credit Manager · Billing Manager · Business & Development Manager · Compensation & Benefits Manager · Credit & Collections Manager · Payroll Manager · Risk Manager · Operations Managers · Public Relations Managers · Human Resource Managers · Management Analysts · Facilities Managers · Association Managers · Meeting & Convention Planners · Administrative Services Managers · Sports & Entertainment Managers · Hospital Management · Government Management · Public Organization Management · Manufacturing Management · Purchasing Management · First Line Supervisors · Public Relations Specialists · Senior Managers · Management Trainees
<b>Business Financial Management &amp; Accounting</b>	Accountants · Accounting Clerk · Accounting Supervisor · Adjuster · Adjustment Clerk · Assistant Treasurer · Auditor · Bookkeeper · Budget Analyst · Budget Manager · Billing Supervisor · Cash Manager · Controller · Merger & Acquisitions Manager · Price Analyst · Top Collections Executive · Top Investment Executive · Treasurer · Chief Financial Officer · Finance Director · Certified Public Accountant · Accounts Receivable Clerk · Cost Accountant · Financial Accountant · Billing Clerk · Payroll Accounting Clerk
<b>Human Resources</b>	Human Resources Managers · International Human Resources Managers · Human Resources Coordinators · Industrial Relations Director · Compensation & Benefits Managers · Employment & Placement Managers · Employee Assistance Plan Managers · Training & Development Managers · Human Resources consultant · Corporate Trainer · Training & Development Specialists · Conciliators/Mediators/Arbitrators · Employer Relations Representatives · Labor & Personnel Relations Specialists · Affirmative Action Coordinators · Equal Employment Opportunity Specialists · OSHA/ADA Compliance Officer · Pay Equity Officers · Interpreters & Translators · Organizational Behaviorists · Occupational Analysts · Compensation, Benefits & Job Analyst Specialists · Human Resources Information Systems Specialists · Meeting & Convention Planners · Employment Interviewers, Private or Public Employment Service · Personnel Recruiters · Human Resources Assistants · Payroll Professional · Assignment Clerks · Identification Clerks · Human Resources Generalist · Human Resources Clerks
<b>Business Analysis</b>	Systems Analyst · E-Commerce Analyst · Requirements Specialist · Marketing Analyst · Operations Research Analyst · Business Consultant · Business Analyst · Budget Analyst · Product Manager · Price Analyst
<b>Marketing</b>	Marketing Manager · Assistant Marketing Manager · Sales Engineer · Sales Manager · Sales Representative · Broker · Agents · Assistant Store Manager · Department Manager · Assistant Department Manager · Salesperson · Customer Service Supervisor · Customer Service Consultant · Counter Person · Customer Service Clerk · Product Manager · Project Manager · Research & Development Manager · Research & Management Supervisor · International Marketing Manager & Supervisor · International Merchandising Manager & Supervisor · Marketing Manager · Property, Real Estate and Association Manager & Supervisor · Small Business Owner & Entrepreneur · E-commerce Manager & Entrepreneur · Wholesale & Retail buyer · International Distribution Manager · Warehouse Manager · Logistics Manager/Supervisor · Logistics Manager/Coordinator · Market Researcher · Marketing Information Manager · Public Relations Specialist · Public Relations Writer · Copywriter · Media coordinator · Art Director · Graphic Designer · Event Manager · Advertising Salesperson · Route Salesperson · Distribution Worker · Wholesale, Freight, Stocking, Handling, Material Moving and Packing Worker · Traffic, Shipping, & Receiving Clerk · Demonstrators and Product Promoter · Retail Salespeople & Associate · Telemarketer
<b>Administrative &amp; Information Support</b>	Administrative Assistant · Executive Assistant · Office Manager · Administrative Support · Media Front Office Assistant · Information Assistant · Desktop Publisher · Customer Service Assistant · Data Entry Specialists · Receptionist · Communications Equipment Operator · Computer Operator · Court Reporter · Stenographer · Dispatcher · Shipping & Receiving Personnel · Records Processing Occupations including Library Assistant & Order Processor · Word Processor · Typists · Medical Transcriptionist · Legal Secretaries · Paralegals
<b>Cluster Knowledge and Skills</b>	
❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking ❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork ❖ Ethics and Legal Responsibilities	

States' Career Clusters Initiative, 2006, [www.careerclusters.org](http://www.careerclusters.org)



**Planning, managing and providing education and training services, and related learning support services.**


Pathways	Sample Career Specialties/Occupations
<b>Administration and Administrative Support</b>	<ul style="list-style-type: none"> <li>▪ Superintendents, Principals, Administrators</li> <li>▪ Supervisors and Instructional Coordinators</li> <li>▪ Education Researchers, Test Measurement Specialists</li> <li>▪ College Presidents, Deans</li> <li>▪ Curriculum Developers</li> <li>▪ Instructional Media Designers</li> </ul>
<b>Professional Support Services</b>	<ul style="list-style-type: none"> <li>▪ Psychologists- Clinical, Developmental, Social</li> <li>▪ Social Workers</li> <li>▪ Parent Educators</li> <li>▪ Counselors</li> <li>▪ Speech-Language Pathologists and Audiologists</li> </ul>
<b>Teaching/Training</b>	<ul style="list-style-type: none"> <li>▪ Preschool, Kindergarten Teachers, Aids</li> <li>▪ Elementary Teachers, Aids</li> <li>▪ Secondary Teachers, Aids</li> <li>▪ Special Education Teachers, Aids</li> <li>▪ College/University Lecturers, Professors</li> <li>▪ Human Resource Trainers</li> <li>▪ Physical Trainers</li> <li>▪ Coaches</li> <li>▪ Child Care Directors</li> <li>▪ Child Care Workers</li> <li>▪ Child Life Specialist</li> <li>▪ Nanny</li> <li>▪ Early Childhood Teachers and Assistants</li> <li>▪ Teacher Aids</li> <li>▪ Group Workers and Assistants</li> </ul>
<b>Cluster Knowledge and Skills</b>	
<ul style="list-style-type: none"> <li>❖ Academic Foundations</li> <li>❖ Communications</li> <li>❖ Problem Solving and Critical Thinking</li> <li>❖ Information Technology Applications</li> <li>❖ Systems</li> <li>❖ Safety, Health and Environmental</li> <li>❖ Leadership and Teamwork</li> <li>❖ Ethics and Legal Responsibilities</li> <li>❖ Employability and Career Development</li> <li>❖ Technical Skills</li> </ul>	





**Planning, services for financial and investment planning, banking, insurance, and business financial management.**

<b>Pathways</b>	<b>Sample Career Specialties/Occupations</b>
<b>Financial &amp; Investment Planning</b>	Personal Financial Advisor • Tax Preparation • Sales Agents, Securities, Commodities Investment Advisors • Brokerage Clerk (Assistant) • Development Officers
<b>Business Financial Management</b>	Accountants • Financial Analysts • Treasurers, Controllers and Chief Revenue Agents • Auditor • Economists • Tax Examiners • Collectors • Revenue Agents
<b>Banking &amp; Related Services</b>	Credit Analyst • Loan Officers • Bill and Account Collectors • Tellers • Loan Processors • Customer Service Reps • Data Processors • Accounting • Internal Auditors • Compliance Officers • Title Researchers & Examiners • Abstractors • Credit Report Providers • Repossession Agents • Network Services • Operations Managers • Debt Counselors
<b>Insurance Services</b>	Claims Agents, Examiners, and Investigators • Claims Clerks • Insurance Appraisers • Underwriters • Actuaries • Sales Agents • Customer Service Agents • Processing Clerks • Direct Marketing
<b>Cluster Knowledge and Skills</b>	
❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking ❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork ❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills	

	<b>Executing governmental functions to include Governance; National Security; Foreign Service; Planning; Revenue and Taxation; Regulation; and Management and Administration at the local, state, and federal levels.</b>
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Pathways	Sample Career Specialties/Occupations
<b>Governance</b>	President • Vice President • Governor • Lieutenant Governor • Mayor • Cabinet Level Secretary (Fed./ State) • Representative (Fed/State) • Senator (Fed/State) • Assistants, Deputies, and Chiefs of Staff • Commissioner (County, Parish, City) • Commissioner (State Agency) • Congressional Aide • Legislative Aide • Legislative Assistant • Specialist • Lobbyist
<b>National Security</b>	National Security Advisor • Staff or Field Officer • Officer/Specialist • Electronic Warfare • Operations • Combat Operations • Infantry Field Artillery • Air Defense Artillery • Special Forces • Armor • Munitions • Nuclear Weapons • Missile and Space Systems • Military Intelligence • Signals Intelligence • Surface Ship Warfare Officer • Submarine Officer • Combat Control Officer • Combat Engineer • Combat Aircraft Pilot/Crew • Airborne Warning/Control Specialist • Intelligence/Counterintelligence • Agent/Specialist • Intelligence Analyst
<b>Foreign Service</b>	Ambassador • Foreign Service Officer • Consular Officer • Administrative Officer • Political Officer • Economic Officer • Diplomatic Courier
<b>Planning</b>	Business/Enterprise Official • Chief of Vital Statistics • Commissioner • Director (Various Agencies) • Economic Development Coordinator • Federal Aid Coordinator • Census Clerk • County Director • Census Enumerator • Planner • Program Associate
<b>Revenue and Taxation</b>	Assessor • Tax Auditor • Internal Revenue Investigator • Revenue Agent/Officer • Tax Examiner/Assistant/Clerk • Inspector General • Tax Attorney • Tax Policy Analyst
<b>Regulation</b>	Business Regulation Investigator • Chief of Field Operations • Code Inspector/Officer • Director • Equal-Opportunity Officer • Inspector Investigator/Examiner • Chief Bank Examiner • Bank Examiner • Aviation Safety Officer • Border Inspector • Cargo Inspector • Election Supervisor • Enforcement Specialist • Immigration Officer
<b>Public Management and Administration</b>	City Manager • City Council • City or County Clerk • Court Administrator or Clerk • Executive Director/ • Officer/Associate • Foundation • Association • Charitable Organization • Industrial Foundation • Chamber of Commerce • General Service Officer • Management Analysis Officer • Program Administration Officer

Cluster Knowledge and Skills
❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking ❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork ❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills



**Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.**

Pathways	Sample Career Specialties/Occupations
<b>Therapeutic Services</b>	Acupuncturist • Anesthesiologist Assistant • Art / Music / Dance Therapist(s) • Athletic Trainer • Audiologist • Certified Nursing Assistant • Chiropractor • Dental Assistant / Hygienist • Dental Lab Technician • Dentist • Dietician • Dosimetrist • EMT • Exercise Physiologist • Home Health Aide • Kinesiotherapist • Licensed Practical Nurse • Massage Therapist • Medical Assistant • Mortician • Occupational Therapist/Asst • Ophthalmic Medical Personnel • Optometrist • Orthotist/Prosthetist • Paramedic • Pharmacist/ Pharmacy Tech • Physical Therapist / Assistant • Physician (MD/DO) • Physician's Assistant • Psychologist • Recreation Therapist • Registered Nurse • Respiratory Therapist • Social Worker • Speech Language Pathologist • Surgical Technician • Veterinarian / Vet Tech
<b>Diagnostics Services</b>	Admitting Clerk • Applied Researcher • Community Services Specialists • Data Analyst Epidemiologist • Ethicist • Health Educator • Health Information Coder • Health Information Services • Healthcare Administrator • Medical Assistant • Medical Biller/Patient Financial • Services • Medical Information Technologist • Medical Librarian/Cybrarian Patient Advocates • Public Health Educator Reimbursement Specialist (HFMA) • Risk Management • Social Worker • Transcriptionist • Unit Coordinator • Utilization Manager
<b>Health Informatics</b>	Biomedical / Clinical Engineer • Biomedical / Clinical Technician • Central Services • Environmental Health and Safety • Environmental Services • Facilities Manager • Food Service • Hospital Maintenance Engineer • Industrial Hygienist • Materials Management • Transport Technician
<b>Support Services</b>	Biochemist • Bioinformatics Associate • Bioinformatics Scientist • Bioinformatics Specialist • Biomedical Chemist • Biostatistician • Cell Biologist • Clinical Trials Research Associate • Clinical Trials Research Coordinator • Geneticist • Lab Assistant-Genetics • Lab Technician • Microbiologist • Molecular Biologist • Pharmaceutical Scientist • Quality Assurance Technician • Quality Control Technician • Regulatory Affairs Specialist • Research Assistant • Research Associate • Research Scientist • Toxicologist
<b>Cluster Knowledge and Skills</b>	
❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking ❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork ❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills	



**Hospitality & Tourism encompasses the management, marketing and operations of restaurants and other foodservices, lodging, attractions, recreation events and travel related services.**

Pathways	Sample Career Specialties/Occupations
<b>Restaurants and Food/Beverage Services</b>	<ul style="list-style-type: none"> <li>▪ General Manager ▪ Food &amp; Beverage Manager ▪ Kitchen Manager ▪ Catering &amp; Banquets Manager ▪ Service Manager ▪ Maitre'd ▪ Restaurant ▪ Owner ▪ Baker ▪ Brewer ▪ Caterer ▪ Executive Chef ▪ Cook ▪ Pastry &amp; Specialty Chef ▪ Bartender ▪ Restaurant Server ▪ Banquet Server ▪ Cocktail Server ▪ Banquet Set-Up Employee ▪ Bus Person ▪ Room Service Attendant ▪ Kitchen Steward ▪ Counter Server ▪ Wine Steward ▪ Host</li> </ul>
<b>Lodging</b>	<ul style="list-style-type: none"> <li>Front Office Manager ▪ Executive Housekeeper ▪ Director of Sales &amp; Marketing ▪ Chief Engineer ▪ Director of Human Resources ▪ Rooms Division Manager ▪ Director of Security ▪ Controller ▪ Food &amp; Beverage Director ▪ Resident Manager ▪ Director of Operations ▪ General Manager ▪ Regional Manager ▪ Quality Assurance Manager ▪ Corporate Management ▪ Lodging Management ▪ Owner/Franchisee Administrative Support ▪ Uniformed Services Support ▪ Communications Supervisor ▪ Front Desk Supervisor ▪ Reservations Supervisor ▪ Laundry Supervisor ▪ Room Supervisor ▪ Bell Captain ▪ Shift Supervisor ▪ Sales Professional ▪ Night Auditor ▪ Front Desk Employee ▪ Valet Attendant ▪ Bell Attendant ▪ Door Attendant ▪ Concierge ▪ PBX Operator ▪ Reservationists ▪ Guestroom Attendant ▪ Public Space Cleaner ▪ Laundry Attendant ▪ House Person ▪ Maintenance Worker ▪ Van Driver</li> </ul>
<b>Travel &amp; Tourism</b>	<ul style="list-style-type: none"> <li>Executive Director ▪ Assistant Director ▪ Director of Tourism Development ▪ Director of Membership Development ▪ Director of Communications ▪ Director of Visitor Services ▪ Director of Sales ▪ Director of Marketing and Advertising ▪ Director of Volunteer Services ▪ Director of Convention and Visitors Bureau ▪ Market Development Manager ▪ Group Sales Manager ▪ Events Manager ▪ Sales Manager ▪ Destination Manager ▪ Convention Services Manager ▪ Heritage Tourism Developer ▪ Travel Agent (Commercial &amp; Vacation) ▪ Event Planner ▪ Meeting Planner ▪ Special Events Producer ▪ Nature Tourism Coordinator ▪ Tour and Travel Coordinator ▪ Tourism Marketing Specialist ▪ Transportation Specialist ▪ Welcome Center Supervisor ▪ Visitor Center Counselor ▪ Tourism Assistant ▪ Executive Assistant ▪ Tour Guide ▪ Tour Operator ▪ Motor Coach Operator ▪ Tour and Ticket Reservationists ▪ Interpreter</li> </ul>
<b>Recreation, Amusements &amp; Attractions</b>	<ul style="list-style-type: none"> <li>Club Manager ▪ Club Assistant Manager ▪ Club Instructor ▪ Club Equipment &amp; Facility Maintenance ▪ Club Scheduler ▪ Club Event Planner ▪ Club Membership Developer ▪ Parks &amp; Gardens Director ▪ Parks &amp; Gardens Activity Coordinator ▪ Parks &amp; Gardens Access Management ▪ Parks &amp; Gardens Safety &amp; Security ▪ Parks &amp; Garden Ranger ▪ Resort Trainer ▪ Resort Instructor ▪ Resort Equipment Maintenance ▪ Resort Scheduler, Manager, Supervisor, Dealer, Slot Supervisor and Maintenance and Security &amp; Safety ▪ Fairs/Festival Event Planner, supervisor, manager, promotional developer ▪ Theme Parks/Amusement Parks Resale Department Manager, Retail Manager, Ride Operations Manager, Group Events Manager ▪ Family Centers Manager, Equipment Operator/Maintenance ▪ Historical /Cultural /Architectural Ecological Industrial Sites Guides/Ranger and Exhibit Developer ▪ Museums/ Zoos/Aquariums Docent, Animal Trainer and Handler and Exhibit Developer</li> </ul>
<b>Cluster Knowledge and Skills</b>	
<ul style="list-style-type: none"> <li>❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking</li> <li>❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork ❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills</li> </ul>	



**Preparing individuals for employment in career pathways that relate to families and human needs.**

<b>Pathways</b>	<b>Sample Career Specialties/Occupations</b>
<b>Early Childhood Development &amp; Services</b>	Directors • Childcare Facilities Assistant Directors • Childcare Facilities • Elementary School Counselors • Preschool Teachers Educators for Parents • Nannies • Teachers' Assistants • Childcare Assistants/Workers
<b>Counseling &amp; Mental Health Services</b>	Industrial-Organizational Psychologists • Sociologists • School Counselors/Psychologists • Substance Abuse and Behavioral Disorder Counselors • Mental Health Counselors • Vocational Rehabilitation Counselors • Career Counselors • Employment Counselors • Residential Advisors • Marriage, Child and Family Counselors
<b>Family &amp; Community Services</b>	Community Service Directors • Adult Day Care Coordinators • Coordinators of Volunteers • Licensed Professional Counselors • Religious Leaders Directors, Religious Activities/Education Programs • Human Services Workers • Social Services Workers • Vocational Rehabilitation Counselors • Employment Counselors • Career Counselors • Vocational Rehabilitation Service Workers • Leisure Activities Coordinators • Dieticians • Geriatric Service Workers • Adult Day Care Workers • Residential Advisors • Emergency and Relief Workers • Community Food Service Workers • Community Housing Service Workers • Social and Human Services Assistants
<b>Personal Care Services</b>	Barbers • Cosmetologists, Hairdressers, & Hairstylists • Shampooers, Nail Technicians, Manicurists & Pedicurists • Skin Care Specialists/Estheticians • Electrolysis Technicians • Electrologists • Funeral Directors/Morticians • Embalmers • Funeral Attendants • Personal and Home Care Aides • Companions • Spa Attendants • Personal Trainers • Massage Therapists
<b>Consumer Services</b>	Consumer Credit Counselors • Consumer Affairs Officers • Consumer Advocates • Certified Financial Planners • Insurance Representatives • Bankers • Real Estate Services Representatives • Financial Advisors • Investment Brokers • Employee Benefits Representatives • Hospital Patient Accounts Representatives • Customer Service Representatives • Consumer Research Department Representatives • Consumer Goods or Services Retailing Representatives • Market Researchers • Account Executives • Sales Consultants • Event Specialists • Inside Sales Representatives • Field Merchandising Representatives • Buyers • Small Business Owners
<b>Cluster Knowledge and Skills</b>	
❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking ❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork ❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills	



**Building Linkages in IT Occupations Framework: For Entry Level, Technical, and Professional Careers Related to the Design, Development, Support and Management of Hardware, Software, Multimedia, and Systems Integration Services**

Pathways	Sample Career Specialties/Occupations
<p><b>Network Systems</b></p>	<p><b>Network Design and Administration:</b>            Communications Analyst • Data Communications Analyst • Information Systems Administrator            Information Systems Operator • Information Technology Engineer  <b>Network:</b> Administrator • Analyst • Architect • Engineer • Manager • Operations Analysis            • Security Analyst • Specialist • Technician • Transport Administrator • PC Support Specialist •  <b>Systems:</b> Administrator • Engineer • Support Lead • Technical Support Specialist • User            Support Specialist</p>
<p><b>Information Support and Services</b></p>	<p><b>Database Development and Administration:</b>  <b>Data:</b> Administrator • Analyst • Architect • Management Associate • Modeler • Modeling            Specialist  <b>Database:</b> Administration Associate • Administrator • Analyst • Developer • Manager •            Modeler • Security Expert • DSS (Decision Support Services) • Knowledge Architect •            Senior Database Administrator • Systems Analyst  <b>Systems:</b> Administrator • Analyst • Tester  <b>Technical Writer:</b> Desktop Publisher • Document Specialist • Documentation Specialist •            Editor • Electronic Publications Specialist • Publisher • Instructional Designer • Online Pub-            lisher • Technical Communicator • Editor • Publications Manager • Writer  <b>Technical Support:</b> Analyst • Call Center Support Representative • Content Manager  <b>Customer:</b> Liaison • Service Representative • Service Professional  <b>Help Desk:</b> Specialist • Technician • Maintenance Technician • PC Support Specialist • PC            Systems Coordinator • Product Support Engineer • Sales Support Technician • Systems Ana-            lyst  <b>Technical:</b> Account Manager • Support Engineer • Support Representative • Testing Engi-            neer  <b>Enterprise Systems Analysis and Integration:</b> Application Integrator • Business Continuity            Analyst • Cross-Enterprise Integrator  <b>Data:</b> Systems Designer • Systems Manager • Warehouse Designer • E-Business Specialist •            Electronic Transactions Implementer  <b>Information Systems:</b> Architect • Planner</p>
<p><b>Interactive Media</b></p>	<p><b>Digital Media:</b> 2D/3D Artist • Animator • Audio/Video Engineer • Designer • Media Spe-            cialist • Media/Instructional Designer  <b>Multimedia:</b> Author • Authoring Specialist • Developer • Specialist • Producer • Production            Assistant • Programmer • Streaming Media Specialist • Virtual Reality Specialist  <b>Web:</b> Designer • Producer • Specialist  <b>Web Development and Administration:</b> <b>Web:</b> Administrator • Architect • Designer • Page            Developer • Producer • Site Developer • Specialist</p>
<p><b>Programming and Software Development</b></p>	<p><b>Applications:</b> Analyst • Engineer • Business Analyst • Computer Engineer • Data Modeler  <b>Operating System:</b> Designer/Engineer • Programmer Analyst • Program Manager • Pro-            grammer • Programmer/Analyst • Project Lead  <b>Software Applications:</b> Specialist • Architect • Design Engineer • Development Engineer •            Engineer • QA Specialist • Tester  <b>Systems:</b> Analyst • Administrator • Test Engineer • Tester</p>
<p><b>Cluster Knowledge and Skills</b></p>	
<p style="text-align: center;">❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking            ❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and            Teamwork ❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills</p>	



**Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services**

Pathways	Sample Career Specialties/Occupations
<b>Correction Services</b>	Warden· Jail Administrator· Mid-level Manager • Program Coordinator and Counselor· Public Information Officer • Correctional Trainer • Case Manager· Community Corrections Practitioner • Probation/ parole officer • Corrections Educator • Corrections Officer • Detention Deputy • Youth Services Worker • Facility Maintenance Workers • Transport Officer • Food Service Staff· Medical Staff • Dietitian· Support Staff
<b>Emergency and Fire Management Services</b>	Emergency Management and Response Coordinator • Emergency Planning Manager • EMT • Fire Fighter • Mgr/Supv. Of Fire Fighters • Forest Fire Fighter • Mgr/Supv. of Forest Fire Fighters • Forest Fire Inspector & Investigator • Hazardous Materials Responder • Dispatcher • Training Officer, Grant Writer and Coordinator • Rescue Workers
<b>Security &amp; Protective Services</b>	Security Director • Corporate/Agency Security Director/VP • Corporate Director of Sales • Security Systems Designer/Consultant • Physical Security Specialist Consultant • Information Systems Security Specialist • Computer Forensics Specialist • Private/Corporate Investigator • Loss Prevention/Security Manager (e.g. Store, hotel) • Security Trainer/Educator • Security Sales Representative/Manager • Loss Prevention Specialist • Physical Security Assistant • Security Systems Technician (Install/maintain) • Investigative Assistant (private sector) • Security Trainer (Basics) • Security Sales Assistant • Transportation Security Supervisor • Information Security Assistant (Document Control) • Personnel Security Assistant • Executive Protection Officer (Private) • Supervisory Security officer (armed, unarmed) • Certified Security Officer (SPO, POST, Arrest Authority) • Armored Car Guard • Control Center Operator (e.g. ADT) (Monitoring Center) • Uniformed Security Officer (Unarmed -- proprietary and contract) • Security Clerk • Transportation Security Technician • Loss Prevention Assistant • Uniformed Security officer (armed) • Computer Security Specialist • Computer Forensics Examiner • Executive Protection Specialist • Gaming Surveillance Specialist • Information Security specialist • Information Technology Security • Armored Car Guards • Industrial Espionage Security • Life Guard, Ski Patrol • Physical Property Security • Private Security Specialist
<b>Law Enforcement Services</b>	Animal Control Officer • Bailiffs • Child Support • Missing Persons • Unemployment Fraud Investigators • Criminal Investigators & Special Agents • Gaming Investigator • Bomb Technician • Game Enforcement Officer • Highway Patrol Pilots • Immigration & Customs Inspectors • Mgr/Supv. Police & Detectives • Police Detectives and Criminal Investigators • Police, Fire & Ambulance Dispatchers • Police & Patrol Officers • Private Detectives & Investigators • Sheriffs & Deputy Sheriffs • Training Officer • Transit & Railroad Police • Park Ranger • Evidence Technician • Federal Marshall
<b>Legal Services</b>	Administrative Law • Attorney • Case Management Specialist • Court Reporter • File and Document Manager • Information Officer • Investigator • Judge • Law Clerk • Legal Assistant • Legal Secretary • Magistrate Mediator/Arbitrator • Negotiator • Para legal



**Planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities, such as production planning and control, maintenance, and manufacturing/process engineering.**

Pathways	Sample Career Specialties/Occupations
<b>Production</b>	Assemblers ▪ Automated Manufacturing Technicians ▪ Bookbinders ▪ Calibration Technicians ▪ Electrical Installers and Repairers ▪ Electromechanical Equipment Assemblers ▪ Extruding and Drawing Machine Setters/Set-Up Operators ▪ Extrusion Machine Operators ▪ Foundry Workers ▪ Grinding, Lapping, and Buffing Machine Operators ▪ Hand Packers and Packagers ▪ Hoist and Winch Operators ▪ Instrument Makers ▪ Large Printing Press Machine Setters and Set-Up Operators ▪ Machine Operators ▪ Managers, Supervisors ▪ Medical Appliance Makers ▪ Milling Machine Setters, Set-Up Operators ▪ Millwrights ▪ Operators, Tenders, Cutters/Brazers, Soldering, Machine Operations ▪ Painters ▪ Pattern & Model Makers ▪ Precision Layout Workers ▪ Precision Optical Goods Workers ▪ Production Associates ▪ Sheet Metal Workers ▪ Solderers and Brazers ▪ Tool and Die Makers ▪ Welders
<b>Manufacturing Production Process Development</b>	Design Engineers ▪ Electrical and Electronic Technicians and Technologists ▪ Electronics Engineers ▪ Engineering and Related Technicians and Technologists ▪ Engineering Technicians ▪ Industrial Engineers ▪ Labor Relations Managers ▪ Manufacturing Engineers ▪ Manufacturing Technicians ▪ Power Generating and Reactor Plant Operators ▪ Precision Inspectors, Testers, and Graders ▪ Process Improvement Technicians ▪ Production Managers ▪ Purchasing Agents ▪ Supervisors
<b>Maintenance, Installation &amp; Repair</b>	Biomedical Equipment Technicians ▪ Boilermakers ▪ Communication System Installers/Repairers ▪ Computer Installers/Repairers ▪ Computer Maintenance Technicians ▪ Electrical Equipment ▪ Installers/Repairers ▪ Facility Electricians ▪ Industrial Electronic ▪ Installers/Repairers ▪ Industrial Facilities Managers ▪ Industrial Machinery Mechanics ▪ Industrial Maintenance Electricians ▪ Industrial Maintenance Mechanics ▪ Industrial Maintenance Technicians ▪ Instrument Calibration and Repairers ▪ Instrument Control Technicians ▪ Job/Fixture Designers ▪ Laser Systems Technicians ▪ Maintenance Repairers ▪ Major Appliance Repairers ▪ Meter Installers/Repairers ▪ Millwrights ▪ Plumbers, Pipe Fitters and Steam Fitters ▪ Security System Installers/Repairers
<b>Quality Assurance</b>	Calibration Technicians ▪ Inspectors ▪ Lab Technicians ▪ Process Control Technicians ▪ Quality Control Technicians ▪ Quality Engineers ▪ SPC Coordinators
<b>Logistics &amp; Inventory Control</b>	Communications, Transportation and Utilities Managers ▪ Dispatchers ▪ Freight, Stock, and Material Movers ▪ Industrial Truck and Tractor Operators ▪ Logistical Engineers ▪ Logisticians ▪ Material Associates ▪ Material Handlers ▪ Material Movers ▪ Process Improvement Technicians ▪ Quality Control Technicians ▪ Traffic Managers ▪ Traffic, Shipping, and Receiving Clerks
<b>Health, Safety and Environmental Assurance</b>	Environmental Engineers ▪ Environmental Specialists ▪ Health and Safety Representatives ▪ Safety Coordinators ▪ Safety Engineers ▪ Safety Team Leaders ▪ Safety Technicians
<b>Cluster Knowledge and Skills</b>	
<ul style="list-style-type: none"> <li>❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking</li> <li>❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork</li> <li>❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills</li> </ul>	





**Planning, managing, and performing marketing activities to reach organizational objectives.**

Pathways	Sample Career Specialties/Occupations
<b>Management and Entrepreneurship</b>	Entrepreneurs • Owners • Small Business Owners • Presidents • Chief Executive Officers • Principals • Partners • Proprietors • Franchisees • Independent X's (e.g., distributor) • Customer Service Representatives
<b>Professional Sales and Marketing</b>	Inbound Call Managers • Channel Sales Managers • Regional Sales Managers • Client Relationship Managers • Business Development Managers • Territory Representatives / Managers • Key Account Managers • National Account Managers • Account Executives • Sales Engineers Sales Executives • Technical Sales Specialists • Retail Sales Specialists (big ticket) • Outside Sales Representatives • Industrial Sales Representatives • Manufacturer's Representatives • Salespersons • Field Marketing Representatives • Brokers • Agents • Field Representatives • Solutions Advisors • Sales/ Marketing Associates • Telemarketers • Customer Service Representatives
<b>Buying and Merchandising</b>	Store Managers • Retail Marketing Coordinators • Merchandising Managers • Merchandise Buyers • Operations Managers • Visual Merchandise Managers • Sales Managers • Department Managers • Sales Associates • Customer Service Representatives Clerks (e.g., stock, receiving, etc.)
<b>Marketing Communications and Promotion</b>	Advertising Managers • Public Relations Managers • Public Information Directors • Sales Promotion Managers • Co-op Managers • Trade Show Managers • Circulation Managers • Promotions Managers • Art/Graphics Directors • Creative Directors • Account Executives • Account Supervisors • Sales Representatives • Marketing Associates • Media Buyers/ Planners • Interactive Media Specialists • Analysts • Contract Administrators •
<b>Marketing Information Management and Research</b>	Database Managers • Research Specialists / Managers • Brand Managers • Marketing Services Managers • Customer Satisfaction Managers • (Research) Project Managers • CRM Managers • Forecasting Managers • Strategic Planners, Marketing Product Planners • Planning Analysts • Directors of Market Development • Database Analysts • Research Associates • Frequency Marketing Specialists • Knowledge Management Specialists • Interviewers • Customer Service Representatives •
<b>Distribution and Logistics</b>	Warehouse Managers • Materials Managers Traffic Managers • Logistics Managers • Transportation Managers • Inventory Managers/Analysts • Logistics Analysts/ Engineers • Distribution Coordinators • Shipping/Receiving Administrators • Shipping / Receiving Clerks • Customer Service Representatives •
<b>E-Marketing</b>	Fulfillment Managers • E-Merchandising Managers • E-Commerce Directors • Web Site Project Managers • Internet Project Directors • Brand Managers • Forum Managers • Web Masters • Web Designers • Interactive Media Specialists • Internet Sales Engineers • Site Architects • User Interface Designers • On-line Market Researchers • Copywriters-Designers • Account Supervisors Customer Support Specialists • Customer Service Representatives •
<b>Cluster Knowledge and Skills</b>	
<ul style="list-style-type: none"> <li>❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking</li> <li>❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork ❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills</li> </ul>	

States' Career Clusters Initiative, 2006, [www.careerclusters.org](http://www.careerclusters.org)



**Planning, managing, and providing scientific research and professional and technical services (e.g. physical science, social science, and engineering) including laboratory and testing services, and research and development service**

Pathways	Sample Career Specialties/Occupations
<p><b>Engineering and Technology</b></p>	<p>Aerospace Engineer • Aeronautical Engineer • Agricultural Engineer • Agricultural Technician • Application Engineer • Architectural Engineer • Automotive Engineer • Biomedical Engineer • Biotechnology Engineer • Chemical Engineer • Civil Engineer • Communications Engineer • Computer Engineer • Computer Hardware Engineer • Computer Programmer • Computer Science Technician • Computer Software Engineer • Construction Engineer • Consultant • Development Engineer • Drafter • Electrical Engineer • Electrician • Electronics Technician • Energy Transmission Engineer • Environmental Engineer • Facilities Technician • Fire Protection Engineer • Geothermal Engineer • Hazardous Waste Engineer • Hazardous Waste Technician • Human Factors Engineer • Industrial Engineer • Industrial Engineering Technician • Licensing Engineer • Manufacturing Engineer • Manufacturing Technician • Manufacturing Processes Engineer • Marine Engineer • Materials Engineer • Materials Lab &amp; Supply Technician • Mechanical Engineer • Metallurgic Engineer • Mining Engineer • Naval Engineer • Network Technician • Nuclear Engineer • Ocean Engineer • Operations Research Engineer • Packaging Engineer • Packaging Technician • Petroleum Engineer • Pharmaceutical Engineer • Plastics Engineer • Power Systems Engineer • Product Design Engineer • Project Engineer • Project manager • Prototype Engineer • Quality Engineer • Quality Technician • Radio/TV Broadcast Technician • Radiology Engineer • Researcher • Safety Engineer • Software Engineer • Sound Technician • Structural Engineer • Survey Technician • Systems Design Engineer • Technical Sales Manager • Technical Writer • Telecommunications Engineer • Textile Engineer • Transportation Engineer</p>
<p><b>Science and Math</b></p>	<p>Analytical Chemist • Anthropologist • Applied mathematician • Archeologist • Astronomer • Astrophysicist • Atmospheric scientist • Biologist • Botanist • CAD operator • Cartographer • Chemist • Communications technologist • Conservation scientist • Cosmologist • Cryptographer • Crystallographer • Demographer • Dye chemist • Ecologist • Economist • Electron-microscopist • Environmental scientist • Expert systems scientist • Geneticist • Geologist • Geophysicist • Geoscientist • Herpetologist • Hydrologist • Ichthyologist • Inorganic chemist • Laboratory Technician • Mammalogist • Marine scientist • Materials analyst • Materials scientist • Mathematician • Mathematics • Metallurgist • Meteorologist • Microbial Physiologist • Mycologist • Nanobiologist • Nuclear chemists • Nuclear technician • Numerical analyst • Nutritionist • Oceanographer • Organic chemist • Ornithologist • Paleontologist • Physicist • Polymer scientist • Programmer • Protein scientist • Protozoologist • Quality-control scientist • Radio chemist • Research chemist • Research Technician • Science Teacher • Lab Technician • Scientific visualization / graphics expert • Spectroscopist • Statistician • Technical writer • Technologist • Toxicologist • Zoologist</p>
<p><b>Cluster Knowledge and Skills</b></p>	
<p style="text-align: center;">❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking ❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork ❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills</p>	



**Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.**

Pathways	Sample Career Specialties/Occupations
<p><b>Transportation Operations</b></p>	<p><b>Air/Space Transportation:</b> Transportation managers—air • Airplane pilots/copilots • Commercial pilots • Flight engineers • Flight attendants • Dispatchers-air • Traffic managers • Air traffic controllers • Aircraft cargo handling supervisors • Airfield operations specialists • Other airlines operations and support jobs</p> <p><b>Rail Transportation:</b> Transportation managers---rail • Dispatchers-rail • Traffic managers • Locomotive engineers, • Locomotive firers • Rail yard conductors and yardmasters • Railroad brake, signal and switch operators (including train crew members and yard workers) • Rail yard engineers, dinkey operators, and hostlers • Other railyard and terminal operations and support jobs</p> <p><b>Water Transportation:</b> Transportation managers—water * Dispatchers—water • Traffic managers • Captains • Mates • Pilots of water vessels • Sailors and marine oilers • Able seamen • Ordinary seamen • Ship and boat captains • Ship engineers • Motorboat operators • Bridge and lock tenders • Other port/harbor/waterway/marina operations and support jobs</p> <p><b>Road Transportation:</b> Transportation managers—road • Dispatchers--Truck/bus/taxi, traffic managers • Truck drivers-heavy • Truck drivers-tractor-trailer • Truck drivers—light or delivery services • Bus drivers-transit and intercity • Bus drivers-school • Taxi drivers and chauffeurs • Truck/bus/taxi terminal operations and support jobs</p> <p><b>Transit Systems:</b> Transportation managers—mass transit • Dispatchers-bus • Traffic managers • Dispatchers-rail • Traffic managers • Bus drivers—transit and intercity • Subway and streetcar operators • Other terminal operations and support jobs</p>
<p><b>Logistics Planning and Management Services</b></p>	<p>Logisticians • Logistics managers • Logistics Engineers • Logistics analysts • Logistics consultants • International logistics</p>
<p><b>Warehousing and Distribution Center Operations</b></p>	<p>Warehouse managers • Storage and distribution managers • Industrial and packaging engineers • Traffic, shipping and receiving clerks • Production, planning, expediting clerks • First-line supervisors/managers of helpers • Laborers, and material movers-hand • First-line supervisors/managers of transportation and material-moving machine and vehicle operators • Laborers and freight, stock and material movers, hand • Car, truck and ship loaders • Packers and packagers-hand • Other packaging/packing/material handling and moving jobs</p>
<p><b>Facility and Mobile Equipment Maintenance</b></p>	<p><b>Facility:</b> Facility maintenance managers and engineers • Industrial equipment mechanics • Industrial electricians, • Electrical/electronic technicians • Other facility/terminal maintenance jobs</p> <p><b>Mobile Equipment:</b> Mobile equipment maintenance managers • Electrical and electronic installers and repairers—transportation equipment • Mobile heavy equipment mechanics</p> <p><b>Air/Space</b>—Aerospace engineering and operations technicians • Aircraft mechanics and service technicians • Airframe mechanics • Power plant mechanics • Aircraft engine specialists • Aircraft body and bonded structure repairers • Avionics technicians. <b>Water</b>—Motorboat mechanics • Ship mechanics and repairers • Motorboat mechanics • Automotive/truck mechanics and body repairers <b>Rail</b>—Rail car repairers • Signal and track switch repairers • Rail locomotive and car mechanics and repairers <b>Road</b>—Electronic equipment installers and repairers—motor vehicle • Automotive body and related repairers • Automotive glass installers and repairers • Automotive service technicians and mechanics • Automotive master mechanics • Automotive specialty technicians • Bus and truck mechanics and diesel engine specialists • Motorcycle mechanics • Bicycle repairers • Tire repairers and changers</p>



**Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.**

Pathways	Sample Career Specialties/Occupations
<b>Transportation Systems/ Infrastructure Planning, Management, and Regulation</b>	<p><b>General</b>—Intermodal--Urban and regional planners • Civil engineers • Engineering technicians • Surveying and mapping technicians • Government service executives • Environmental compliance inspectors <b>Air/Space</b>—Air traffic controllers • Aviation inspectors  <b>Road</b>—Traffic engineers • Traffic technicians • Motor vehicle inspectors • Freight inspectors,  <b>Rail</b>—Railroad inspectors <b>Water</b>—Marine cargo inspectors • Vessel traffic control specialists  <b>Transit</b>—Public transportation inspectors <b>Other</b>---Other government agency managers • Regulators • Inspectors, other federal/state/local transportation agency jobs</p>
<b>Health, Safety and Environmental Management</b>	<p>Health and safety managers • Industrial health and safety engineers • Environmental scientists and specialists • Environmental science and protection technicians • Environmental managers and engineers • Environmental compliance inspectors * Safety analysts</p>
<b>Sales and Service</b>	<p>Marketing managers, • Sales managers • Sales representatives—transportation/logistics services • Reservation, travel and transportation agents/clerks • Cargo and freight agents • Customer service managers, • Customer service representatives • Customer order and billing clerks • Cashiers, counter and rental clerks</p>
<b>Cluster Knowledge and Skills</b>	
<p style="text-align: center;">❖ Academic Foundations ❖ Communications ❖ Problem Solving and Critical Thinking  ❖ Information Technology Applications ❖ Systems ❖ Safety, Health and Environmental ❖ Leadership and Teamwork ❖ Ethics and Legal Responsibilities ❖ Employability and Career Development ❖ Technical Skills</p>	