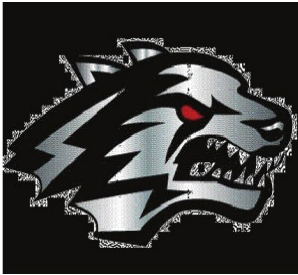


Gadsden Independent School District

2010-2011 High School Pre-Registration Handbook for Students and Parents

Chaparral High School
Desert Pride Academy
Gadsden High School
Santa Teresa High School



Gadsden Independent School District
School Board Approved
December 10, 2009

Cynthia Nava
Superintendent
P.O. Drawer 70
Anthony, New Mexico 88021
(505) 882-6200



**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, and course descriptions 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 worksheet. This handbook contains information concerning registration and graduation requirements, and A Guide to Career Clusters and Pathways contains descriptions of each course and pathway 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 12th 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 12th 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 childcare 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™ online program, available at school or at home: www.careercruising.com. Career Cruising™ 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.

TESTING INFORMATION

The following information is offered as a guide to assist parents and students. It is recommended that all students take advantage of these tests when they are offered.

- PSAT:** A preview test to the SAT that is available to all sophomores and juniors; National Merit Scholarship Qualifying Test when taken as a junior
- ACT:** A college admission test accepted by all universities; preferred by most New Mexico Universities.
- SAT:** A college admission test accepted by all universities, preferred by exclusive schools and by Texas schools

Test dates are available in the Counseling Center and in English classes. Depending on the school, ACT or SAT scores are required for college admission.

- Interest Inventories:** Assessment tools available to help students determine career interests
- ASVAB:** A military aptitude test available to all grades; on a volunteer basis
- ACT/Compass:** An entrance exam for the Dona Ana Community College and for qualification for courses articulated with DACC.

Testing Calendar

- PSAT:** October
- HSTW:** January-February (Grade 12)
- ACCESS:** Spring (ELL students only)
- NMSBA:** Spring (Grade 11)
- PLAN:** PreACT See counselor for information
- SAT:** See counselor for information
- ACT:** See counselor for information
- ASVAB:** See counselor for information

CLASSIFICATION OF STUDENTS

POLICIES FOR TRANSFERRING CREDITS FROM FOREIGN COUNTRIES

- 1) Students transferring from Mexico (or countries with similar grading systems) should present their transcript to the counselors to be evaluated as follows:
 - a. Only Grade 3 of *secundaria* (U.S. Grade 9) should be reviewed along with grades 1, 2, & 3 of *preparatoria* (U.S. Grades 10, 11, 12). Only those courses for which the student has earned an A, B, C, or D (A = 95, B = 85, C = 75, D = 65, unless percentage grades are on transcript) will be counted for credit. A student may only transfer up to eight (8) credits **per year**, some of which may be electives. A student may only transfer up to a total of **8 credits**.
 - b. The students may transfer half-credits if earned under a semester system.
 - c. Grade conversion: Numerical grades based on a scale of 10 are converted into percentages / letter grades as follows:

10 = 100 = A+	
9 = 90 = A	(Numerical grades with decimals are not to be rounded off.
8 = 80 = B	A 7.9 is still 79, which equals a C)
7 = 70 = C	
6 = 60 = D	
0-5 = 50 = F	(No Credit Allowed)
- 2) Student enrolling with transcripts from countries with dissimilar systems will be evaluated on an individual basis.
- 3) **Foreign exchange students may only be classified as 11th grade students and are not eligible to graduate from Gadsden Independent School District.**
- 4) **Persons who have successfully completed the equivalent of U.S. high school in their country of origin are NOT eligible to matriculate in high school in New Mexico.**

CLASSIFICATION REQUIREMENTS (determined in June of each year)

- To be classified as a sophomore a minimum of 6 credits are needed.
- To be classified as a junior a minimum of 12 credits are needed.
- To be classified as a senior a minimum of 20 credits are needed.
- Transfer students entering with 19 credits are reclassified in January as seniors.
- Seniors need 28 credits to graduate. ** (See page 6)

GRADUATION CREDIT AND HOME SCHOOLING

New Mexico Statutes require any person operating or intending to operate a home school to notify the Secretary of Education of the establishment of a home school within thirty (30) days of its establishment and to notify the Secretary of Education on or before April 1st prior to each subsequent year of operation. Graduation credit will only be given to home school students upon the receipt of a transcript from an accredited online and/or correspondence school, as required by Public Education Department regulations.

CREDIT FOR HIGH SCHOOL COURSES AT THE MIDDLE SCHOOL

At the present time, Gadsden ISD offers five courses that students can take at the Middle School level that will earn them High School graduation credit. Those courses are:

- English 1
- Honors English 1
- Algebra 1
- Honors Algebra 1
- Geometry
- Honors Geometry
- General Computer Applications
- Spanish 1
- Spanish 2
- PREPS

Qualifying Steps for Placement into Various Courses

To be eligible for placement into English 1, Algebra 1, and Geometry students must meet the following eligibility criteria:

- Step 1: Students qualify automatically if their performance on the New Mexico Standards-based Assessment (NMSBA) receives a rating of Advanced in Language Arts and/or Mathematics.
- Step 2: Students whose performance on the New Mexico Standards-based Assessment (NMSBA) receives a rating of proficient in Language Arts and/or Mathematics may still be considered. If the student is referred to the Student Assistance Team (SAT) for placement, the committee will consider the student's grades and teacher recommendation and any other previous standardized tests. These students will qualify on the recommendation of the SAT after considering this information. If the student still does not qualify, the end of the book test in Pre-Algebra or a Language Arts Department test may be added to the student's profile and the SAT may reconsider approval of the placement.

Credit for High School Classes will be awarded as follows:

1. In order to receive High School credit student must pass with a 60% or above.
2. Students earning 80-100% in a high school class as 7th or 8th-grade students can be recommended for Honors courses.

STUDENTS MAY NOT TAKE THESE COURSES AGAIN AT THE HIGH SCHOOL IF THEY HAVE ALREADY PASSED THEM AT THE MIDDLE SCHOOL LEVEL (As per 6.30.2 NMAC: "A student cannot take the same course twice for credit.")

Notice of/Credit for these courses will be transmitted by an official letter/transcript from the middle school and sent to the Office of the Associate Superintendent for Instruction, and the corresponding High School Principal and Counseling Department Chair.

GRADUATION AND BEYOND GRADUATION REQUIREMENTS

**Students who transfer as seniors to Gadsden Independent School District from a traditional six-period or seven-period day will be required to complete successfully the minimum state requirement of 23.5 credits.*

A New State Requirement Graduation

Being proficient on the 11th grade NMSBA is a new state requirement for graduation. This is a Standards Based Assessment. To be prepared to pass the assessment, students will need to be enrolled in the following courses at the beginning of their third year in high school. Beginning with the class of 2012 the following prerequisites are required:

- English III (with credit for English I and English II)
- Algebra II (with credit for Algebra I and Geometry)
- One of the following- Biology, Chemistry, or Physics (With credit for integrated Science I and II).
- World History (With credit for American Government, and U.S. History)
- To be eligible for graduation, one for the following needs to be completed- an AP course, an online course, an honors course or a dual credit course.

Special Education

Awarding of a high school diploma or certificate of completion to students in a special education program shall be in accordance with Educational Standards for New Mexico Public Schools, effective July 1988.

Regular Education

The Gadsden Independent School District specifies graduation requirements for all students. These requirements meet and in some instances exceed the requirements specified in the New Mexico Standards for Excellence.

Graduating classes of 2011 & 2012: must successfully complete the following core requirements:

1. Four (4) credits in English
 - a. English 1 - 1 credit
 - b. English 4 - 1 credit
 - c. English 3 - 1 credit
 - d. English 2 - 1 credit.
2. Three (3) credits in Mathematics, at least one of which is equivalent to Algebra I or higher
 - a. Algebra 1
 - b. Geometry
 - c. Algebra 2
3. Three (3) credits in Science, one of which must have a laboratory component
 - a. Integrated Science 1
 - b. Integrated Science 2
 - c. Integrated Biology 3 or Integrated Physics 3 or Integrated Chemistry 3
4. Four (4) credits in Social Sciences
 - a. U.S. Governments/Economics - 1 credit
 - b. New Mexico History and Geography - 1 credit
 - c. World History/Geography - 1 credit
 - d. United States History/Geography 1 credit
5. One (1) credit in Physical Education
6. One (1) credit in Communication Skills.

Additionally, students enrolled at Desert Pride Academy, Gadsden High School, Santa Teresa High School and Chaparral High School are required to complete eight (8) electives for a total of twenty-six (26) credits.

Graduating classes of 2013 and there after: must successfully complete the following requirements:

1. Four (4) credits in English
 - a. English 1 - 1 credit
 - b. English 2 - 1 credit
 - c. English 3 - 1 credit
 - d. English 4 - 1 credit
2. Three (3) credits in Mathematics, at least one of which is equivalent to Algebra I or higher
 - a. Algebra 1
 - b. Geometry
 - c. Algebra 2
 - d. Math Elective
3. Three (3) credits in Science, one of which must have a laboratory component
 - a. Integrated Science 1
 - b. Integrated Science 2
 - c. Integrated Biology 3 or Integrated Physics 3 or Integrated Chemistry 3
4. Four (4) credits in Social Sciences
 - a. U.S. Governments/Economics - 1 credit
 - b. United States History/Geography - 1 credit
 - c. World History/Geography - 1 credit
 - d. New Mexico History and Geography - 1 credit
5. One (1) credit in Physical Education
6. One (1) in a career cluster course /Workplace Readiness/Foreign Language
7. One (1) credit in an advanced college placement course/ honors course/dual credit course offered by a college/distance learning course.

Additionally, students enrolled at Desert Pride Academy, Chaparral High School, Gadsden High School, and Santa Teresa High School are required to complete seven (7) electives for a total of twenty-six (26) credits.

For students enrolling or re-enrolling in the Gadsden Independent School District:

1. Credits shall be transferable with no loss of value between schools that are accredited.
2. Students transferring from a home school or private school to the district shall be placed at the grade level appropriate to the age of the student, or to the student's score on an achievement test administered according to the statewide or district testing programs.
3. Credits earned through correspondence or extension study may be accepted if such credits are from schools approved or accredited by the National Home Study Counsel, the State Board of Education, of the state in which they are located, or by a college or university which is regionally accredited for such purposes.
4. A final examination shall be administered to all students in all courses offered for credit.
5. A student cannot take the same course twice for credit.
6. Dual enrollment credit, both academic and vocational, may be earned simultaneously from both the public school district and the post-secondary institution(s). Dual enrollment requires an agreement between the two entities.
7. A student shall receive a high school diploma if he/she has passed a state competency examination in the subject areas of language arts, writing, reading, mathematics, science, and social studies for the graduating classes of 2010-2012.

8. Starting with the class of 2012, students will have to pass the New Mexico Standard-Based Assessment examination, or provide alternative demonstrations of competency using standards-based indicators to receive a high school diploma.
9. If a student exits from the school system at the end of grade twelve without having passed a state competency examination (Classes 2010-2011) or New Mexico Standard Based Assessment (Class 2012) or without having provided alternative demonstrations of competency using standards-based indicators (Class 2012), he/she shall receive a certificate of completion indicating the number of credits earned and the grade completed. If within five years after a student exits from the school system he/she takes and passes the state graduation examination, or provides alternative demonstrations of competency using standards-based indicators he/she may receive a high school diploma.
10. While enrolled in middle school, students who qualify may take designated courses offered at the High School level for credit and used to meet graduation requirements.
11. In order to participate in Chaparral High School, Gadsden High School, and Santa Teresa High School graduation ceremonies (graduating classes 2010-2011), students must have satisfactorily completed the required twenty-six (26) credits and passed all six (6) areas of the New Mexico High School Competency Exam. Starting with the graduating class of 2012, in order to participate in the graduating ceremonies, students must have satisfactorily completed 26 credits and passed the New Mexico Standard Based- Assessment, or provide alternative demonstrations of competency using standards-based indicators.
12. After July 1, 2010, the currently issued high school diploma will be replaced by the New Mexico diploma of excellence.
13. Chaparral High School, Gadsden High School and Santa Teresa High School will identify and recognize the top 10% of the graduation class as part of the graduation ceremony.

Next-step plans. Each student shall complete a next-step plan for each high school year pursuant to 22-13-1.1 NMSA 1978. A student shall develop and file an updated final next-step plan during the senior year and prior to graduation. The plan shall explain any differences from previous interim next-step plans, shall be filed with the principal of the student's high school and shall be signed by the student, the student's parent or guardian, and the student's guidance counselor or other school official charged with coursework planning for the student. For students with individualized education programs (IEPs), the transition plan substitutes for the next-step plan. Class of 2013 and thereafter, a parent may submit written permission on the Next-Step plan, completed during the sophomore year, for his or her child to complete a lesser math unit than Algebra 2.

Special Education

For students with disabilities, the Individualized Educational Program (IEP) team is responsible for determining whether a student with disabilities has completed a planned program of study making him/her eligible to receive a diploma. Graduation plans must be part of all IEP's beginning with the 8th grade IEP. Upon completion of a planned program of study the student will be awarded a diploma or, after July 1, 2010, a New Mexico diploma of excellence. A student may be awarded a diploma using any of the following programs of study:

1. A Standard program of study is based upon meeting or surpassing all requirements for graduation based upon New Mexico Standards for Excellence with or without reasonable modification of delivery and assessment methods. In addition, a student shall pass all sections of the current state graduation examination(s) under standard administration or with state-approved accommodations, and shall meet all other standard graduation requirements of the district.
2. A career readiness program of study is based upon meeting the State Board of Education's Career Readiness Standards with Benchmarks as defined in the IEP with or without reasonable modifications of delivery and assessment methods. In addition, the student shall take the current state graduation examination(s) under standard administration or with state-approved accommodations, and achieve a level of competency (LOC) pre-determined by the student's IEP team. The student shall earn at least the minimum number of credits required by the district for graduation through standard or alternative courses that address the employability and career development standards with benchmarks and performance standards, as determined by the IEP team. Course work shall include a minimum of four (4) credits of career development opportunities and learning experiences that may include any of the following: career readiness and vocational course work, work experience, community-based instruction, student service learning, job shadowing, mentoring or entrepreneurship related to the student's occupational choices.
3. An ability program of study was developed for students who have a significant cognitive, disability or severe mental health issues. The IEP goals and functional curriculum course work shall be based on the New Mexico standards with benchmarks and performance standards and employability and career development standards with benchmarks and performance standards. Students in this program of study shall earn the minimum number of credits or be provided equivalent educational opportunities required by the district, with course work individualized to meet the unique needs of the student through support of the IEP. In addition, a student shall take either the current state graduation examination(s) under standard administration or with state-approved accommodations, or the state-approved alternate assessment. The student shall achieve a level of competency pre-determined by the student's IEP team in the current graduation examination or the state-approved alternate assessment, and meet all other graduation requirements established by the IEP team.

The IEP team is responsible for determining whether the student has completed a planned program of study based on the student's strengths, interests, preferences, identified educational and functional needs and long-term educational or occupational goals, making the student eligible to receive either a diploma or a conditional certificate of transition. The district shall provide each student, who has an IEP and who graduates or reaches the maximum age for special education services, a summary of the student's academic achievement and functional needs and long-term educational; or occupational goals, making the student eligible to receive either a diploma or conditional certificate of transition. The district shall provide each student, who has an IEP and who graduates or reach maximum age for special education services, a summary the student's academic achievement and functional performance (SOP), which shall include recommendations on how to assist the student in meeting post-secondary goals.

Conditional certificate of transition.

A student who receives special education services may be granted a conditional certificate of transition (CCT) in the form of a continuing or transition IEP when:

1. The IEP team provides sufficient documentation and justification that the issuance of a conditional certificate of a transition for an individual student is warranted;
2. Prior to the student's projected graduation date, the IEP team provides prior written notice stating that the student will receive a conditional certificate of transition;
3. The district ensures that a conditional certificate of transition is not a program of study and does not end the student's right to FAPE;
4. The district ensures that a conditional certificate of transition entitles a student who has attended four years or more of high school to participate in graduation activities, and requires that the student continue receiving special education supports and services needed to obtain the high school diploma;
5. The district ensures that, prior to receiving a conditional certificate of transition, the student has a continuing (C) or transition (T) IEP;
6. The student's continuing or transition IEP outlines measures, resources and specific responsibilities for both the student and the district to ensure that the student receives a diploma.

A student who does not return to complete the program of study as outlined in the continuing or transition IEP will be considered as a dropout. A student who receives a conditional certificate of transition is eligible to continue receiving special education services until receipt of a diploma or until the end of the academic year in which the student becomes 22 years of age.

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1. Code of Federal Regulation 34 (34. CFR) Part 300
 2. New Mexico Statutes 1978 annotated Chapters 22 and 22a 1998 replacement Chapter 22 article 2 - 8.3
 3. New Mexico Statutes 1978 annotated Chapters 22 and 22a 1998 replacement Chapter 22 article 2 -8.4 Section D
 4. New Mexico Standards for Excellence 6 NMAC 6.30.2.10 Section 9 parts A & B, H & I
 5. New Mexico State Regulations 90-2 Amendment 2
 6. New Mexico State Regulations 90-2 Amendment A, D-1
 7. Title 6 ,Chapter 19, Part 7, 6.19.7.2 NMAC-N,1/30/09

Replaces Policy: IKF

POST SECONDARY PREPARATORY COURSES

Taking a college entrance exam and having a high grade point average will not guarantee student admission into a university. The student will also need to complete successfully a series of high school courses, which the universities believe will prepare them for university studies. In order to meet these requirements, it is **RECOMMENDED** that the student complete the following courses:

English	Four (4) Credits	English 1, 2, 3, and 4
Science	Four (4) Credits	Subjects such as Integrated Science, Biology, Chemistry, Physics, and Human Anatomy/Physiology
Mathematics	Four (4) Credits	Algebra I, Algebra II, and Geometry; Trigonometry and Calculus are highly recommended for students going into engineering
Social Sciences	Four (4) Credits	Principles of Democracy, United States History, World History, and New Mexico History
Foreign Language	Two (2) Credits	A minimum of two years of the same foreign language will fulfill this requirement
Fine Arts	One (1) Credit	Courses from the following fields: art, music, theater arts
Computer Technology	One (1) Credit	Course from Computer and Information Technology

*College entrance requirements vary. See your counselor for the college in which you are interested and/or secure a catalog directly for the college. Materials are available in the Counseling Center to help students research information and decide on a university. (Note: Students may be denied admission to the university of their choice if they have not taken the recommended high school courses that meet their admissions policy. **IT IS THE RESPONSIBILITY OF THE STUDENT AND HIS/HER PARENTS TO ENSURE THAT RECOMMENDED COURSES ARE COMPLETED.**)*

COURSE SELECTION

GUIDELINES

Courses will only be offered if requested by a minimum of 15 students. The Central Management Team (CMT) must approve exceptions.

- 1) Students will enroll in eight classes for the year. Seniors' schedules will be modified to meet their specific needs.
- 2) Students planning to complete graduation requirements in December (end of 1st semester) should contact their counselor by the end of the first grading period.
- 3) Schedule changes are only granted for the following reasons:
 - a) **The student is misplaced in a class and does not have the necessary skills or prerequisites.**
 - b) **The student has taken the course before and successfully completed it.**
 - c) **A senior needs a required course for graduation.**
 - d) **The principal will be the final authority in approving all schedule changes.**
- 4) In order to enroll in a course, students must have been enrolled in and successfully completed the prerequisites for that course in the previous semesters.
- 5) Students will be enrolled in required courses appropriate to their grade classification and ability.
- 6) Students not present the first day of school will forfeit their class choices during pre-registration. If classes are a forfeit, students may select classes from those that still remain open.
- 7) The absentee policy starts the **first** day of each semester. Students absent **10** consecutive days from the beginning of the school year will be dropped as "no-shows." Parents must re-enroll students who have been dropped because of 10 consecutive days of absence. Previous selection of classes is forfeited; students may select classes that still remain open.
- 8) No class fees will be refunded after student has been enrolled in a course 10 or more days.
- 9) Students who enroll in Gadsden Secondary Schools after the first six (6) weeks may **not** receive credit for that semester, pending appeal to the principal/designee. The only exception is a student transferring from another school in which they were enrolled immediately prior to registration at Gadsden Secondary Schools.

COURSE FEE SCHEDULE

This is the fee schedule for the following courses:

All Business/Technology Courses	\$10.00
All Family and Consumer Sciences Courses	\$10.00
All Fine and Performing Arts Courses	\$10.00
All Drivers Education Courses	\$ 5.00
All Science Courses	\$10.00
All Career Pathway Courses	\$10.00

COURSES WHICH CAN BE TAKEN MORE THAN ONCE FOR CREDIT

The chart below identifies courses which can be taken more than once and defines the maximum allowable enrollment opportunities and awarding of credit. **Students may not repeat any other courses for credit. NOTE: NO FRESHMEN ARE ALLOWED TO ENROLL IN MAJOR SPORTS; instead, they can only be enrolled in regular PE or Weight-Training.**

Title	Times / Credits	Title	Times / Credits
Gymnastics 1	4	Marching Band	4
Gymnastics 2	4	Concert Band	4
Girls Volleyball	4	Contemporary Band	4
Girls Soccer	4	Music-Mariachi 1	2
Girls Basketball	4	Music-Mariachi 2	2
Softball	4	Guitar	4
Boys Soccer	4	Piano	4
Boys Basketball	4	Music Theory	4
Football	4	Chorus - Concert Choir	4
Baseball	4	Vocal Ensemble	4
Fitn. Cond. Activ. - Athlete	4	Art Portfolio	4
Weight Training - Athlete	4	Expressive Movement	4
Athletic Training	4	Journalism - Newspaper	4
Library/AVC Aide	2	Journalism - Yearbook	4
Peer Counselor	4	Mass Media - Production	4
School Orientation (Upward Bound)	4	Introduction to ROTC 1	2
Technology Systems (PREPS)	4	Introduction to ROTC 2	2
Health for Parenting Teens (GRADS)	4	Military ROTC 1	2
Study Skills (DPA ONLY)	4	Military ROTC 2	2
ProStart 1	2	ProStart 2	2

GRADES AND GPA

**GRADING SYSTEM FOR SENIOR HIGH SCHOOL
(A7/1/85; R8/27/96)**

- 1) The teacher will assess all students and record all grades numerically. No grades will be represented by dots, dashes, stars or other non-numerical symbols.
- 2) Grades are determined on the basis of total possible points for grading period; curving of grades is not permitted.
- 3) Each session will have two terms and each term grade will be calculated numerically by averaging all grades.
- 4) A percentage grade will be derived from the numerical grade and will be assigned a letter equivalent based upon the following scale:

90-100	A
80-89	B
70-79	C
60-69	D
50-59	F
- 5) Honors courses/AP courses/Dual Credit courses will be awarded as follows:

90-100 + 5 points
80-89 + 5 points
70-79 + 5 points
60-69 No extra points
50-59 No extra points
- 6) The session average for all **year-long** or **A/B Block Courses** will be determined by the following percentages:

40% - Average of 1 st and 2 nd 9 weeks grades
10% - Fall semester Exam
40% - Average of 3 rd and 4 th 9 weeks grades
10% - Spring Semester Exam
- 7) The session average for all **4 X 4 Block Courses** will be determined by the following percentages:

40% - 1 st 9 Weeks
40% - 2 nd 9 Weeks
20% - Final Exam
- 8) Student progress will be assessed frequently and reported to the student. It is required that, at a minimum, students' parents will be notified of student progress at regular intervals prior to the end of a semester.

9) The weight of various assignments during the **semester** will be left to the discretion of the teacher. However, the weighing of assignments must be logical, fair, and described in the classroom procedures so the students are aware of the system being used.

10) Grades will reflect academic performance skill levels. Grades will absolutely not be used as disciplinary censure. **GPA will be determined by the total grade points earned. Grade points will be figured based upon the credited courses.**

CLASS RANKING REQUIREMENTS

(based on a numerical system, as indicated above)

In order to qualify for ranking in the top 10% of the graduating senior class, a student must complete their entire senior year (9 months) in the Gadsden Independent School District. To be eligible for such ranking, students who wish to graduate in less than four years, or those transferring from another district, **must also** complete their entire senior year in Gadsden.

HONORS COURSES

The courses listed below are those courses that have been determined to be honors courses, and as such they will be awarded honors points, given for letter grades of A, B, or C only. Entry into these courses is determined by prerequisites, invitation, and teacher/counselor recommendation.

Honors English 1	Honors Algebra 2	Honors Chemistry—Adv. Studies	Honors Spanish 4
Honors English 2	Honors Geometry	Honors Physics—Adv. Studies	Honors French 3
Honors English 3	Honors Trigonometry	Honors Anatomy/Physiology 1 & 2	Honors Government
Honors English 4	Honors Integr. Science 1 & 2	Honors Sports Physiology 2	Honors U.S. History
Honors Algebra 1	Honors Biology—Adv. Studies	Honors Spanish 3	Honors World History

ADVANCED PLACEMENT COURSES

The Advanced Placement Courses listed below are the courses that have been designed to meet the rigorous academic requirements of the Advanced Placement (AP) Program. The AP Program is a cooperative educational endeavor between secondary schools and colleges and universities. Students may elect to take the AP examination in each AP course they have successfully completed in order to demonstrate college-level achievement. Upon passing the exam, the student can receive college or university credit for the course. These courses will also be awarded points on a five-point scale when determining grade-point average.

AP Art	AP Physics	AP Statistics
AP Calculus AB	AP English Comp/Lit	AP French Language
AP Biology	AP Spanish Language	AP United States History
AP Chemistry	AP Spanish Literature	AP World History

AP courses do not substitute for required courses.

Dual Credit

What is Dual Credit? Dual Credit courses are college level courses offered by Dona Ana Community College. GISD student who enroll in Dual Credit courses have the opportunity to earn college credit and high school elective credits at the same time. Course topics cover a wide range of subjects and materials. Students enrolled in Dual Credit are subject to the rules, guidelines, and calendars of DACC.

Who is eligible for Dual Credit? Any high school student within the Gadsden Independent School District who has a 70% GPA, parent permission, and good attendance may be eligible for Dual Credit.

How to participate in Dual Credit: Student must take the COMPASS placement exam and pass 2 or more of the following:

- Math = CCDR 114 N
- Reading = CCDR 105N (55)
- Writing = CCDE 110N (34)

Or achieve a composite score on the ACT of 15.

Students must also complete the following:

- Dual Credit Request Form
- NMSU Application for Undergraduate Admission form
- Transportation Agreement
- Additional permission and/or agreement forms for individualized courses as set forth by DACC

Where are classes offered: Dual credit classes for Gadsden Independent School District Students are offered at the Gadsden and Sunland Park DACC branches.

When are Dual Credit courses offered: Dual Credit courses are offered each fall and spring semesters and additional courses may be available during the summer sessions. All courses follow the NMSU and DACC academic Calendar

Grades: Grades for Dual Credit Courses are based on the 5 point scale. Grades will be transmitted twice each semester (mid-term and final) from the DACC Dual Credit Director to the GISD Coordinator for Career Technical Education.

Transportation: GISD does provide some busing to the 2 DACC centers located within the Gadsden District. Students who hold a valid driver's license and have completed the Transportation Agreement are eligible to provide their own transportation to and from their Dual Credit Classes.

OTHER FORMS OF COURSEWORK

INDEPENDENT STUDY PROGRAM

This program is designed for those students wishing to take a course that could not be justified due to the small number of student requests, or for those students wishing to add a course of interest outside of the regular schedule of classes.

1. **Students will not be allowed to take any core subject required for graduation through the Independent Study course number.** The core subjects are listed on page 6 under Graduation Requirements, letters A-G.
2. All independent study courses must have approval from the school principal, counselor, and teacher of record.
3. The number of credits earned is contingent upon the number of hours the student is engaged in study.
4. The student must complete all Independent Study course work assigned and the teacher of record must submit grades for these students during the time that grades for all other courses are due.
5. Each student must sign a contract of study that has been approved and signed by the school's teacher of record, counselor, and principal. The contract must include the following:
 - a. Course content should include 180 hours of engagement for one (1) credit.
 - b. Evaluation methods and method of grade determination must be specified.

CORRESPONDENCE, ONLINE, OR EXTENSION STUDY

Credits earned through correspondence, online, or extension study may be accepted if such credits are from schools approved or accredited by the National Home Study Council, the State Board of Education of the state in which they are located, or by a college or university that is regionally accredited for such purposes.

All correspondence, online, or extension study must have prior approval and verification of accreditation of the offering school, from the school counselor, and must have the principal's approval prior to correspondence or extension study registration.

DESERT PRIDE ACADEMY

Desert Pride Academy offers an educational environment that provides the flexibility and support needed for non-traditional students to complete their high school program. The academic focus is on the core subjects of language arts, mathematics, social studies, and science, in addition to a limited number of electives that allow for an individualized self-paced program. The student population is composed of dropout recovery, those over-aged, and those referred for long-term suspension.

Criteria for Admission

1. Student must be 16 – 21 years of age.
2. Student must be at least one school year behind in their academic credits.
3. Student must be recommended by the superintendent or high school principal, and/or have been recommended for long-term suspension, and/or have dropped out of school, and/or have been released from a correctional institution.
4. Students who meet the criteria for admission and are recommended by an I.E.P. committee may also be accepted for admission.
5. Students must complete an application, interview, and be approved by the Desert Pride Academy principal.
6. Students will be accepted for admission on a per-semester basis.

Process for Admission

1. Student must meet the criteria for admission.
2. Student will be dropped from their permanent high school.
3. Student will enroll at Desert Pride Academy for one semester

Requirements for Continued Enrollment

1. Student must have a good attendance record.
2. Student must attain eighty percent mastery in each academic class.
3. Student must pass eighty percent of all academic classes attempted.
4. Student must demonstrate good behavior; show respect, and positive attitude.
5. Student must be approved by Desert Pride Academy (administration, teachers, and staff) to be accepted for subsequent semesters.

Curriculum

1. The student must be in attendance for a semester, and/or master ninety percent of the academic benchmarks per subject, to receive one academic credit per class.
2. The student will follow a self-paced curriculum individualized to his/her academic needs.
3. The student, with the exception of graduating seniors, may earn a maximum of six credits per semester.
4. The student will meet the state requirements for a high school diploma.

GATEWAY TO CAREERS**ONE-STOP CAREER CENTERS**

Located at Chaparral High School, Gadsden High School, and Santa Teresa High School are the One-Stop Career Centers, designed to provide the following services to students and the community:

- Assist in the building of a career portfolio, including a resume.
- Provide career guidance, college planning, access to current job opportunities in the area and nationwide
- Work permits issued for students under 16 (must have proof of social security number)
- Resources, software, and computers available for resume writing, job search, interviewing skills, work ethics, and career and college Internet searches
- Career readiness assistance
- Information on current labor market and future job demands
- Referrals to local community service providers

The One Stop Career Centers offer the following services to teachers:

- Access to classroom activities related to career readiness standards
- Assistance in facilitating resume writing, interviewing skills, job applications, career investigation and college/financial aid research
- Staff development on a variety of topics, including financial aid, college research, career exploration, and more
- Provide teachers with current labor market information and employment projections for the future

CLASS OF 2012 AND THEREAFTER	
PLANNING FOR GRADUATION AND A CAREER: CHECKLIST FOR STUDENTS AND PARENTS	
FRESHMEN	
	Pre-register as 8 th graders for High School after familiarizing yourself with graduation requirements and elective options.
	Create career pathway and four-year plan during freshman year.
	Explore post-secondary schools and financial aid options.
	Build career portfolio, including résumé.
SOPHOMORE	
	Register for courses by pathway
	Check progress and update four-year plan and career pathway.
	Explore post-secondary schools and financial aid options.
	Update career portfolio, including résumé.
JUNIOR	
	Register for courses by pathway
	Check progress and update four-year plan and career pathway.
	Take the PSAT if preparing for college (optional).
	Explore post-secondary schools and scholarship options.
	Take applicable college entrance exams, such as ACT and SAT.
	Consider taking the ASVAB for career planning.
	Attend College/Career Days
	Pass SBA for graduation requirements
	Update career portfolio, including résumé.
SENIOR	
	Register for courses by pathway
	Check progress and update four-year plan and career pathway.
	Pass SBA for graduation requirements
	Meet all course and credit requirements for graduation.
	Explore and finalize post-secondary schools and scholarship options.
	Take applicable college entrance exams, such as ACT and SAT.
	Consider taking the ASVAB for career planning.
	Attend College/Career Days
	Complete post-secondary school applications within deadlines.
	Complete scholarship applications within deadlines.
	Attend financial aid workshop and complete FASFA form in January (parents must have completed income tax return).
	Finalize career portfolio, including résumé.

CLASS OF 2010-2011	
PLANNING FOR GRADUATION AND A CAREER: CHECKLIST FOR STUDENTS AND PARENTS	
FRESHMEN	
	Pre-register as 8 th graders for High School after familiarizing yourself with graduation requirements and elective options.
	Create career pathway and four-year plan during freshman year.
	Explore post-secondary schools and financial aid options.
	Build career portfolio, including résumé.
SOPHOMORE	
	Register for courses by pathway
	Check progress and update four-year plan and career pathway.
	Explore post-secondary schools and financial aid options.
	Pass 6 portions of the NMHSCE
	Update career portfolio, including résumé.
JUNIOR	
	Register for courses by pathway
	Check progress and update four-year plan and career pathway.
	Take the PSAT if preparing for college (optional).
	Explore post-secondary schools and scholarship options.
	Take applicable college entrance exams, such as ACT and SAT.
	Consider taking the ASVAB for career planning.
	Attend College/Career Days
	Update career portfolio, including résumé.
SENIOR	
	Register for courses by pathway
	Check progress and update four-year plan and career pathway.
	Meet all course and credit requirements for graduation.
	Explore and finalize post-secondary schools and scholarship options.
	Take applicable college entrance exams, such as ACT and SAT.
	Consider taking the ASVAB for career planning.
	Attend College/Career Days
	Complete post-secondary school applications within deadlines.
	Complete scholarship applications within deadlines.
	Attend financial aid workshop and complete FASFA form in January (parents must have completed income tax return).
	Finalize career portfolio, including résumé.

NEXT STEP PLAN

Student Name: _____	_____	Student ID # _____
Home Address: _____	City, State, Zip: _____	_____
Parent/Guardian Name: _____	Phone Number: _____	Projected Graduation Date: _____

STUDENT GOALS:

1. What are the student's long-term career interest goals?
9th _____
10th _____
11th _____
12th _____
2. What academic goals does the student have?
9th _____
10th _____
11th _____
12th _____
3. What extra-curricular activities does the student participate in or plan to participate in?
9th _____
10th _____
11th _____
12th _____
4. What are the student's plans for post-secondary training and learning?
9th _____
10th _____
11th _____
12th _____
5. What are the student's personal and/or social goals?
9th _____
10th _____
11th _____
12th _____

NEXT STEP: PLANNING AND LINKAGE

Student Name: _____ Student ID # _____

What does the student need in order to prepare for desired post-school outcomes?

<i>Student Needs</i>	<i>Activities and Strategies</i>				
	9th Grade	10th Grade	11th Grade	12th Grade	
Academic Support and/or Study Skills	Tutoring	Tutoring	Tutoring	Tutoring	
	Study Group	Study Group	Study Group	Study Group	
	Other	Other	Other	Other	
Extracurricular Experiences	Student Government	Student Government	Student Government	Student Government	
	Athletics	Athletics	Athletics	Athletics	
	Other	Other	Other	Other	
Exposure to Postsecondary Education and Career Options	Concurrent Enrollment	Concurrent Enrollment	Concurrent Enrollment	Concurrent Enrollment	
	College Tours	College Tours	College Tours	College Tours	
	Job Shadowing	Job Shadowing	Job Shadowing	Job Shadowing	
	Other	Other	Other	Other	
Family and/or Social Support	Parent Involvement	Parent Involvement	Parent Involvement	Parent Involvement	
	Students Leadership	Students Leadership	Students Leadership	Students Leadership	
	Mentoring	Mentoring	Mentoring	Mentoring	
Required Entrance Exams	Assessment/Testing	Assessment/Testing	Assessment/Testing	Assessment/Testing	
	Career Assessment	Career Assessment	Career Assessment	Career Assessment	
	Academic Assessment	Academic Assessment	Academic Assessment	Academic Assessment	
	Other	Other	Other	Other	
Other					

Note: "No student shall be promoted from the ninth, tenth, or eleventh grade who has not developed and/or updated his or her interim next-steps plan within sixty days prior to the end of each school year."

Career Cluster: _____

Career Pathway: _____

**PLAN OF STUDY
CLASS OF 20__**

Student Name _____ ID #: _____ Date _____

This plan of study should serve as a guide, along with other career planning materials, as you continue your career path. Courses listed within this plan are only **recommended** coursework and should be individualized to meet each student's educational and career goals. All plans should meet high school graduation requirements as well as college entrance requirements.

High School	9 th Grade	Credits Earned	10 th Grade	Credits Earned	11 th Grade	Credits Earned	12 th Grade	Credits Earned
	English 1		English 2		English 3		English 4	
	Algebra 1		Geometry		Algebra 2		Career Cluster Elective *Additional Math	
	Integrated Science 1		Integrated Science 2		Integrated Science 3: Biology, Chemistry or Physics		Career Cluster Elective	
	Government/Economics		U.S. History/Geography		World History/Geography		NM History/Geography	
	Foreign Language 1		Foreign Language 2		Business Education Course or 3 rd Level of a Foreign Language		Career Cluster Elective	
	Physical/Health Education I		Career Cluster Elective		Career Cluster Elective		Career Cluster Elective	
	Career Cluster Elective		Career Cluster Elective		Career Cluster Elective		Career Cluster Elective	
	Career Cluster Elective		Career Cluster Elective		Career Cluster Elective		Career Cluster Elective	
	Course Substitution(s)		Course Substitution(s)		Course Substitution(s)		Course Substitution(s)	
Beginning with freshman class of 2008-2009: In addition to required courses, SBA (Student Based Assessment) must be passed in order to graduate. Beginning with freshmen class of 2009-2010: 4 credits in Math and an AP Course, Honors Course, Dual Credit Course, or an Online Course will be required to graduate.								
Post-Secondary	Community College		College/University			Military, Job, or Other		
	<input type="checkbox"/>		<input type="checkbox"/>			<input type="checkbox"/>		

Parent/Guardian Signature _____	Date _____	Student Signature _____	Date _____	Advisor Signature _____	Date _____
Parent/Guardian Signature _____	Date _____	Student Signature _____	Date _____	Advisor Signature _____	Date _____
Parent/Guardian Signature _____	Date _____	Student Signature _____	Date _____	Advisor Signature _____	Date _____
Parent/Guardian Signature _____	Date _____	Student Signature _____	Date _____	Advisor Signature _____	Date _____

Post High School/Final Next Step Plan
Después de escuela preparatoria/El plan final del Paso Siguiente

Student Name: <i>Nombre del estudiante</i>	_____	Student ID # <i># de identificación</i>	_____
Home Address: <i>Dirección</i>	_____	City, State, Zip: <i>Ciudad, Estado, Zona Postal</i>	_____
Parent/Guardian Name: <i>Nombre del padre/Tutor</i>	_____	Phone Number: <i>Número de teléfono</i>	_____
		Projected Graduation Date: <i>Fecha de graduación proyectada:</i>	_____

What is the student's long-term career interest? ¿Cuál es el interés del estudiante en su carrera de largo plazo?

What does the student plan to do after high school? ¿Qué espera hacer el estudiante después de la escuela preparatoria?

Check appropriate box <i>Marca la caja apropiada.</i>	Write a narrative (descriptive statement) about your plans in the space provided. Escribe un narrativo (una oración descriptiva) explicando sus planes en el espacio de abajo.
<input type="checkbox"/> Bachelor Degree Program <i>Programa Bachiller</i>	_____
<input type="checkbox"/> Public College/University (name) <i>Colegio/Universidad Público (nombre)</i>	_____
<input type="checkbox"/> Private College/University (name) <i>Colegio/Universidad Privado (nombre)</i>	_____
<input type="checkbox"/> Associate Degree Program <i>Programa de Curso Asociado</i>	_____
<input type="checkbox"/> Trade Certificate Program <i>Programa de certificación técnico</i>	_____
<input type="checkbox"/> Military Service (branch) <i>Servicio militar</i>	_____
<input type="checkbox"/> Work/Study/Apprenticeship Program <i>Programa de trabajar/estudiar/aprendizaje</i>	_____
<input type="checkbox"/> On-the-Job Training <i>Entrenamiento en el trabajo</i>	_____
<input type="checkbox"/> Work <i>Trabajo</i>	_____
<input type="checkbox"/> Other <i>Otro</i>	_____

How does the student intend to accomplish these goals? ¿Cómo espera el estudiante cumplir sus metas?

Final Next Step Plan Signatures (prior to high school graduation)/ Firmas del plan final del Paso Siguiente (antes de la graduación de la escuela preparatoria)

Student: <i>Estudiante</i>	_____	Date: <i>Fecha:</i>	_____	Comments/Comentarios:	_____
Parent/Guardian: <i>Padre/Tutor:</i>	_____	Date: <i>Fecha:</i>	_____		
Counselor or other school official: <i>Consejero u otro oficial de la escuela:</i>	_____	Date: <i>Fecha:</i>	_____		
Other:	_____	Date:	_____		
Otro:	_____	Fecha:	_____		

	<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>Pathways</p>	<p>Sample Career Specialties/Occupations</p>
<p>Food Products and Processing Systems</p>	<p>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 Specialist</p>
<p>Plant Systems</p>	<p>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 Managers • Growers • Farmers • Ranchers</p>
<p>Animal Systems</p>	<p>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</p>
<p>Power, Structural & Technical Systems</p>	<p>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</p>
<p>Natural Resources Systems</p>	<p>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</p>
<p>Environmental Service Systems</p>	<p>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</p>
<p>Agribusiness Systems</p>	<p>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</p>
<p>Cluster Knowledge and Skills</p> <p> <input type="checkbox"/> Academic Foundations <input type="checkbox"/> Communications <input type="checkbox"/> Problem Solving and Critical Thinking <input type="checkbox"/> Information Technology Applications <input type="checkbox"/> Systems <input type="checkbox"/> Safety, Health and Environmental <input type="checkbox"/> Leadership and Teamwork <input type="checkbox"/> Ethics and Legal Responsibilities <input type="checkbox"/> Employability and Career Development <input type="checkbox"/> Technical Skills </p>	


	<p>Careers in designing, planning, managing, building and maintaining the built environment.</p>
<p>Pathways</p>	<p>Sample Career Specialties/Occupations</p>
<p>Design/ Pre-Construction</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>Construction</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>

Maintenance/Operations	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
Cluster Knowledge and Skills	
<input type="checkbox"/> Academic Foundations <input type="checkbox"/> Communications <input type="checkbox"/> Problem Solving and Critical Thinking <input type="checkbox"/> Information Technology Applications <input type="checkbox"/> Systems <input type="checkbox"/> Safety, Health and Environmental <input type="checkbox"/> Leadership and Teamwork <input type="checkbox"/> Ethics and Legal Responsibilities <input type="checkbox"/> Employability and Career Development <input type="checkbox"/> Technical Skills	


	Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism.
Pathways	Sample Career Specialties/Occupations
Audio and Video Technologies	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
Printing Technologies	Graphics and Printing Equipment Operators • Lithographers and Platemakers • Computer Typography and Composition Equipment Operators
Visual Arts	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
Performing Arts	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
Journalism and Broad Casting	Audio/Video Operations • Control Room Technician • Station Managers • Radio & TV Announcers • Publishers • Editors • Journalists • Reporters - Print, Broadcast, Other
Telecommunications Technologies	Telecommunication Technicians • Telecommunication Equipment • Cable, Line Repairers/Technologies Installers • Telecommunication Computer Programmers • Systems Analysts
Cluster Knowledge and Skills	
<input type="checkbox"/> Academic Foundations <input type="checkbox"/> Communications <input type="checkbox"/> Problem Solving and Critical Thinking <input type="checkbox"/> Information Technology Applications <input type="checkbox"/> Systems <input type="checkbox"/> Safety, Health and Environmental <input type="checkbox"/> Leadership and Teamwork <input type="checkbox"/> Ethics and Legal Responsibilities <input type="checkbox"/> Employability and Career Development <input type="checkbox"/> 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
Management	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
Business Financial Management & Accounting	Accountants • Accounting Clerk • Accounting Supervisor • Adjuster • Adjustment Clerk • Assistant Treasurer • Management 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
Human Resources	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

Business Analysis	Systems Analyst · E-Commerce Analyst · Requirements Specialist · Marketing Analyst · Operations Research Analyst · Business Consultant · Business Analyst · Budget Analyst · Product Manager · Price Analyst
Marketing	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 Administrative Assistant · 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
Cluster Knowledge and Skills	
<input type="checkbox"/> Academic Foundations <input type="checkbox"/> Communications <input type="checkbox"/> Problem Solving and Critical Thinking <input type="checkbox"/> Information Technology Applications <input type="checkbox"/> Systems <input type="checkbox"/> Safety, Health and Environmental <input type="checkbox"/> Leadership and Teamwork <input type="checkbox"/> Ethics and Legal Responsibilities	


	Planning, managing and providing education and training services, and related learning support services.
Pathways	Sample Career Specialties/Occupations
Administration and Administrative Support	<input type="checkbox"/> Superintendents, Principals, Administrators <input type="checkbox"/> Supervisors and Instructional And Coordinators <input type="checkbox"/> Education Researchers, Test Measurement Specialists <input type="checkbox"/> College Presidents, Deans <input type="checkbox"/> Curriculum Developers <input type="checkbox"/> Instructional Media Designers
Professional Support Services	<input type="checkbox"/> Psychologists- Clinical, Developmental, Social <input type="checkbox"/> Social Workers <input type="checkbox"/> Parent Educators <input type="checkbox"/> Counselors <input type="checkbox"/> Speech-Language Pathologists and Audiologists
Teaching/Training	Preschool, Kindergarten Teachers, Aids <input type="checkbox"/> Elementary Teachers, Aids <input type="checkbox"/> Secondary Teachers, Aids <input type="checkbox"/> Special Education Teachers, Aids <input type="checkbox"/> College/University Lecturers, Professors <input type="checkbox"/> Human Resource Trainers <input type="checkbox"/> Physical Trainers <input type="checkbox"/> Coaches <input type="checkbox"/> Child Care Directors <input type="checkbox"/> Child Care Workers <input type="checkbox"/> Child Life Specialist <input type="checkbox"/> Nanny <input type="checkbox"/> Early Childhood Teachers and Assistants <input type="checkbox"/> Teacher Aids <input type="checkbox"/> Group Workers and Assistants
Cluster Knowledge and Skills	
<input type="checkbox"/> Academic Foundations <input type="checkbox"/> Communications <input type="checkbox"/> Problem Solving and Critical Thinking <input type="checkbox"/> Information Technology Applications <input type="checkbox"/> Systems <input type="checkbox"/> Safety, Health and Environmental <input type="checkbox"/> Leadership and Teamwork <input type="checkbox"/> Ethics and Legal Responsibilities <input type="checkbox"/> Employability and Career Development <input type="checkbox"/> Technical Skills	

	Planning, services for financial and investment planning, banking, insurance, and business financial management.
Pathways	Sample Career Specialties/Occupations
Financial & Investment Planning	Personal Financial Advisor • Tax Preparation • Sales Agents, Securities, Commodities Investment Advisors • Brokerage Clerk (Assistant) • Development Officers
Business Financial Management	Accountants • Financial Analysts • Treasurers, Controllers and Chief Revenue Agents • Auditor • Economists • Tax Examiners • Collectors • Revenue Agent
Banking & Related Services	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 • Re-possession Agents • Network Services • Operations Managers • Debt Counselors
Insurance Services	Claims Agents, Examiners, and Investigators • Claims Clerks • Insurance Appraisers • Underwriters • Actuaries • Sales Agents • Customer Service Agents • Processing Clerks • Direct Marketing
Cluster Knowledge and Skills	
<input type="checkbox"/> Academic Foundations <input type="checkbox"/> Communications <input type="checkbox"/> Problem Solving and Critical Thinking <input type="checkbox"/> Information Technology Applications <input type="checkbox"/> Systems <input type="checkbox"/> Safety, Health and Environmental <input type="checkbox"/> Leadership and Teamwork <input type="checkbox"/> Ethics and Legal Responsibilities <input type="checkbox"/> Employability and Career Development <input type="checkbox"/> Technical Skills	

 Government & Public Administration	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
Pathways	Sample Career Specialties/Occupations
Governance	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
National Security	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
Foreign Service	Ambassador • Foreign Service Officer • Consular Officer • Administrative Officer • Political Officer • Economic Officer • Diplomatic Courier
Planning	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
Revenue and Taxation	Assessor • Tax Auditor • Internal Revenue Investigator • Revenue Agent/Officer • Tax Examiner/Assistant /Clerk • Inspector General • Tax Attorney • Tax Policy Analyst
Regulation	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
Public Management and Administration	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	
<input type="checkbox"/> Academic Foundations <input type="checkbox"/> Communications <input type="checkbox"/> Problem Solving and Critical Thinking <input type="checkbox"/> Information Technology Applications <input type="checkbox"/> Systems <input type="checkbox"/> Safety, Health and Environmental <input type="checkbox"/> Leadership and Teamwork <input type="checkbox"/> Ethics and Legal Responsibilities <input type="checkbox"/> Employability and Career Development <input type="checkbox"/> Technical Skills	

 Health Science	Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development
Pathways	Sample Career Specialties/Occupations
Therapeutic Services	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 •
Diagnostics Services	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
Health Informatics	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
Support Services	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
Cluster Knowledge and Skills	
<input type="checkbox"/> Academic Foundations <input type="checkbox"/> Communications <input type="checkbox"/> Problem Solving and Critical Thinking <input type="checkbox"/> Information Technology Applications <input type="checkbox"/> Systems <input type="checkbox"/> Safety, Health and Environmental <input type="checkbox"/> Leadership and Teamwork <input type="checkbox"/> Ethics and Legal Responsibilities <input type="checkbox"/> Employability and Career Development <input type="checkbox"/> Technical Skills	

	<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>Pathways</p>	<p>Sample Career Specialties/Occupations</p>
<p>Restaurants and Food/Beverage Services</p>	<p><input type="checkbox"/> General Manager <input type="checkbox"/> Food & Beverage Manager <input type="checkbox"/> Kitchen Manager <input type="checkbox"/> Catering & Banquets Manager <input type="checkbox"/> Service Manager <input type="checkbox"/> Maitre'd <input type="checkbox"/> Restaurant <input type="checkbox"/> Owner <input type="checkbox"/> Baker <input type="checkbox"/> Brewer <input type="checkbox"/> Caterer <input type="checkbox"/> Executive Chef <input type="checkbox"/> Cook <input type="checkbox"/> Pastry & Specialty Chef <input type="checkbox"/> Bartender <input type="checkbox"/> Restaurant Server <input type="checkbox"/> Banquet Server <input type="checkbox"/> Cocktail Server <input type="checkbox"/> Banquet Set-Up Employee <input type="checkbox"/> Bus Person <input type="checkbox"/> Room Service Attendant <input type="checkbox"/> Kitchen Steward <input type="checkbox"/> Counter Server <input type="checkbox"/> Wine Steward <input type="checkbox"/> Host</p>
<p>Lodging</p>	<p><input type="checkbox"/> Front Office Manager <input type="checkbox"/> Executive Housekeeper <input type="checkbox"/> Director of Sales & Marketing <input type="checkbox"/> Chief Engineer <input type="checkbox"/> Director of Human Resources <input type="checkbox"/> Rooms Division Manager <input type="checkbox"/> Director of Security <input type="checkbox"/> Controller <input type="checkbox"/> Food & Beverage Director <input type="checkbox"/> Resident Manager <input type="checkbox"/> Director of Operations <input type="checkbox"/> General Manager <input type="checkbox"/> Regional Manager <input type="checkbox"/> Quality Assurance Manager <input type="checkbox"/> Corporate Management <input type="checkbox"/> Lodging Management <input type="checkbox"/> Owner/Franchisee Administrative Support <input type="checkbox"/> Uniformed Services Support <input type="checkbox"/> Communications Supervisor <input type="checkbox"/> Front Desk Supervisor <input type="checkbox"/> Reservations Supervisor <input type="checkbox"/> Laundry Supervisor <input type="checkbox"/> Room Supervisor <input type="checkbox"/> Bell Captain <input type="checkbox"/> Shift Supervisor <input type="checkbox"/> Sales Professional <input type="checkbox"/> Night Auditor <input type="checkbox"/> Front Desk Employee <input type="checkbox"/> Valet Attendant <input type="checkbox"/> Bell Attendant <input type="checkbox"/> Door Attendant <input type="checkbox"/> Concierge <input type="checkbox"/> PBX Operator <input type="checkbox"/> Reservationists <input type="checkbox"/> Guestroom Attendant <input type="checkbox"/> Public Space Cleaner <input type="checkbox"/> Laundry Attendant <input type="checkbox"/> House Person <input type="checkbox"/> Maintenance Worker <input type="checkbox"/> Van Driver</p>
<p>Travel & Tourism</p>	<p><input type="checkbox"/> Executive Director <input type="checkbox"/> Assistant Director <input type="checkbox"/> Director of Tourism Development <input type="checkbox"/> Director of Membership Development <input type="checkbox"/> Director of Communications <input type="checkbox"/> Director of Visitor Services <input type="checkbox"/> Director of Sales <input type="checkbox"/> Director of Marketing and Advertising <input type="checkbox"/> Director of Volunteer Services <input type="checkbox"/> Director of Convention and Visitors Bureau <input type="checkbox"/> Market Development Manager <input type="checkbox"/> Group Sales Manager <input type="checkbox"/> Events Manager <input type="checkbox"/> Sales Manager <input type="checkbox"/> Destination Manager <input type="checkbox"/> Convention Services Manager <input type="checkbox"/> Heritage Tourism Developer <input type="checkbox"/> Travel Agent (Commercial & Vacation) <input type="checkbox"/> Event Planner <input type="checkbox"/> Meeting Planner <input type="checkbox"/> Special Events Producer <input type="checkbox"/> Nature Tourism Coordinator <input type="checkbox"/> Tour and Travel Coordinator <input type="checkbox"/> Tourism Marketing Specialist <input type="checkbox"/> Transportation Specialist <input type="checkbox"/> Welcome Center Supervisor <input type="checkbox"/> Visitor Center Counselor <input type="checkbox"/> Tourism Assistant <input type="checkbox"/> Executive Assistant <input type="checkbox"/> Tour Guide <input type="checkbox"/> Tour Operator <input type="checkbox"/> Motor Coach Operator <input type="checkbox"/> Tour and Ticket Reservationists <input type="checkbox"/> Interpreter</p>
<p>Recreation, Amusements & Attractions</p>	<p><input type="checkbox"/> Club Manager <input type="checkbox"/> Club Assistant Manager <input type="checkbox"/> Club Instructor <input type="checkbox"/> Club Equipment & Facility Maintenance <input type="checkbox"/> Club Scheduler <input type="checkbox"/> Club Event Planner <input type="checkbox"/> Club Membership Developer <input type="checkbox"/> Parks & Gardens Director <input type="checkbox"/> Parks & Gardens Activity Coordinator <input type="checkbox"/> Parks & Gardens Access Management <input type="checkbox"/> Parks & Gardens Safety & Security <input type="checkbox"/> Parks & Garden Ranger <input type="checkbox"/> Resort Trainer <input type="checkbox"/> Resort Instructor <input type="checkbox"/> Resort Equipment Maintenance <input type="checkbox"/> Resort Scheduler, Manager, Supervisor, Dealer, Slot Supervisor and Maintenance and Security & Safety <input type="checkbox"/> Fairs/Festival Event Planner, supervisor, manager, promotional developer <input type="checkbox"/> Theme Parks/Amusement Parks Resale Department Manager, Retail Manager, Ride Operations Manager, Group Events Manager <input type="checkbox"/> Family Centers Manager, Equipment Operator/Maintenance <input type="checkbox"/> Historical/Cultural/Architectural Ecological Industrial Sites Guides/Ranger and Exhibit Developer <input type="checkbox"/> Museums/Zoos/Aquariums Docent, Animal Trainer and Handler and Exhibit Developer</p>
<p>Cluster Knowledge and Skills</p>	
<p><input type="checkbox"/> Academic Foundations <input type="checkbox"/> Communications <input type="checkbox"/> Problem Solving and Critical Thinking <input type="checkbox"/> Information Technology Applications <input type="checkbox"/> Systems <input type="checkbox"/> Safety, Health and Environmental <input type="checkbox"/> Leadership and Teamwork <input type="checkbox"/> Ethics and Legal Responsibilities <input type="checkbox"/> Employability and Career Development <input type="checkbox"/> Technical Skills</p>	

	<p>Preparing individuals for employment in career pathways that relate to families and human needs.</p>
<p>Pathways</p>	<p>Sample Career Specialties/Occupations</p>
<p>Early Childhood Development & Services</p>	<p><input type="checkbox"/> Directors <input type="checkbox"/> Childcare Facilities Assistant Directors <input type="checkbox"/> Childcare Facilities <input type="checkbox"/> Elementary School Counselors <input type="checkbox"/> Preschool Teachers Educators for Parents <input type="checkbox"/> Nannies <input type="checkbox"/> Teachers' Assistants <input type="checkbox"/> Childcare Assistants/Workers</p>
<p>Counseling & Mental Health Services</p>	<p><input type="checkbox"/> Industrial-Organizational Psychologists <input type="checkbox"/> Sociologists <input type="checkbox"/> School Counselors/Psychologists <input type="checkbox"/> Substance Abuse and Behavioral Disorder Counselors <input type="checkbox"/> Mental Health Counselors <input type="checkbox"/> Vocational Rehabilitation Counselors <input type="checkbox"/> Career Counselors <input type="checkbox"/> Employment Counselors <input type="checkbox"/> Residential Advisors <input type="checkbox"/> Marriage, Child and Family Counselors</p>
<p>Family & Community Services</p>	<p><input type="checkbox"/> Community Service Directors <input type="checkbox"/> Adult Day Care Coordinators <input type="checkbox"/> Coordinators of Volunteers <input type="checkbox"/> Licensed Professional Counselors <input type="checkbox"/> Religious Leaders Directors, Religious Activities/Education Programs <input type="checkbox"/> Human Services Workers <input type="checkbox"/> Social Services Workers <input type="checkbox"/> Vocational Rehabilitation <input type="checkbox"/> Employment Counselors <input type="checkbox"/> Career Counselors <input type="checkbox"/> Vocational Rehabilitation Service Workers <input type="checkbox"/> Leisure Activities Coordinators <input type="checkbox"/> Dieticians <input type="checkbox"/> Geriatric Service Workers <input type="checkbox"/> Adult Day Care Workers <input type="checkbox"/> Residential Advisors <input type="checkbox"/> Emergency and Relief Workers <input type="checkbox"/> Community Food Service Workers <input type="checkbox"/> Community Housing Service Workers <input type="checkbox"/> Social and Human Services Assistants</p>
<p>Personal Care Services</p>	<p><input type="checkbox"/> Barbers <input type="checkbox"/> Cosmetologists, Hairdressers, & Hairstylists <input type="checkbox"/> Shampoos, Nail Technicians, Manicurists & Pedicurists <input type="checkbox"/> Skin Care Specialists/Estheticians <input type="checkbox"/> Electrolysis Technicians <input type="checkbox"/> Electrologists <input type="checkbox"/> Funeral Directors/Morticians <input type="checkbox"/> Embalmers <input type="checkbox"/> Funeral Attendants <input type="checkbox"/> Personal and Home Care Aides <input type="checkbox"/> Companions <input type="checkbox"/> Spa Attendants <input type="checkbox"/> Personal Trainers <input type="checkbox"/> Massage Therapists</p>
<p><input type="checkbox"/> Consumer Credit Counselors <input type="checkbox"/> Consumer Affairs Officers <input type="checkbox"/> Consumer Advocates <input type="checkbox"/> Certified Financial Planners <input type="checkbox"/> Insurance Representatives <input type="checkbox"/> Bankers <input type="checkbox"/> Real Estate Services Representatives <input type="checkbox"/> Financial Advisors <input type="checkbox"/> Investment</p>	

Consumer Services	Brokers <input type="checkbox"/> Employee Benefits Representatives <input type="checkbox"/> Hospital Patient Accounts Representatives <input type="checkbox"/> Customer Service Representatives <input type="checkbox"/> Consumer Research Department Representatives <input type="checkbox"/> Consumer Goods or Services Retailing Representatives <input type="checkbox"/> Market Researchers <input type="checkbox"/> Account Executives <input type="checkbox"/> Sales Consultants <input type="checkbox"/> Event Specialists <input type="checkbox"/> Inside Sales Representatives <input type="checkbox"/> Field Merchandising Representatives <input type="checkbox"/> Buyers <input type="checkbox"/> Small Business Owners
Cluster Knowledge and Skills	
<input type="checkbox"/> Academic Foundations <input type="checkbox"/> Communications <input type="checkbox"/> Problem Solving and Critical Thinking <input type="checkbox"/> Information Technology Applications <input type="checkbox"/> Systems <input type="checkbox"/> Safety, Health and Environmental <input type="checkbox"/> Leadership and Teamwork <input type="checkbox"/> Ethics and Legal Responsibilities <input type="checkbox"/> Employability and Career Development <input type="checkbox"/> 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
Network Systems	<p>Network Design and Administration: Communications Analyst <input type="checkbox"/> Data Communications Analyst <input type="checkbox"/> Information Systems Administrator <input type="checkbox"/> Information Systems Operator <input type="checkbox"/> Information Technology Engineer</p> <p>Network: Administrator <input type="checkbox"/> Analyst <input type="checkbox"/> Architect <input type="checkbox"/> Engineer <input type="checkbox"/> Manager <input type="checkbox"/> Operations Analysis <input type="checkbox"/> Security Analyst <input type="checkbox"/> Specialist <input type="checkbox"/> Technician <input type="checkbox"/> Transport Administrator <input type="checkbox"/> PC Support Specialist <input type="checkbox"/></p> <p>Systems: Administrator <input type="checkbox"/> Engineer <input type="checkbox"/> Support Lead <input type="checkbox"/> Technical Support Specialist <input type="checkbox"/> User Support Specialist</p>
Information Support and Services	<p>Database Development and Administration: Data: Administrator <input type="checkbox"/> Analyst <input type="checkbox"/> Architect * Management Associate <input type="checkbox"/> Modeler <input type="checkbox"/> Modeling Specialist</p> <p>Database: Administration Associate <input type="checkbox"/> Administrator <input type="checkbox"/> Analyst <input type="checkbox"/> Developer <input type="checkbox"/> Manager <input type="checkbox"/> Modeler <input type="checkbox"/> Security Expert <input type="checkbox"/> DSS (Decision Support Services) <input type="checkbox"/> Knowledge Architect <input type="checkbox"/> Senior Database Administrator <input type="checkbox"/> Systems Analyst</p> <p>Systems: Administrator <input type="checkbox"/> Analyst <input type="checkbox"/> Tester</p> <p>Technical Writer: Desktop Publisher <input type="checkbox"/> Document Specialist <input type="checkbox"/> Documentation Specialist <input type="checkbox"/> Editor <input type="checkbox"/> Electronic Publications Specialist <input type="checkbox"/> Publisher <input type="checkbox"/> Instructional Designer <input type="checkbox"/> Online Publisher <input type="checkbox"/> Technical Communicator <input type="checkbox"/> Editor <input type="checkbox"/> Publications Manager <input type="checkbox"/> Writer</p> <p>Technical Support: Analyst <input type="checkbox"/> Call Center Support Representative <input type="checkbox"/> Content Manager</p> <p>Customer: Liaison <input type="checkbox"/> Service Representative <input type="checkbox"/> Service Professional</p> <p>Help Desk: Specialist <input type="checkbox"/> Technician <input type="checkbox"/> Maintenance Technician <input type="checkbox"/> PC Support Specialist <input type="checkbox"/> PC Systems Coordinator <input type="checkbox"/> Product Support Engineer <input type="checkbox"/> Sales Support Technician <input type="checkbox"/> Systems Analyst</p> <p>Technical: Account Manager <input type="checkbox"/> Support Engineer <input type="checkbox"/> Support Representative <input type="checkbox"/> Testing Engineer</p> <p>Enterprise Systems Analysis and Integration: Application Integrator <input type="checkbox"/> Business Continuity Analyst <input type="checkbox"/> Cross-Enterprise Integrator</p> <p>Data: Systems Designer <input type="checkbox"/> Systems Manager <input type="checkbox"/> Warehouse Designer <input type="checkbox"/> E-Business Specialist <input type="checkbox"/> Electronic Transactions Implementer</p> <p>Information Systems: Architect <input type="checkbox"/> Planner</p>
Interactive Media	<p>Digital Media: 2D/3D Artist <input type="checkbox"/> Animator <input type="checkbox"/> Audio/Video Engineer <input type="checkbox"/> Designer <input type="checkbox"/> Media Specialist <input type="checkbox"/> Media/Instructional Designer</p> <p>Multimedia: Author <input type="checkbox"/> Authoring Specialist <input type="checkbox"/> Developer <input type="checkbox"/> Specialist <input type="checkbox"/> Producer <input type="checkbox"/> Production Assistant <input type="checkbox"/> Programmer <input type="checkbox"/> Streaming Media Specialist <input type="checkbox"/> Virtual Reality Specialist</p> <p>Web: Designer <input type="checkbox"/> Producer <input type="checkbox"/> Specialist</p> <p>Web Development and Administration: Web: Administrator <input type="checkbox"/> Architect <input type="checkbox"/> Designer <input type="checkbox"/> Page Developer <input type="checkbox"/> Producer <input type="checkbox"/> Site Developer <input type="checkbox"/> Specialist</p>
Programming and Software Development	<p>Applications: Analyst <input type="checkbox"/> Engineer <input type="checkbox"/> Business Analyst <input type="checkbox"/> Computer Engineer <input type="checkbox"/> Data Modeler</p> <p>Operating System: Designer/Engineer <input type="checkbox"/> Programmer Analyst <input type="checkbox"/> Program Manager <input type="checkbox"/> Programmer <input type="checkbox"/> Programmer/Analyst <input type="checkbox"/> Project Lead</p> <p>Software Applications: Specialist <input type="checkbox"/> Architect <input type="checkbox"/> Design Engineer <input type="checkbox"/> Development Engineer <input type="checkbox"/> Engineer <input type="checkbox"/> QA Specialist <input type="checkbox"/> Tester</p> <p>Systems: Analyst <input type="checkbox"/> Administrator <input type="checkbox"/> Test Engineer <input type="checkbox"/> Tester</p>
Cluster Knowledge and Skills	
<input type="checkbox"/> Academic Foundations <input type="checkbox"/> Communications <input type="checkbox"/> Problem Solving and Critical Thinking <input type="checkbox"/> Information Technology Applications <input type="checkbox"/> Systems <input type="checkbox"/> Safety, Health and Environmental <input type="checkbox"/> Leadership and Teamwork <input type="checkbox"/> Ethics and Legal Responsibilities <input type="checkbox"/> Employability and Career Development <input type="checkbox"/> Technical Skills	

 Public Safety, Corrections & Security	Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services
Pathways	Sample Career Specialties/Occupation
Correction Services	Warden- Jail Administrator- Mid-level Manager <input type="checkbox"/> Program Coordinator and Counselor- Public Information Officer <input type="checkbox"/> Correctional Trainer <input type="checkbox"/> Case Manager- Community Corrections Practitioner <input type="checkbox"/> Probation/ parole officer <input type="checkbox"/> Corrections Educator <input type="checkbox"/> Corrections Officer <input type="checkbox"/> Detention Deputy <input type="checkbox"/> Youth Services Worker <input type="checkbox"/> Facility Maintenance Workers <input type="checkbox"/> Transport Officer <input type="checkbox"/> Food Service Staff- Medical Staff <input type="checkbox"/> Dietitian- Support Staff
Emergency and Fire Management Services	Emergency Management and Response Coordinator <input type="checkbox"/> Emergency Planning Manager <input type="checkbox"/> EMT <input type="checkbox"/> Fire Fighter <input type="checkbox"/> Mgr/Supv. Of Fire Fighters <input type="checkbox"/> Forest Fire Fighter <input type="checkbox"/> Mgr/Supv. of Forest Fire Fighters <input type="checkbox"/> Forest Fire Inspector & Investigator <input type="checkbox"/> Hazardous Materials Responder <input type="checkbox"/> Dispatcher <input type="checkbox"/> Training Officer, Grant Writer and Coordinator <input type="checkbox"/> Rescue Workers
Security & Protective Services	Security Director <input type="checkbox"/> Corporate/Agency Security Director/VP <input type="checkbox"/> Corporate Director of Sale Security Systems Designer/Consultant <input type="checkbox"/> Physical Security Specialist Consultant <input type="checkbox"/> Information Systems Security Specialist <input type="checkbox"/> Computer Forensics Specialist <input type="checkbox"/> Private/Corporate Investigator <input type="checkbox"/> Loss Prevention/Security Manager (e.g. Store, hotel) <input type="checkbox"/> Security Trainer/Educator <input type="checkbox"/> Security Sales Representative/Manager <input type="checkbox"/> Loss Prevention Specialist <input type="checkbox"/> Physical Security Assistant <input type="checkbox"/> Security Systems Technician (Install/maintain) <input type="checkbox"/> Investigative Assistant (private sector) <input type="checkbox"/> Security Trainer (Basics) <input type="checkbox"/> Security Sales Assistant Transportation Security Supervisor <input type="checkbox"/> Information Security Assistant (Document Control) <input type="checkbox"/> Personnel Security Assistant <input type="checkbox"/> Executive Protection Officer (Private) <input type="checkbox"/> Supervisory Security officer (armed, unarmed) <input type="checkbox"/> Certified Security Officer (SPO, POST, Arrest Authority) <input type="checkbox"/> Armored Car Guard <input type="checkbox"/> Control Center Operator (e.g. ADT)(Monitoring Center) <input type="checkbox"/> Uniformed Security Officer (Unarmed -- proprietary and contract) <input type="checkbox"/> Security Clerk <input type="checkbox"/> Transportation Security Technician <input type="checkbox"/> Loss Prevention Assistant <input type="checkbox"/> Uniformed Security officer (armed) <input type="checkbox"/> Computer Security Specialist <input type="checkbox"/> Computer Forensics Examiner <input type="checkbox"/> Executive Protection Specialist <input type="checkbox"/> Gaming Surveillance Specialist <input type="checkbox"/> Information Security specialist <input type="checkbox"/> Information Technology Security <input type="checkbox"/> Armored Car Guards <input type="checkbox"/> Industrial Espionage Security <input type="checkbox"/> Life Guard, Ski Patrol <input type="checkbox"/> Physical Property Security <input type="checkbox"/> Private Security Specialist
Law Enforcement Services	Animal Control Officer <input type="checkbox"/> Bailiffs <input type="checkbox"/> Child Support <input type="checkbox"/> Missing Persons <input type="checkbox"/> Unemployment Fraud Investigators <input type="checkbox"/> Criminal Investigators & Special Agents <input type="checkbox"/> Gaming Investigator <input type="checkbox"/> Bomb Technician <input type="checkbox"/> Game Enforcement Officer <input type="checkbox"/> Highway Patrol Pilots <input type="checkbox"/> Immigration & Customs Inspectors <input type="checkbox"/> Mgr/Supv. Police & Detectives <input type="checkbox"/> Police Detectives and Criminal Investigators <input type="checkbox"/> Police, Fire & Ambulance Dispatchers <input type="checkbox"/> Police & Patrol Officers <input type="checkbox"/> Private Detectives & Investigators <input type="checkbox"/> Sheriffs & Deputy Sheriffs <input type="checkbox"/> Training Officer <input type="checkbox"/> Transit & Railroad Police <input type="checkbox"/> Park Ranger <input type="checkbox"/> Evidence Technician <input type="checkbox"/> Federal Marshall
Legal Services	Administrative Law <input type="checkbox"/> Attorney <input type="checkbox"/> Case Management Specialist <input type="checkbox"/> Court Reporter <input type="checkbox"/> File and Document Manager <input type="checkbox"/> Information Officer <input type="checkbox"/> Investigator <input type="checkbox"/> Judge <input type="checkbox"/> Law Clerk <input type="checkbox"/> Legal Assistant <input type="checkbox"/> Legal Secretary <input type="checkbox"/> Magistrate Mediator/Arbitrator <input type="checkbox"/> Negotiator <input type="checkbox"/> Para legal
 Manufacturing	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
Production	Assemblers <input type="checkbox"/> Automated Manufacturing Technicians <input type="checkbox"/> Bookbinders <input type="checkbox"/> Calibration Technicians <input type="checkbox"/> Electrical Installers and Repairers <input type="checkbox"/> Electromechanical Equipment Assemblers <input type="checkbox"/> Extruding and Drawing Machine Setters/Set-Up Operators <input type="checkbox"/> Extrusion Machine Operators <input type="checkbox"/> Foundry Workers <input type="checkbox"/> Grinding, Lapping, and Buffing Machine Operators <input type="checkbox"/> Hand Packers and Packagers <input type="checkbox"/> Hoist and Winch Operators <input type="checkbox"/> Instrument Makers <input type="checkbox"/> Large Printing Press Machine Setters and Set-Up Operators <input type="checkbox"/> Machine Operators <input type="checkbox"/> Managers, Supervisors <input type="checkbox"/> Medical Appliance Makers <input type="checkbox"/> Milling Machine Setters, Set-Up Operators <input type="checkbox"/> Millwrights <input type="checkbox"/> Operators, Tenders, Cutters/Brazers, Soldering, Machine Operations <input type="checkbox"/> Painters <input type="checkbox"/> Pattern & Model Makers <input type="checkbox"/> Precision Layout Workers <input type="checkbox"/> Precision Optical Goods Workers <input type="checkbox"/> Production Associates <input type="checkbox"/> Sheet Metal Workers <input type="checkbox"/> Solderers and Brazers <input type="checkbox"/> Tool and Die Makers <input type="checkbox"/> Welders
Manufacturing Production Process Development	Design Engineers <input type="checkbox"/> Electrical and Electronic Technicians and Technologists <input type="checkbox"/> Electronics Engineers <input type="checkbox"/> Engineering and Related Technicians and Technologists <input type="checkbox"/> Engineering Technicians <input type="checkbox"/> Industrial Engineers <input type="checkbox"/> Labor Relations Managers <input type="checkbox"/> Manufacturing Engineers <input type="checkbox"/> Manufacturing Technicians <input type="checkbox"/> Power Generating and Reactor Plant Operators <input type="checkbox"/> Precision Inspectors, Testers, and Graders <input type="checkbox"/> Process Improvement Technicians <input type="checkbox"/> Production Managers <input type="checkbox"/> Purchasing Agents <input type="checkbox"/> Supervisors
Maintenance, Installation & Repair	Biomedical Equipment Technicians <input type="checkbox"/> Boilermakers <input type="checkbox"/> Communication System Installers/Repairers <input type="checkbox"/> Computer Installers/Repairers <input type="checkbox"/> Computer Maintenance Technicians <input type="checkbox"/> Electrical Equipment <input type="checkbox"/> Installers/ Repairers <input type="checkbox"/> Facility Electricians <input type="checkbox"/> Industrial Electronic <input type="checkbox"/> Installers/ Repairers <input type="checkbox"/> Industrial Facilities Managers <input type="checkbox"/> Industrial Machinery Mechanics <input type="checkbox"/> Industrial Maintenance Electricians <input type="checkbox"/> Industrial Maintenance Mechanics <input type="checkbox"/> Industrial Maintenance Technicians <input type="checkbox"/> Instrument Calibration and Repairers <input type="checkbox"/> Instrument Control Technicians <input type="checkbox"/> Job/Fixture Designers <input type="checkbox"/> Laser Systems Technicians <input type="checkbox"/> Maintenance Repairers <input type="checkbox"/> Major Appliance Repairers <input type="checkbox"/> Meter Installers/Repairers <input type="checkbox"/> Millwrights <input type="checkbox"/> Plumbers, Pipe Fitters and Steam Fitters <input type="checkbox"/> Security System Installers/Repairers
Quality Assurance	Calibration Technicians <input type="checkbox"/> Inspectors <input type="checkbox"/> Lab Technicians <input type="checkbox"/> Process Control Technicians <input type="checkbox"/> Quality Control Technicians <input type="checkbox"/> Quality Engineers <input type="checkbox"/> SPC Coordinators

Logistics & Inventory Control	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
Health, Safety and Environmental Assurance	Environmental Engineers ☐ Environmental Specialists ☐ Health and Safety Representatives ☐ Safety Coordinators ☐ Safety Engineers ☐ Safety Team Leaders ☐ Safety Technicians
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 performing marketing activities to reach organizational objectives.
Pathways	Sample Career Specialties/Occupations
Management and Entrepreneurship	Entrepreneurs ☐ Owners ☐ Small Business Owners ☐ Presidents ☐ Chief Executive Officers ☐ Principals ☐ Partners ☐ Proprietors ☐ Franchisees ☐ Independent X's (e.g., distributor) ☐ Customer Service Representatives
Professional Sales and Marketing	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
Buying and Merchandising	Store Managers ☐ Retail Marketing Coordinators ☐ Merchandising Managers ☐ Merchandise Buyers ☐ Operations Managers ☐ Visual Merchandise Managers ☐ Sales Managers ☐ Department Managers ☐ Sales Associates ☐ Customer Service Representatives ☐ Representatives Clerks (e.g., stock, receiving, etc.)
Marketing Communications and Promotion	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 ☐
Marketing Information Management and Research	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
Distribution and Logistics	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
E-Marketing	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
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 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
Engineering and Technology	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 & 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
Science and Math	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
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, 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
Transportation Operations	Air/Space Transportation: 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 Rail Transportation: 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) □ Railyard engineers, dinkey operators, and hostlers □ Other railyard and terminal operations and support jobs Water Transportation: 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 Road Transportation: 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 Transit Systems: 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
Logistics Planning Services	Logisticians □ Logistics managers □ Logistics Engineers □ Logistics analysts □ Logistics Consultants and Management □ International logistics
Warehousing and Distribution Center Operations	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
Facility and Mobile Equipment Maintenance	Facility: Facility maintenance managers and engineers □ Industrial equipment mechanics □ Industrial electricians, □ Electrical/electronic technicians □ Other facility/terminal maintenance jobs Mobile Equipment: Mobile equipment maintenance managers □ Electrical and electronic installers and repairers—transportation equipment □ Mobile heavy equipment mechanics Air/Space—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. Water—Motorboat mechanics □ Ship mechanics and repairers □ Motorboat mechanics □ Automotive/truck mechanics and body repairers Rail—Rail car repairers □ Signal and track switch repairers □ Rail loco-motive and car mechanics and repairers Road—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
Transportation, Distribution & Logistics	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
Transportation Systems/ Infrastructure Planning, Management, and Regulation	General—Intermodal—Urban and regional planners □ Civil engineers □ Engineering technicians □ Surveying and mapping technicians □ Government service executives □ Environmental compliance inspectors Air/Space—Air traffic controllers □ Aviation inspectors Road—Traffic engineers □ Traffic technicians □ Motor vehicle inspectors □ Freight inspectors, Rail—Railroad inspectors Water—Marine cargo inspectors □ Vessel traffic control specialists Transit—Public transportation inspectors Other—Other government agency managers □ Regulators □ Inspectors, other federal/state/local transportation agency jobs
Health, Safety and Environmental Management	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
Sales and Service	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
Cluster Knowledge and Skills	
<input type="checkbox"/> Academic Foundations <input type="checkbox"/> Communications <input type="checkbox"/> Problem Solving and Critical Thinking <input type="checkbox"/> Information Technology Applications <input type="checkbox"/> Systems <input type="checkbox"/> Safety, Health and Environmental <input type="checkbox"/> Leadership and Teamwork <input type="checkbox"/> Ethics and Legal Responsibilities <input type="checkbox"/> Employability and Career Development <input type="checkbox"/> Technical Skills	