



SB 155 Reference Materials

(2015-16)

Kansas Career & Technical Education



**A Guide to the Tuition Reimbursement &
Credential Incentive Legislation**

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Governor's Secondary/Postsecondary Career Technical Education Initiative

In January 2012, Governor Brownback announced a bold and innovative plan to enhance career technical education in Kansas and better prepare high school students for college and careers. The legislatures responded with Senate Bill 155 which provides new state dollars to pay college tuition for high school students earning college credits in technical courses and at the same time, earn an industry credential valued by employers. The free college tuition applies to any and all technical courses in approved programs at public community and technical colleges.

The key components of the CTE initiative include*:

- Student Tuition Support - \$11.75 million for career technical programs
- School Transportation Costs – to transport high school students to their local community or technical college
- Incentives to High Schools for Certificates Earned in Key Occupations - \$1.5 million for high schools who increase the number of students earning an industry-recognized credential in key occupations
- Marketing Career Technical Education programs to students and families to increase participation - \$50,000

This plan encourages high school students to pursue college level courses in technical fields preparing them for high demand and high wage careers. Additionally, the initiative aligns a student's junior or senior high school year with college and postsecondary education. The student is on a fast track to a technical career and the family saves money on college tuition.

Technical careers offer the student many benefits:

Swift - ready to work in a chosen career field in two years or less.

Diverse – a variety of technical careers are available including energy to healthcare, technology and engineering to construction.

Rewarding – starting salaries for career technical education graduates range from \$25,000 to \$45,000

Focused – technical education programs study only what is relevant and pertinent to the career

Hands-on – learn by doing using real tools and technology in real-life applications

Affordable – average tuition cost for Kansas public technical and community colleges is \$2,665 per year and now Kansas high school students can enroll in technical courses tuition free

***Dollar amounts allocated for this legislation are subject to change on an annual basis.**

Accommodating – students completing technical programs may be ready for work or transfer the credits toward a bachelor’s degree and above.

More than 64 percent of future Kansas jobs will require some level of college education. The Governor’s Secondary/Postsecondary Technical Education plan prepares students for a future of economic prosperity, prepares a qualified and talented workforce for business and promotes a robust economy for Kansas.

Secondary/Postsecondary CTE Initiative

Frequently Asked Questions

(For the purposes of Tuition for Technical Education and the Career Technical Education Incentive Program (SB 155) funding , the definition of an Eligible Postsecondary Institution is any Kansas public Community College, Technical College or the Washburn Institute of Technology.)

Tuition: Eligible courses

1. Will the payment for secondary student credit hours apply only to courses in programs on the high-demand list?

Response: No. The secondary tuition for technical education funding will be applied to postsecondary credit hours generated by secondary students enrolled in a postsecondary tiered technical course which is part of any approved technical program at an eligible postsecondary institution. The funding rate for secondary credit hours in tiered technical courses will be 100% of the KBOR composite rate for tiered courses (not the state share rate applied to postsecondary credit hours).

2. What about non-tiered courses?

Response: No. Secondary student college credit hours in a non-tiered course (regardless of the program) will not be included in the secondary tuition for technical education funding distribution. Institutions should continue current practice with regard to tuition for non-tiered courses for both secondary and postsecondary students.

3. Will courses included in short-term (SAPP) programs qualify for higher education reimbursement if taken by high school students? I would also like to know if CTE courses taken during the summer semester by high school students would qualify for both our institution as well as high schools (if the programs meet the high school funding criteria).

Response: Yes. As a general rule if the SAPP is comprised of a course or courses tied or linked to an approved technical program, the credit hours generated are eligible for funding regardless of whether the student is secondary or postsecondary or semester in which the credit hours are generated. The only difference is which funding source—tiered technical, secondary tuition for technical education, or non-tiered course credit hour grants.

Tiered technical course credit hours earned by eligible high school students during the summer months will be reported during fall.

As for the high school, the district determines whether the course counts for graduation purposes; and KSDE determines high school funding criteria.

- 4. If we have a high school student taking a CNA course, this would be considered a SAPP program at our institution. An example of a course that they would take would be NAID1229. I looked at this course and it is currently a tiered course (Tier 1, composite rate of \$227). So, based on the fact that the course is tied or linked to a technical program, and is tiered, we would receive funding for these high school students from the HS funding source. Is that correct?**

Response: Yes. The plan is to fund eligible high school student credit hours in tiered technical courses beginning July 1 or after at the KBOR composite rate (100%) from the secondary tuition for technical education fund.

- 5. If a high school student enrolls in a course designated as tiered (T) but the course is currently being funded at the NT (non-tiered) rate for our college, will we receive the composite tier rate for those credit hours?**

Response: No. For a tiered course to be eligible for the tiered funding rate, the course must be tied or linked to an approved technical program. Likewise, to receive the composite rate for high school student credit hours the course must be tiered AND tied or linked to an approved technical program. Tiered courses funded at the non-tier rate are usually the result of the course not being tied or linked to an approved technical certificate or AAS degree (other than AAS in Technical Studies).

- 6. For purposes of high school courses, must we have a technical program that has that course in it for it to fall under this program or could it be a technical course the high school requests that is not part of a program?**

Response: To be eligible for the secondary tuition for technical education funding, the high school student must be earning postsecondary credit in a tiered technical course that is part of an approved technical program conducted by the postsecondary institution. Secondary student credit hours in courses not part of an approved technical program are not eligible for secondary tuition for technical education funding.

- 7. What constitutes a college-level CTE class?**

Response: For the purposes of this legislation, a college-level course is a postsecondary tiered technical course that is part of a technical program approved by Kansas Board of Regents and delivered by a college or institute of technology.

- 8. Are high school students taking a college-level CTE class that is also part of an approved secondary pathway eligible for the tuition reimbursement?**

Response: Colleges and the institute of technology are eligible to receive tuition funding for the postsecondary credit hours generated by a high school student enrolling in a postsecondary tiered technical course that is part of any approved technical program at the college or institute of technology.

9. Can a college level CTE class that is part of an approved pathway qualify for the 0.5 weighted funding? Do we earn 0.5 funding AND the student gets free tuition, or is it one or the other?

Response: CTE courses taken by high school students will NOT qualify for both the 0.5 vocational funding AND the college tuition payment. If the student takes a course delivered by the high school as part of the state approved high school pathway, the course will generate only the 0.5 vocational funding, if applicable, for the district. If the CTE course is delivered by a college or institute of technology and the high school student earns college credit the course will be eligible for the tuition payment at the college but will not receive the 0.5 weighted vocational funding.

10. Do the CTE college courses have to be part of a pathway to earn the free tuition?

Response: To qualify for the tuition payment, the CTE course must be a tiered technical course in a Kansas Board or Regents approved technical program at a college or institute of technology.

11. If we have secondary students taking college credit CTE classes outside the normal school day schedule, are they eligible for the “no tuition” program?

Response: For the course to be eligible for the secondary tuition funding, the high school student must be earning postsecondary credit in a tiered technical course that is part of an approved technical program conducted by the postsecondary institution. The legislation does not say that the courses have to be taken during normal school hours.

12. Under SB155, can a high school work with any postsecondary institution of their choice to qualify for the tuition reimbursement, or do they have to work within the postsecondary service area that the high school is located in?

Response: If a secondary school has a program they would like to align with an eligible postsecondary institution, it's important for the secondary school to make an effort to reach out to the post-secondary institution in their service area to discuss alignment. If the secondary and postsecondary institutions cannot work out an agreement to align or the postsecondary institution does not have the program, the secondary school is free to pursue other postsecondary institutions for alignment purposes. This is only for face-to-face instruction. If the program is virtual or online, the secondary school may partner with any eligible postsecondary institution offering such a program.

Tuition: Eligible High School Students

13. If we have a high school student that is not a resident of KS, would we still receive reimbursement for the student if they were enrolled in a Tiered course?

Response: No. The high school student must reside within the state of Kansas.

14. What about a student that dropped out of high school and is currently enrolled in a GED program? Are they considered high school students?

Response: No. The legislation defines a secondary student as *“a pupil who: (1) Has not attained a high school diploma or a general educational development (GED) credential; and (ii) is regularly enrolled in and attending a public or private secondary school.”*

15. What about high school students that are enrolled in the Kansas Online High School? I am being told it is an accredited high school within KS. I assume that these students would be included as high school students?

Response: Yes, but only if the online programs are being offered through a public school district.

16. If a student graduated from high school this last spring, are they still considered a high school student during the summer session and convert to non-high school student starting fall? Will we receive reimbursement from KBOR for a student who graduated from high school in the spring if they are taking summer classes starting after July 1? Does a high school student lose their high school status as soon as they graduate?

Response: Question 1—No. Once a student graduates from high school they would be no longer be considered a high school student. Question 2—Yes, at that point the student would be a postsecondary student and their credit hours would be supported through the regular tiered technical or non-tiered course funding streams. Question 3—Yes, a student loses their high school status at the time of graduation.

17. Will colleges receive the tuition payment for high school students enrolled in private high schools or home schooled students?

Response: Colleges and the Washburn Institute of Technology are eligible to receive the tuition funding for secondary students regularly enrolled and attending a private high school or are home schooled that enroll in a KBOR approved career technical education course or program conducted by a community college, technical college, or institute of technology.

18. We have a high school student currently being home-schooled who wants to enroll in one of our programs. Would their tuition reimbursement from KBOR be calculated any differently than a high school student enrolled in a USD?

Response: No. The tuition calculation for a home schooled student would be calculated the same. The full KBOR composite rate calculation is applied to all high school student college credit hours in tiered technical courses.

19. Is there an age limit on students taking advantage of the tuition waiver? Must the student have achieved “sophomore” or higher status? Does the student have to be at least 16 years old? What about the rare occasion where a 14 year-old home schooled students wants to enroll in a technical course?

Response: SB 155 does not stipulate a specific grade or age requirement. However, the intent of the legislation is for payment of tuition for 11th and 12th grade high school students enrolling in tiered technical courses at a postsecondary institution. Grade level requirements for concurrent enrollment, including concurrent enrollment partnerships, are defined in K.S.A. 72-11a03, K.A.R. 88-26-3, and KBOR policy Chapter 4.

In any instance, colleges need to be mindful that under this initiative high school students earn transcribed college credit at the time the course is taken. This may impact (positively or negatively) additional college options for the student in the future based on the student's ability to perform well in college-level courses.

20. Can a student at the high school sophomore level or below take college-level CTE classes and be eligible for the "no tuition" program?

Response: The intent of the legislation is for payment of tuition for 11th and 12th grade high school students enrolling in tiered technical courses at a postsecondary institution.

21. Must high school students be enrolled in an accredited high school for their credit hours to be eligible for the tuition reimbursement?

Response: The legislation does not address high school accreditation but defines a secondary student as one whom: 1) has not attained a high school diploma or GED, and 2) is regularly enrolled in and attending a public or private secondary school. Alternative schools could be considered private secondary schools and, as such, college credit hours earned by these high school students would be eligible for tuition reimbursement.

22. If a high school student fails a college technical course that was funded through SB 155 and the student signs up to take the course again, will it still be covered under SB 155 or would the student be responsible for payment the second time?

Response: The intent of this initiative is to pay the tuition for high school students taking college-level technical courses for credit. It is hoped that only high school students with the ability to be successful in college-level courses would be enrolled in these courses. As stated earlier, high school students earn transcribed college credit at the time the course is taken which may impact (positively or negatively) additional college options for the student in the future based on the student's ability to perform well in college-level courses. However, should a high school student be unsuccessful in a college-level technical course, the college's policy regarding course retakes shall be applied.

23. If a high school senior enrolls in an SB155 eligible course prior to graduation, but completes the course after graduation would the postsecondary institution be reimbursed for the tuition?

Response: Yes. The eligible postsecondary institution would receive tuition reimbursement for any high school student who began the postsecondary course prior to their high school graduation.

Incentive Award/Qualifying Credentials

24. When can schools anticipate the annual list of critical career and technical education programs being available? (The monetary incentive for high schools)

Response: The list of high-demand occupations and associated industry credentials that qualify for the incentive awards will be available on the KBOR and KSDE websites by August 1st of each school year.

25. Is the incentive funding applicable to students from private high schools or are home schooled?

Response: Colleges and the institute of technology may request incentive funding from KBOR to cover ½ of the cost of a credentialing exam for secondary students regularly enrolled and attending a private high school or are home schooled, and are currently or were previously admitted to an approved career technical education course or program conducted by the institution. No college or institute of technology is required to pay ½ the cost for three or more industry-recognized certification assessments that are substantially the same for any student failing to earn the certification on two previous attempts.

26. There are industry-recognized certifications that exist in my CTE area but are not listed on the incentivized certification list. Why aren't those certifications listed?

Response: Only certifications associated with high demand occupations (as identified by the Kansas Department of Labor) were identified for the incentive award. Not all occupations are high demand occupations for Kansas.

27. Why were the listed certifications the only ones listed for those occupations?

Response: For some high demand occupations multiple certifications were identified; for others only one certification was selected. The credentials selected were based on professional requirements for the occupation, age limitations, and whether or not high school CTE pathways and/or postsecondary CTE programs offer courses that prepare students for the specific certifications. Many of the identified credentials are approved certifications established through the postsecondary program alignment project.

28. If a student earned a certification from the approved list prior to July 1, 2012, but will not graduate until a later date, will this qualify for the monetary incentive?

Response: No. The certification must have been earned after the onset of the SB155 legislation, which was July 1, 2012. Keep in mind that to be eligible for the incentive funding the student must not only have earned a credential after July 1, 2012, but must also have graduated.

29. How and when do schools report certifications earned to the state?

Response: School districts are required to maintain records of qualified certifications earned by their students. Once the student graduates from high school, the district will submit the list of certifications earned to KSDE and the incentive dollars will then be paid to the district. The state auditors will check the records kept on file at the district level to verify that the list submitted is accurate.

30. Does it matter where, when, or through whom a student earns the qualifying certification?

Response: The location or the time of day the student takes the course to earn the certification **does not** matter. It could be taken in the summer time, at night, etc. and the school would still receive the \$1000 if the student earns the certification while in HS and then graduates. It also does not matter who

is sponsoring the class that leads to the certification (i.e. postsecondary institution or private organization/industry).

Transportation

31. If a college offers a qualifying CTE course at a high school, can a neighboring school transport students to that high school and get reimbursed for transportation?

Response: Yes, as long as the course(s) meet the requirements of the law for the paid tuition.

32. If the school does not provide transportation for students to travel off-campus for college-level CTE classes, can students/parents be reimbursed for transportation costs?

Response: The legislation will only reimburse local school districts for transportation provided for 11th & 12th grade students attending courses that qualify under this legislation for the tuition payments.

33. Is there a student minimum for transportation reimbursement?

Response: No, there is no student minimum required for transportation reimbursement.

34. Is there a maximum mileage reimbursement?

Response: No, there is no maximum mileage reimbursement. Form 196 – CTE State Aid for Transportation to Community College/Technical Colleges is available on the KSDE website for schools to submit payment requests.

35. Does the CTE Course(s) taken have to be part of a pathway to earn the transportation reimbursement?

Response: If the course(s) taken qualifies for the tuition payment, it will also qualify for the transportation reimbursement

36. Where is the Transportation Reimbursement form for school vehicles taking students to college classes?

Response: Transportation for college CTE courses will be reported on the Local Effort Form. All Board Clerks work with this form and the CTE transportation has been added to the form. If you have questions, please contact Sara Barnes at KSDE, sbarnes@ksde.org.

Other Questions

37. What will happen if a large number of high school students enter postsecondary technical courses and the appropriated funds run out?

Response: Institutions would receive a pro rata share of the funding that is available.

38. Do colleges have the legal right to charge USD's or high school students an additional fee to make up for the loss in funds from the secondary funding stream?

Response: As stated in Section 8 of SB 155, secondary students admitted to a career technical education course or program conducted by a community college, technical college or institute of technology may be charged fees, but shall not be charged tuition. The section also defines Fees as *“those charges assessed against a student . . . for student services, such as health clinics, athletic activities and technology services, or for books, supplies or other materials necessary for a particular course or program, the expense of which is not covered by tuition.”* Tuition is then defined as *“those charges assessed against a student . . . on a per credit hour, per course or per term basis, and that are charged to cover the general expense of providing instructional services.”* The statute does not address local school districts.

48. Can eligible postsecondary institutions get access to the annual list of tiered courses prior to July 1st of each year?

Response: Yes, however you need to remember the annual data does not lock until mid-September and is not certified until the end of September—up until that time institutions have the opportunity to request changes to courses and programs. To access the data log-in to the data system, select the academic year, and click on the Program Inventory tab. From that point, click on the course maintenance link. From the course maintenance page there is a link to download an excel spreadsheet. This download will provide a spreadsheet listing all courses in a college. From there you can sort by course ID, by T/N status, etc. . . .

49. If a college A requires a high school diploma as a pre-requisite to a technical course and neighboring college B does not have this requirement for the same technical course, can college B deliver the technical course to students residing in college A's district? Can college B deliver the course in college A's service area?

Response: It is anticipated that such issues would be resolved during discussions between the school district and college A for this particular technical course. If however, the school district and college B applied for permission to deliver the technical course in the specified service area, the Board would consider the ability, willingness, and intention of college A to deliver the requested technical course in any potential decisions regarding approval for delivery of the course by college B within college A's service area.

50. Under this program, do faculty members teaching a college course at a high school site have to have a K-12 license if some of the students in the class are taking the course for high school credit only? Does the state require a faculty also be licensed by the state under the K-12 licensure requirements to meet the “highly qualified” standard?

Response: Each college establishes the credentialing requirements for faculty members hired by the college. Likewise, school districts establish credentialing requirements for teachers within their respective districts utilizing the spectrum of licensures established by the Kansas Board of Education which include Technical Education Certification and Visiting Scholar Licensure.

51. How do the postsecondary institutions access the funds for tuition reimbursement? How should high school students be reported in KSPD?

Response: Postsecondary institutions will submit and certify student files for the Fall Census submission (mid- December) as usual utilizing the flag to designate high school students. Individual student records for both secondary and postsecondary students enrolled in postsecondary institutions are uploaded to the KHEDS system.

52. What about High School students that are currently receiving some sort of third party assistance for their classes such as WIA support. How do we handle these students? Should they refuse the additional support and we would collect from the state for their enrollment?

Response: Federal workforce investment act funding can provide students broader support than only tuition expenses. The state funding should be utilized for tuition support. If you have any questions, please contact your local one-stop provider.

<p>Kansas Workforce ONE Elmore Center 631 E. Crawford, Suite 206 Salina, KS 67401 Phone: 785-493-8018 Toll Free: 866-828-8887</p>	<p>Heartland Works, Inc. 5020 SW 28th St # 100 Topeka, KS 66614 (785) 234-0500 1-800-444-8551</p>	<p>KansasWorks Local Area V Workforce Investment Board (WIB) Area Administrative Office (AAO) 200 Arco Place, Box 120, Suite 103 Independence, KS. 67301 (620) 332-5900</p>
<p>Workforce Partnership 9221 Quivira Road Overland Park, KS 66215 (913)577-5900</p>	<p>Workforce Alliance of South Central Kansas 150 N. Main Street, Suite 200 Wichita, KS 67202 Tel: 316-771-6800</p>	

53. What is the impact on the credit hour limitation for concurrent enrollment hours? Will CTE be exempt from this limit?

Response: The credit hour limit for concurrent enrollment credits (24 semester credit hours) applies only to those credits earned through concurrent enrollment partnership (CEP) courses. These are college courses taught by a high school teacher at the high school during the high school day for which students earn college credit. Current KBOR policy exempts tiered technical college courses from the credit hour limit for CEP courses.

Key Statutes Related to SB155

- **K.S.A. 72-7539** Study for implementing individual career plan of study
- **K.S.A. 72-4489** Career technical education incentive program
- **K.S.A. 72-4488** Career technical education programs located outside service area
- **K.S.A. 72-4455** Statewide articulation agreement, development
- **K.S.A. 72-7540** Study of state aid for career technical education programs

2015-2016 Excel in CTE Initiative (SB 155) Qualifying Credential Incentive List

2010 Standard Occupational Codes (SOC)	Classification of Instructional Program (CIP) Code	Occupation	Credentials/Certifications Qualifying for Incentive Payment	Average Annual Wages
53-3032	49.0205	Truck Drivers, Heavy and Tractor-Trailer	Commercial Driver License (CDL)	\$40,300
31-1012	51.3902	Nursing Assistants, Orderlies **	Certified Nurse Aide (CNA)	\$23,110
15-1151	01.0106, 11.1006, 51.0709	Computer Support Specialists **	Cisco-- Certified Entry Networking Technician; CompTIA - A+; CompTIA - Network +; CompTIA - Server +; CompTIA - Security +; Microsoft-- Microsoft Technology Associate (MTA); Microsoft Certified Solutions Associate (MCSA)	\$44,530
49-3023	47.0600, 47.0604, 47.0614, 47.0617	Automotive Service Technicians and Mechanics	Automotive Service Excellence (ASE) -- ASE Student Certification in all 4 of the following areas: Brakes, Electrical/Electronic Systems, Engine Performance, and Suspension and Steering – OR ASE Student Certification in at least one of the following areas: Maintenance and Light Repair (MLR), Automobile Service Technician (AST) or Master Automobile Service Technician (MAST)	\$38,740
51-4121	15.0614, 48.0508	Welders, Cutters, Solderers, and Brazers	American Welding Society (AWS) -- 3 Position Qualifications D1.1 standard or higher (AWS - 1F, 2F and 1G); American Society of Mechanical Engineers (ASME) Section 9 Standards (6G level)	\$35,150
47-2031	46.0201	Carpenters	National Center for Construction Education and Research (NCCER) - Core Curriculum: Introduction to Craft Skills and Carpentry Level 1	\$39,760
53-3033	49.0205	Truck Drivers, Light or Delivery Services,	Commercial Driver License (CDL)	\$33,840
47-2111	46.0302	Electricians	National Center for Construction Education and Research (NCCER) - Core Curriculum: Introduction to Craft Skills and Electrical Level 1	\$48,610
49-9041	47.0303	Industrial Machinery Mechanics	National Center for Construction Education and Research (NCCER) -- Core Curriculum: Introduction to Craft Skills and Industrial Maintenance Level I; Society of Maintenance & Reliability Professionals-- Certified Maintenance & Reliability Technician (CMRT)	\$44,500
49-3031, 49-3041	47.0605, 47.0613	Bus and Truck Mechanics and Diesel Engine Specialists	Automotive Service Excellence (ASE)-- ASE Student Certification in all 4 of the following areas: Diesel Engines, Electrical/Electronic Systems, Brakes, and Steering & Suspension	\$41,950
51-4011	48.0510	Computer-Controlled Machine Tool Operators, Metal and Plastic	National Institute for Metalworking Skills (NIMS) - Machining Level 1	\$34,040
47-2152	46.0502, 46.0503, 46.0599	Plumbers, Pipefitters, and Steamfitters	National Center for Construction Education and Research (NCCER) - Core Curriculum: Introduction to Craft Skills and Plumbing and Pipefitting Level 1	\$48,290
49-9021	15.0501, 47.0201	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	ICE --Core +Residential Air Conditioning & Heating or Light Commercial Air Conditioning & Heating or Commercial Refrigeration; North American Technician Excellence (NATE) -- Core + 1 one of the following specialty areas: Air Conditioning, Air Distribution, Air-to Air Heat Pumps, Gas Furnaces, Oil Furnaces, Hydronics Gas, Light Commercial Refrigeration, Commercial Refrigeration, Ground Source Heat Pump Loop Installer; HVAC Excellence -- Core Areas (Electrical & Refrigeration Theory) + one of the following specialty areas: Air Conditioning, Gas Heat, & Electrical or Light Commercial Air Conditioning, Gas Heat & Electrical or Light Commercial Refrigeration & Electrical; National Center for Construction Education and Research (NCCER)-- Core + HVAC Levels 1 & 2	\$44,070
47-2211	48.0506, 46.0411	Sheet Metal Workers	Manufacturing Skills Standards Council (MSSC) - Certified Production Technician (CPT), National Center for Construction Education and Research (NCCER) - Core Curriculum: Introduction to Craft Skills and Sheet Metal Level 1, National Institute for Metalworking Skills (NIMS) - Metal Forming I	\$43,020
51-4041	48.0501, 48.0503	Machinists	National Institute for Metalworking Skills (NIMS) - Machining Level 1	\$39,690
11-9013	01.0101, 01.1012, 01.0199	Farmers, Ranchers, and Other Agricultural Managers **	Kansas Department of Agriculture (KDA) -- KS Commercial Pesticide Applicators Certificate, Kansas Department of Agriculture (KDA) -- Agriculture Skills and Competencies Certificate	\$95,190***

2015-2016 Excel in CTE Initiative (SB 155) Qualifying Credential Incentive List

2010 Standard Occupational Codes (SOC)	Classification of Instructional Program (CIP) Code	Occupation	Credentials/Certifications Qualifying for Incentive Payment	Average Annual Wages
49-3041	1.0205	Farm Equipment Mechanics	<i>Automotive Service Excellence (ASE)</i> -- ASE Student Certification in all 4 of the following areas: Diesel Engines, Electrical/Electronic Systems, Brakes, and Steering & Suspension	\$36,560
33-2011	43.0203	Fire Fighter	National Firefighter I Certification	\$41,420
51-2041	48.0503, 48.0511	Structural Metal Fabricators and Fitters	<i>Manufacturing Skills Standards Council (MSSC)</i> - Certified Production Technician (CPT), <i>National Center for Construction Education and Research (NCCER)</i> - Core Curriculum: Introduction to Craft Skills and Sheet Metal Level 1, <i>National Institute for Metalworking Skills (NIMS)</i> - Metal Forming I	\$40,750
11-9051	12.0504	Food Service Managers	<i>National Restaurant Association Educational Foundation</i> - ProStart National Certificate of Achievement; <i>ServSafe Food Protection Manager</i>	46,550
** Stackable Credentials				
*** Average Annual Wage - reflects the occupation listed which requires bachelors degree and/or substantial experience in the field. This salary is not likely achievable for students completing the associated credential				

*2016 Phase Out Occupations: Occupations on the 2015 SB155 Certifications/Credentials List but no longer meet the In-Demand/Wage/Education criteria (Only for students who started courses in 2014-2015; Credential must be earned before December 2016)				
51-2099	48.0503, 48.0511	Assemblers and Fabricators, All Other	<i>Manufacturing Skills Standards Council (MSSC)</i> - Certified Production Technician (CPT), <i>National Institute for Metalworking Skills (NIMS)</i> - Machining Level I	\$26,480

*Occupations fall below the minimum demand, wage, or educational requirement criteria; in some cases credentials may also be associated with in-demand occupations listed above

*2015 Phase Out Occupations: Occupations on the 2014 SB155 Certifications/Credentials List but no longer meet the In-Demand/Wage/Education criteria (Only for students who started courses in 2013-2014; Credential must be earned before December 2015)				
51-8093	41.0301, 41.0303	Petroleum Pump System Operators, Refinery Operators, and Gaugers	<i>National Center for Construction Education and Research (NCCER)</i> - Core Curriculum: Introduction to Craft Skills and Control Center Operations	\$61,340
45-2091	01.0204	Agricultural Equipment Operators	Commercial Driver License (CDL)	\$31,510
35-1012	12.0504	First-line Supervisors/Managers of Food Preparation and Serving workers	<i>National Restaurant Association Educational Foundation</i> - ProStart National Certificate of Achievement; <i>ServSafe Food Protection Manager</i>	\$27,290
49-3021	47.0603	Automotive Body and Related Repairers	<i>Automotive Service Excellence (ASE)</i> -- ASE Student Certification on any of the following areas: Painting & Refinishing, Structural Analysis & Damage Repair, Non-Structural Analysis & Damage Repair, or Mechanical & Electrical; <i>Inter-Industry Conference on Auto Collision Repair (I-CAR)</i> --Refinish Technician ProLevel 1	\$38,900
53-7051	49.9999	Industrial Truck and Tractor Operators	Commercial Driver License (CDL)	\$32,350

*Occupations fall below the minimum demand, wage, or educational requirement criteria; in some cases credentials may also be associated with in-demand occupations listed above

CONTACT INFORMATION FOR THE CERTIFICATIONS THAT MEET THE LEGISLATED CREDENTIAL INCENTIVE

HIGH DEMAND CAREER	CERTIFICATION	CONTACT INFORMATION
Truck Drivers, Heavy and Tractor Trailer, Truck Drivers, Light or Delivery Services, Industrial Truck & Tractor Operators	Commercial Driver's License (CDL)	Students must enroll in a CDL course at a community or technical college
Nursing Assistants, Orderlies	Certified Nurse Aide (CNA)	Credentialing offered through the Kansas Department of Health & Environment. Website: http://www.kdheks.gov/hoc/cna.html
Electrician	NCCER – Core Curriculum: Introduction to Craft Skills AND Electrical Level 1	Cloys Bayless – cbayless@agcks.org 316-634-6391
Construction Laborers	NCCER – Core Curriculum: Introduction to Craft Skills AND Construction Laborer	Cloys Bayless – cbayless@agcks.org 316-634-6391
Automotive Service Technicians & Mechanics	National Automotive Student Skills Standards Assessment (NA3SA) – 4 automotive assessments (Brakes, Electrical/Electronic Systems, Engine Performance, and Suspension & Steering)	Developed by ASE in partnership with AYES & NATEF. Website: http://www.na3sa.com/
	Automotive Service Excellence (ASE) – Automotive Service Technician Level 1	ASE Website: https://www.ase.com/Home.aspx
Plumbers, Pipefitters, & Steamfitters	NCCER – Core Curriculum: Introduction to Craft Skills AND Plumbing & Pipefitting Level 1	Cloys Bayless – cbayless@agcks.org 316-634-6391
Bus & Truck Mechanics and Diesel Engine Specialists	National Automotive Student Skills Standards Assessment (NA3SA) – 4 Medium/Heavy Truck Assessments (Brakes, Electrical/Electronic Systems, Diesel Engines, and Steering & Suspension)	Developed by ASE in partnership with AYES & NATEF. Website: http://www.na3sa.com/
	Automotive Service Excellence (ASE) – Medium & Heavy Truck (Diesel)	ASE Website: https://www.ase.com/Home.aspx
Computer User Support Specialist	CISCO – Certified Entry Networking Technician	Available through various vendors such as Certiport (www.certiport.com), Global Knowledge

		(www.globalknowledge.com), and Microsoft (www.microsoft.com)
Computer User Support Specialist (contd.)	CompTIA – A+	Available through various vendors such as Certiport (www.certiport.com), Global Knowledge (www.globalknowledge.com), and Microsoft (www.microsoft.com)
	CompTIA – Network +	Available through various vendors such as Certiport (www.certiport.com), Global Knowledge (www.globalknowledge.com), and Microsoft (www.microsoft.com)
	CISCO – Certified Network Associate	Available through various vendors such as Certiport (www.certiport.com), Global Knowledge (www.globalknowledge.com), and Microsoft (www.microsoft.com)
	CISCO – Certified Network Professional	Available through various vendors such as Certiport (www.certiport.com), Global Knowledge (www.globalknowledge.com), and Microsoft (www.microsoft.com)
	Microsoft Technology Associate (MTA)	
	Microsoft Certified Solutions Associate (MCSA)	
Heating, Air Conditioning, & Refrigeration Mechanics & Installers	North American Technician Excellence (NATE) – HVAC-R	www.natex.org This requires students to take 2 exams. The first is a Core exam either in service or in installation. This is followed by a specialty area exam (such as AC, Heat Pumps, etc.). Is designed as a journeyman certification but exams can be taken by high school students. Go to website and search using your zip code to find a testing site/proctor in your area.
	HVAC Excellence – Employment Ready Certification, Professional Level Technician Certification	www.hvacexcellence.org Employment Ready Certifications available in the following areas: Light Commercial Air Conditioning, Air Conditioning, Basic Refrigeration & Charging Procedures, Electric, Gas, & Oil Heat, Heat Pump, System Diagnosis & Troubleshooting Procedures, Light Commercial Refrigeration. Professional Level Technician Certification: requires 2 yrs. Field

		experience and must pass Core exam and one of the following specialties: Heating, Air conditioning, or Light Commercial HVAC
Heating, Air Conditioning, & Refrigeration Mechanics & Installers (Contd.)	Industry Competency Exams (ICE) – Residential, Light Commercial or Commercial HVAC (3 separate exams)	Designed for entry-level certification. Exam is online through AHRI (Air Cond., Heating, & Refrigeration Institute). Cost is \$30. Three exams are available: Residential, Light Commercial, & Commercial. Someone (not the instructor) must register as a Chief Examiner (proctor) for the school. Contact person is Kristen Fleming – kfleming@ahrinet.org 703-600-0337. Website – www.ahrinet.org
Welders, Cutters, Solderers & Brazers	American Welding Society (AWS) – 3 Position Qualifications (AWS – 1F, 2F, & 1G)	Website: http://www.aws.org/w/a/
	American Society of Mechanical Engineers (ASME) Section 9 Standards (6G Level)	
Carpenters	NCCER – Core Curriculum: Introduction to Craft Skills AND Carpentry Level 1	Cloys Bayless – cbayless@agcks.org 316-634-6391
Assemblers & Fabricators	Manufacturing Skills Standards Council (MSSC) – Certified Production Technician	www.msscusa.org Student must pass four assessments to attain the CPT Certification. Assessments are: Safety; Quality Practices & measurement; Manufacturing Processes & Production; Maintenance Awareness. Standards being assessed are available on the website.
	National Institute for Metalworking Skills (NIMS) – Machining Level 1	https://www.nims-skills.org Requires both a performance test & a theory test. Requires a \$40 student registration fee, then the Performance exam is free. The Theory exam is \$35 for Level 1
Machinists	Manufacturing Skills Standards Council (MSSC) – Certified Production Technician	www.msscusa.org Student must pass four assessments to attain the CPT Certification. Assessments are: Safety; Quality Practices & measurement; Manufacturing Processes & Production; Maintenance Awareness. Standards being assessed are available on

		the website.
	National Institute for Metalworking Skills (NIMS) – Machining Level 1	https://www.nims-skills.org Requires both a performance test & a theory test. Requires a \$40 student registration fee, then the Performance exam is free. The Theory exam is \$35 for Level 1
Industrial Machinery Mechanics	Manufacturing Skills Standards Council (MSSC) – Certified Production Technician	www.msscusa.org Student must pass four assessments to attain the CPT Certification. Assessments are: Safety; Quality Practices & Measurement; Manufacturing Processes & Production; Maintenance Awareness. Standards being assessed are available on the website.
	NCCER – Core Curriculum: Introduction to Craft Skills AND Industrial Maintenance Level 1	Cloys Bayless – cbayless@agcks.org 316-634-6391
Petroleum Pump System Operators, Refinery Operators, and Gaugers	NCCER – Core Curriculum: Introduction to Craft Skills AND Control Center Operations	Cloys Bayless – cbayless@agcks.org 316-634-6391
Sheet Metal Workers	Manufacturing Skills Standards Council (MSSC) – Certified Production Technician	www.msscusa.org Student must pass four assessments to attain the CPT Certification. Assessments are: Safety; Quality Practices & measurement; Manufacturing Processes & Production; Maintenance Awareness. Standards being assessed are available on the website.
	NCCER – Core Curriculum: Introduction to Craft Skills and Sheet Metal Level 1	Cloys Bayless – cbayless@agcks.org 316-634-6391
	National Institute for Metalworking Skills (NIMS) – Metal Forming 1	https://www.nims-skills.org Requires both a performance test & a theory test. Requires a \$40 student registration fee, then the Performance exam is free. The Theory exam is \$35 for Level 1
Cement Masons & Concrete Finishers	NCCER – Core Curriculum: Introduction to Craft Skills AND Concrete Finishing	Cloys Bayless – cbayless@agcks.org 316-634-6391
	NCCER – Core Curriculum: Introduction to Craft Skills AND Introduction to Masonry	Cloys Bayless – cbayless@agcks.org 316-634-6391

	Level 1	
Structural Metal Fabricators & Fitters	Manufacturing Skills Standards Council (MSSC) – Certified Production Technician	www.msscusa.org Student must pass four assessments to attain the CPT Certification. Assessments are: Safety; Quality Practices & measurement; Manufacturing Processes & Production; Maintenance Awareness. Standards being assessed are available on the website.
	National Institute for Metalworking Skills (NIMS) – Metal Forming 1	https://www.nims-skills.org Requires both a performance test & a theory test. Requires a \$40 student registration fee, then the Performance exam is free. The Theory exam is \$35 for Level 1
	NCCER – Core Curriculum: Introduction to Craft Skills AND Sheet Metal Level 1	Cloys Bayless – cbayless@agcks.org 316-634-6391
Agricultural Equipment Operators	Commercial Driver’s License (CDL)	Students must enroll in a CDL course at a community or technical college
Farmers, Ranchers, & Other Agricultural Managers	KS Dept. of Agriculture (KDA) – KS Private Pesticide Applicators Certificate	Jeanne Fox - Jeanne.Fox@kda.ks.gov 785-296-2263
	KDA – Agriculture Skills and Competencies Certificate	Kate Bormann - Kate.Bormann@kda.ks.gov 785-296-7063
First-line Supervisors/Managers of Food Preparation and Serving Workers	National Restaurant Association Educational Foundation – ProStart National Certification of Achievement	Vsiit: http://www.nraef.org/educators/prostart for general information. Neeley Carlson: ncarlson@krha.org for info on the program agreement. Bart.Zwiers@pearson.com to purchase curriculum.
Computer Controlled Machine Tool Operators, Metal and Plastic	Manufacturing Skills Standards Council (MSSC) – Certified Production Technician	www.msscusa.org Student must pass four assessments to attain the CPT Certification. Assessments are: Safety; Quality Practices & Measurement; Manufacturing Processes & Production; Maintenance Awareness. Standards being assessed are available on the website.
	National Institute for Metalworking Skills (NIMS) – Machining Level 1	https://www.nims-skills.org Requires both a performance test & a theory test. Requires a \$40 student registration fee, then the Performance exam is free. The Theory exam is \$35 for

		Level 1
Automotive Body and Related Repairers	Automotive Service Excellence (ASE)—ASE Student Certification on any of the following areas: Painting & Refinishing, Structural Analysis & Damage Repair, Non-Structural Analysis & Damage Repair, or Mechanical & Electrical;	http://www.na3sa.com/ Pricing: \$15 per student, per academic year. The fee allows for a SINGLE attempt at any or all tests in a series.
	Inter-Industry Conference on Auto Collision Repair (I-CAR)-- Refinish Technician ProLevel 1	http://www.i-car.com/html_pages/training/roles2.shtml Must utilize I-Car curriculum, from an I-CAR certified school.

Career Marketing Fact Sheets

The following pages contain individual Fact Sheets for each occupation listed on the Qualifying Certifications/Credentials Chart found on page 17 of this document.

Each Fact Sheet lists:

- Job Description
- Types of Available Jobs
- National & Kansas Job Outlook
- Skills Required for the Occupation
- Education / Training Required for the Occupation
- High School Pathways that Offer the Training
- College Programs that Offer the Training
- Apprenticeship Opportunities
- Scholarship/Financial Assistance Opportunities
- Available Certifications

These sheets can be used as marketing tools to be distributed to students, parents, Advisory Committee members, and other stakeholders.



Fact Sheet on Assemblers & Fabricators Training, & Certification

What does an Assembler/Fabricator do?

Assemblers & Fabricators assemble both finished products and the parts that go into them. They use tools, machines, and their hands to make engines, computers, aircraft, toys, electronic devices, and more.

Closely related occupations include Structural Metal Fabricators and Fitters. In this occupation workers cut, align, and fit together structural metal parts and may help weld or rivet the parts together.

What types of jobs are available?

Assemblers and Fabricators usually work for manufacturing companies that produce items such as engines, computers, automobiles, large appliances, etc.

What is the national job outlook?

It is estimated that there will be 28,700 new workers needed in this industry by 2020. The national job growth rate for assemblers/fabricators by 2020 is +11%, with a median salary of \$27,040 per year.

Structural Metal Fabricators & Fitters will be needed to fill 12,700 positions by 2020, which shows a job growth rate of +16%. The median salary is \$34,530.

What is the job outlook in Kansas?

Assemblers, Fabricators, Structural Metal Fabricators and Fitters are on the list of High Demand Jobs for Kansas. The median salary for Assemblers and Fabricators in Kansas is \$54,419 per year. Due to new positions and retirements, Kansas is expected to need 790 new workers in this occupation by 2018.

Structural Metal Fabricators and Fitters have a median salary of \$38,976. Due to new positions and retirements, Kansas is expected to need 460 new workers in this occupation by 2018.

What skills are required for Assemblers/Fabricators?

The physical skills required of an assembler/fabricator include good color vision, dexterity, physical strength, and stamina. Other skills include mathematics, attention to detail, process monitoring, and the ability to understand technical manuals and schematics.

What type of training/education do these jobs require?

Assemblers/Fabricators can obtain technical training through a high school pathway, an apprenticeship, and/or 1-2 years of training at a technical or community college.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that include teaching assembling & fabricating skills. Check with your high school counselor to see if these skills are included in your high school's Manufacturing Production or Manufacturing Maintenance pathways.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer 1-2 year programs for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Manufacturing Technology
- Welding Technology
- Sheet Metal Technology

Apprenticeship opportunities for Assemblers/Fabricators can be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are several certifications available to workers in this field. Professional organizations that offer certification testing include:

- Manufacturing Skills Standards Council (MSSC)
- Natl. Center for Construction Educ. & Research (NCCER)
- National Institute for Metalworking Skills (NIMS)



Fact Sheet on Automotive Body and Related Repairers

What does an Automotive Body Repairer do?

Automotive Body & Related Repairers restore, refinish, and replace vehicle bodies and frames, windshields, and window glass. Although they repair all types of vehicles, most work primarily on cars, sport utility vehicles, and small trucks.

What types of jobs are available?

Automotive Service Technicians usually work for private companies including automotive dealerships, although many are self-employed.

What is the national job outlook?

It is estimated that there will be 32,700 job openings in this industry by 2020. The national job growth rate for Automotive Body Repairers by 2020 is +19%, with a median salary of \$38,130 per year.

What is the job outlook in Kansas?

Automotive Body Repairers are on the list of High Demand Jobs for Kansas. The median salary for these workers in Kansas is \$35,090 per year. Due to new positions and retirements, Kansas is expected to need 518 new workers in this occupation by 2020. This is a job growth of 8%.

What skills are required for an Automotive Body Repairer?

The physical skills required of an Automotive Body Repairer include the ability to lift heavy parts and tools. They also need excellent manual dexterity and eye-hand coordination and the ability to work in awkward & cramped positions. Following safety procedures and practices is a necessity to prevent injury. Repair technicians work indoors in body shops, which are often noisy, but well-ventilated to disperse dust and paint fumes. Other skills include welding, the ability to listen, follow directions, communicate with customers and clients, problem solving, understand safety requirements, use of hand and power tools, and knowledge of handling, recycling and disposal of hazardous materials.

What type of training/education do these jobs require?

Automotive Body Repairers can obtain technical training through a high school pathway, an apprenticeship, and/or training at a technical or community college.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that include teaching automotive body repair and refinishing skills. Check with your high school counselor to see if these skills are included in your high school's Mobile Equipment Maintenance pathway.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer short and/or long-term programs for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Automotive Collision Repair
- Automotive Collision Technology

Apprenticeship opportunities for Automotive Body Repairers can be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are certifications available to workers in this field. Professional organizations that offer certification testing are:

- Automotive Service Excellence (ASE)
- Inter-Industry Conference on Auto Collision Repair (I-CAR)



Fact Sheet on Automotive Service Technician Training, & Certification

What does an Automotive Service Technician do?

Automotive Service Technicians inspect, maintain, and repair cars and light trucks. They test parts and systems, identify mechanical problems, use computerized diagnostic equipment, and perform basic automotive maintenance tasks.

What types of jobs are available?

Automotive Service Technicians usually work for private companies including automotive dealerships, although approximately 18% are self-employed.

What is the national job outlook?

It is estimated that there will be 124,800 available jobs in this industry by 2020. The national job growth rate for Automotive Service Technicians by 2020 is +17%, with a median salary of \$35,790 per year.

What is the job outlook in Kansas?

Automotive Service Technicians are on the list of High Demand Jobs for Kansas. The median salary for these workers in Kansas is \$33,883 per year. Due to new positions and retirements, Kansas is expected to need 1,540 new workers in this occupation by 2018. This is a job growth of 4%.

What skills are required for an Automotive Service Technician?

The physical skills required of an Automotive Service Technician include the ability to lift heavy parts and tools. They also need excellent manual dexterity and eye-hand coordination. Following safety procedures and practices is a necessity. Other skills include the ability to listen, follow directions, communicate with customers and clients, problem solving, understand safety requirements, use of hand and power tools, knowledge of computerized diagnostic tools, and knowledge of handling, recycling and disposal of hazardous materials.

What type of training/education do these jobs require?

Automotive Service Technicians can obtain technical training through a high school pathway, an apprenticeship, and/or training at a technical or community college.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that include teaching automotive service technician skills. Check with your high school counselor to see if these skills are included in your high school's Mobile Equipment Maintenance pathway.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer short and/or long-term programs for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Automotive Technology
- Diesel Technology

Apprenticeship opportunities for Automotive Service Technicians can be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are certifications available to workers in this field. Professional organizations that offer certification testing are:

- Natl. Auto Student Skills Standards Assessment (NATEF)
- Automotive Service Technician (ASE)



Kansas State Department of Education Career and Technical Education (CTE)



Fact Sheet on Carpenter Training, & Certification

What does a Carpenter do?

A Carpenter constructs and repairs building frameworks and structures – such as stairways, doorframes, partitions, and rafters – made from wood and other materials. They may also install kitchen cabinets, siding, and drywall, or even help construct bridges. Carpenters are one of the most versatile construction occupations, with workers usually doing a variety of tasks.

What types of jobs are available?

There are, basically, three types of carpenters.

Residential Carpenters specialize in home, townhome, and condominium building and remodeling.

Commercial Carpenters remodel and help build commercial office buildings, hospitals, hotels, schools, shopping malls, etc.

Industrial Carpenters work in civil and industrial settings where they put up scaffolding and build and set forms for pouring concrete.

What is the national job outlook?

It is estimated that there will be 196,000 available jobs in this industry by 2020. The national job growth rate for construction laborers by 2020 is +20%, with a median salary of \$39,530 per year.

What is the job outlook in Kansas?

Carpenters are on the list of High Demand Jobs for Kansas. The median salary for these workers in Kansas is \$36,434 per year. Due to new positions and retirements, Kansas is expected to need 1,690 new workers in this occupation by 2018. This is a job growth of 4.4%.

What skills are required for a Carpenter?

The physical skills required of a Carpenter may require work at great heights or outdoors in all kinds of weather. Physical strength and stamina are necessary. Other skills include the ability to listen, follow directions, understand safety requirements, blueprint reading, measurement mathematics, use of hand and power tools, and constant awareness of the surroundings.

What type of training/education do these jobs require?

Carpenters can obtain technical training through a high school pathway, an apprenticeship, and/or training at a technical or community college.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that include teaching carpentry skills. Check with your high school counselor to see if these skills are included in your high school's Construction pathway.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer short and/or long-term programs for this occupation. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Construction Trades
- Carpentry / Carpenter

Apprenticeship opportunities for Carpenters can be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are certifications available to workers in this field. A professional organization that offers certification testing is:

- Natl. Center for Construction Education & Research (NCCER)



Fact Sheet on Cement Mason / Finisher, Training, & Certification

What does a Cement Mason do?

Cement Masons & Finishers set the forms that hold wet concrete, and spread, level and smooth concrete for residential, commercial and industrial applications. Concrete is used in floors, driveways, sidewalks, retaining walls, building foundations and roads. Some entire buildings are made of concrete.

Closely related occupations include stone masons and brick masons. These occupations use a cement mortar to build walls, floors and sidewalks out of stone and brick.

What types of jobs are available?

Many concrete masons are self-employed or are laborers for small companies that mainly perform residential and commercial work. Larger companies have positions for managers and supervisors.

What is the national job outlook?

It is estimated that there will be 72,900 job openings in this industry by 2020. The national job growth rate for Cement Masons/Finishers by 2020 is 29%, which is growth much faster than average. The median salary for a Cement Mason is \$35,600 per year.

Stone and Brick Masons have a projected job growth of 29% by 2020, with a median salary of \$46, 800. There are 54,500 projected job openings in this occupation by 2020.

What is the job outlook in Kansas?

Cement Masons & Finishers are on the list of High Demand Jobs for Kansas. The Kansas job growth rate for this occupation is 6% by 2018, with a median salary of \$34,651 per year. Due to new positions and retirements, Kansas is expected to need 720 new workers in this occupation by 2018.

Stone & Brick Masons have a projected Kansas job growth rate of 5%, with a median salary of \$45,914. Due to new positions and retirements, Kansas is expected to need 370 new workers in this occupation by 2018.

What skills are required for a Cement Mason/Finisher?

The physical skills required of a cement mason include good manual dexterity, trunk strength, coordination, visualization, and flexibility. Other skills include knowledge of building and construction materials and methods, mechanical tool usage, blueprint reading, safety, critical thinking, mathematics, communications, decision making, and time management.

Cement Masons who are self-employed must also have a background in business skills.

What type of training/education do these jobs require?

Cement Masons/Finishers can obtain technical training through a high school pathway, an apprenticeship, and/or 1 year of training at a technical or community college. Although there are some stand-alone certificate programs in Bricklaying/Stone Mason at Kansas colleges, masonry skills are usually taught within a broader construction program.

Does my high school offer the training?

Many Kansas high schools have an approved career and technical education Construction pathway that includes teaching masonry skills. Check with your high school construction instructor or your high school counselor to see if these skills are included in your high school's pathway.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer one year certificate programs for these stone and brick masons. As with the high schools, Cement Mason skills are usually taught within a 1-2 year Construction program. Check with your local postsecondary institutions for programs/degrees in the Construction field.

Apprenticeship opportunities for Cement, Stone, & Brick Masons can be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

While there are no professional certifications required for employment as a Cement Mason in Kansas, there is a certification available through NCCER. Check with your local high school or college instructor for details. The OSHA 10 Hour Construction Safety Course/Certification may be a job requirement for some companies.



Fact Sheet on Nursing Assistants & Orderlies Training, & Certification

What do Nursing Assistants, Orderlies, & Attendants do?

Nursing Assistants, Orderlies, & Attendants help provide basic care for patients in hospitals and residents of long-term care facilities, such as nursing homes.

Care provided may include taking and recording vital signs, bathing patients, changing bedding, serving meals, and providing personal care assistance.

What types of jobs are available?

Jobs are available for these positions in hospitals, rehabilitation facilities, nursing homes, and companies that provide home health care.

What is the national job outlook?

It is estimated that there will be 302,000 new workers needed in this industry by 2020. The national job growth rate for nursing aides, orderlies, and attendants by 2020 is +20%, with a median salary of \$24,010 per year.

What is the job outlook in Kansas?

Nursing Aides, Orderlies & Attendants are on the list of High Demand Jobs for Kansas. The expected job growth rate is +18% and the median salary for these occupations in Kansas is \$22,059 per year. Due to new positions and retirements, Kansas is expected to need 5,490 new workers in this occupation by 2018.

What skills are required for Nursing Assistants, Orderlies, and Attendants?

The physical skills required of a nursing assistant, orderly, or attendant include good physical strength, and stamina. Other skills include communication, attention to detail, and monitoring. Some workers may dispense medications, depending upon the state and the skill/certification level.

What type of training/education do these jobs require?

Nursing Aides, Orderlies & Attendants can obtain technical training through a high school pathway, an apprenticeship, and/or 1 year of training at a technical or community college.

People in these occupations often continue their education to become Certified Medical Assistants, Licensed Practical Nurses or Registered Nurses.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education Health Science pathways that include teaching the needed skills for these occupations. Check

with your high school counselor to see if these skills are included in your high school's Health Science Pathway.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer stand-alone short-term programs and/or 1 year programs for these and related occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Certified Nursing Assistant
- Certified Medical Assistant
- Medical/Clinical Assistant
- Clinical/Medical Laboratory Assistant
- Physical Therapist Assistant
- Home Health Aide
- Pharmacy Technician/Assistant

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are several certifications available to workers in this field. Professional certifications include:

- Certified Nursing Assistant
- Certified Medical Assistant
- Home Health Aide
- Pharmacy Assistant



Kansas State Department of Education Career and Technical Education (CTE)



Fact Sheet on Computer Support Specialist Training, & Certification

What does a Computer Support Specialist do?

Computer support specialists provide help and advice to people and organizations using computer software or equipment. They test and evaluate network systems, perform regular maintenance, and troubleshoot local area networks (LANs), wide area networks (WANs), and Internet Systems.

What types of jobs are available?

Some, called Technical Support Specialists, support information technology (IT) employees within their organization.

Others, called Help-Desk Technicians, assist non-IT users who are having computer problems.

What is the national job outlook?

It is estimated that there will be 110,000 available jobs in this industry by 2020. The national job growth rate for Computer Support Specialists by 2020 is +18%, with a median salary of \$46,260 per year.

What is the job outlook in Kansas?

Computer Support Specialists are on the list of High Demand Jobs for Kansas. The median salary for these workers in Kansas is \$39,767 per year. Due to new positions and retirements, Kansas is expected to need 730 new workers in this occupation by 2018. This is a job growth of 13%.

What skills are required for an Automotive Service Technician?

The physical skills required of a Computer Support Specialist include the ability to sit for long periods of time. They need good manual dexterity and are prone to carpal tunnel syndrome and eye strain. Other needed skills include specialized computer skills (both hardware and software), and the ability to troubleshoot, problem solve and manage time well.

What type of training/education do these jobs require?

Computer Support Specialists can obtain technical training through a high school pathway, an apprenticeship, and/or training at a technical or community college.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that include teaching computer support specialist skills. Check with your high school counselor to see if these skills are included in your high school's Information Support & Services Pathway or Network Systems Pathway.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer short and/or long-term programs for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Computer Installation & Repair Technology
- Computer & information Science
- Computer Systems Networking

Apprenticeship opportunities for Computer Support Specialists may be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are certifications available to workers in this field that include:

- Cisco – Certified Entry Networking Technician, Certified Network Associate, and Certified Network Professional
- CompTIA – A+, and Network +



Fact Sheet on Construction Laborer Training, & Certification

What does a Construction Laborer do?

A Construction Laborer does many basic tasks that require physical labor on construction sites. Duties may include such things as compacting soil, dig trenches, set up and dismantle barricades, forms and scaffolding, remove debris and hazards, operate equipment such as cement mixers, or load and unload building materials.

They may work as helpers for a variety of crafts persons such as brickmasons, carpenters, electricians, painters, pipefitters, and roofers.

What types of jobs are available?

Construction laborers work in a variety of construction areas including, building homes and businesses, tearing down buildings, hazardous material removal, building highways and roads, and digging tunnels & mine shafts.

What is the national job outlook?

It is estimated that there will be 212,400 available jobs in this industry by 2020. The national job growth rate for construction laborers by 2020 is +21%, with a median salary of \$29, 280 per year.

What is the job outlook in Kansas?

Construction Laborers are on the list of High Demand Jobs for Kansas. The median salary for these workers in Kansas is \$27,988 per year. Due to new positions and retirements, Kansas is expected to need 2,410 new workers in this occupation by 2018. This is a job growth of 12.7%.

What skills are required for a Construction Laborer?

The physical skills required of a construction laborer are very demanding and may require work at great heights or outdoors in all kinds of weather. Physical strength and stamina are necessary. Other skills include the ability to listen, follow directions, understand safety requirements, and constant awareness of the surroundings.

What type of training/education do these jobs require?

Construction laborers can obtain technical training through a high school pathway, an apprenticeship, and/or short-term training at a technical or community college.

Many construction laborers will continue to gain skills to become a carpenter, brick mason, electrician, painter, pipefitter, or other skilled craftsman.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that include teaching machinist skills. Check with your high school counselor to see if these skills are included in your high school's Construction pathway.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer short and/or long-term programs for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Construction Trades
- Carpentry / Carpenter
- Construction/ Heavy Equipment/ Earthmoving Equipment Operation

Apprenticeship opportunities for Construction laborers can be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are certifications available to workers in this field. A professional organization that offers certification testing is:

- Natl. Center for Construction Education & Research (NCCER)



Kansas State Department of Education Career and Technical Education (CTE)



Fact Sheet on Bus & Truck Mechanics / Diesel Engine Specialist Training, & Certification

What does a Bus & Truck Mechanic / Diesel Engine Specialist do?

Bus & Truck Mechanics / Diesel Engine Specialists (Diesel Service Technicians) inspect, repair, or overhaul buses, trucks, and anything else with a diesel engine. They diagnose malfunctions, perform routine maintenance, replace malfunctioning components, inspect brake, electrical, steering, transmission, and engine systems, and test effectiveness of repairs.

What types of jobs are available?

Diesel Service Technicians are usually employed full time to work in shops that may be open seven days a week, including evenings to accommodate over-the-road trucks that run long hours. Some shops offer road-side maintenance and repair services 24-hours a day.

Related occupational fields include automotive service technician, heavy vehicle and mobile equipment service technician, and small engine mechanic.

What is the national job outlook?

It is estimated that there will be 35,200 available jobs in this industry by 2020. The national job growth rate for this occupation by 2020 is +15%, with a median salary of \$40,850 per year.

What is the job outlook in Kansas?

Diesel Service Technicians are on the list of High Demand Jobs for Kansas. The median salary for these workers in Kansas is \$37,802 per year. Due to new positions and retirements, Kansas is expected to need 1,010 new workers in this occupation by 2018. This is a job growth of just under 6%.

What skills are required for a Diesel Service Technician?

The physical skills required of a Diesel Service Technician require the ability to lift heavy parts and tools. They also need excellent manual dexterity and eye-hand coordination. Following safety procedures and practices is a necessity. Other skills include the ability to listen, follow directions, communicate with customers and clients, problem solving, understand safety requirements, use of hand and power tools, knowledge of computerized diagnostic tools, and knowledge of handling, recycling and disposal of hazardous materials.

What type of training/education do these jobs require?

Diesel Service Technicians can obtain technical training through a high school pathway, an apprenticeship, and/or training at a technical or community college.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that include teaching automotive service and repair skills. Check with your high school counselor to see if these skills are included in your high school's Mobile Equipment Maintenance pathway.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer short and/or long-term programs for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Diesel Technology
- Automotive Technology

Apprenticeship opportunities for Diesel Service Technicians may be available and can be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are certifications available to workers in this field. They include:

- Natl. Auto Student Skills Standards Assessment (NATEF)
- Medium & Heavy Truck Service Technician (ASE)



Kansas State Department of Education Career and Technical Education (CTE)



Fact Sheet on Electrician Careers, Training, & Certification

What do Electricians do?

Electricians install and maintain, electrical wiring and lighting systems in residential, commercial and industrial settings. They are also responsible for installation and maintenance of security systems and fire detection systems, as well as performing large motor repair and other industrial maintenance jobs. They sometimes also install telephone and computer system wiring.

What types of jobs are available?

Jobs are available in:
Electrical
Industrial Maintenance
Wholesale Electrical Supply Sales
Building Inspection

What is the national job outlook?

According to the Occupational Outlook Handbook, the national job growth rate for Electricians by 2020 is +23%, which is growth faster than average. The national median salary in 2010 was \$23.20 per hour.

What is the job outlook in Kansas?

Electricians are on the list of High Demand Jobs for Kansas. The Kansas job growth rate for this occupation by 2018 is +7%, with a median salary of \$21.21 per hour.

Sales representatives are projected to have a Kansas job growth rate of +9% by 2018 and have a median salary of \$29.18 per hour.

Building Inspectors are projected to have a Kansas job growth rate of +20% by 2018 and have a median salary of \$21.97 per hour.

What kind of skills do I need?

An electrician is required to have skilled knowledge in the trade which in addition to the hands-on skills, includes reading blueprints & schematics, technical mathematics, material and job estimating, use of hand and power tools, use of various types of voltage meters, and knowledge of local, state & national electrical codes. Those who are self-employed must also have a good working knowledge of business practices including accounting, invoicing, and marketing.

Retail & wholesale sales requires a business training background and knowledge of the parts and uses of electrical supplies and materials.

Building Inspectors work for local municipalities and require knowledge of both building and electrical codes.

What type of training/education do these jobs require?

Many electricians learn their trade through apprenticeships, although many high school pathways and postsecondary technical and community college programs offer courses that teach entry-level skills for these occupations.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that may include the courses you need. Check with your high school counselor to see if either of the following pathways are offered at your school and include the necessary courses:

Construction Manufacturing Maintenance

What other opportunities are available for this training?

Many Kansas technical colleges, community colleges and universities offer one-year certification and/or two-year associate degree options for this occupation. Check with your local postsecondary institutions for programs/degrees in the following areas:

Electrical Technology
Industrial Maintenance & Installation

The Kansas Registered Apprenticeship Program also has opportunities available, and can be contacted at 316-771-6848 or www.KansasApprenticeship.org.

Other apprenticeship opportunities can be located by contacting the Kansas Department of Commerce or

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

The National Center for Construction Education and Research (NCCER) has professional certifications available for electricians. Once a student earns the NCCER certification for Introduction to Craft Skills, they can then work toward earning the certification in Electrical Level 1. This certification can be earned through skills programs & pathways at local high schools, Kansas Technical Colleges and Kansas Community Colleges. Check with your local secondary and postsecondary institutions for certification availability.

Are there other job requirements?

Electrician is a licensed occupation. An apprentice license can be obtained through your local city licensing office. To become a journeyman or master electrician requires passing the Pro-Metric National Licensing exam. A passing grade on this exam will allow you to obtain a journeyman or master license through your local city licensing office.



Kansas State Department of Education Career and Technical Education (CTE)



Fact Sheet on Farmer, Rancher, & Other Agricultural Manager Training, & Certification

What do Farmers, Ranchers & Other Agricultural Managers do?

Workers in this industry run establishments that produce crops, livestock, and dairy products. They spend a considerable amount of time working outdoors performing many strenuous physical activities, and most maintain and operate machinery.

What types of jobs are available?

Farmers and Ranchers usually own their own land and manage it themselves. As the cost of running smaller farms & ranches increases, many farmers have developed successful market niches with opportunities in horticulture and organic food production.

Agricultural Managers usually work for larger consolidated farming and ranching organizations, where the owner may not reside on the property.

What is the national job outlook?

As more farms and ranches consolidate, the projected outlook on the national level shows a decline by 2020 of about 96,000 workers. The median salary for persons in this industry is \$60,750 per year.

What is the job outlook in Kansas?

What skills are required for a Farmer, Rancher, and Other Agricultural Manager?

The physical skills required for this industry include stamina to work long hours, and physical strength to lift heavy loads. Other skills include ability to safely use & maintain farm machinery and hand & power tools, knowledge in handling and disposing of hazardous chemicals, agricultural science, and use of computer and GIS technology.

What type of training/education do these jobs require?

Many Farmers, Ranchers and Other Agricultural Managers typically gain skills through work experience and usually have at least a high school diploma. As farm and land management has grown more complex, more farmers and ranchers now have a bachelor's degree in agriculture or a related field.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that include teaching agricultural skills. Check with your high school counselor to see if these pathways are offered at your school:

- Power, Structural & Technical Systems
- Plant Systems
- Agriculture Science

What college programs offer this training?

Some Kansas technical colleges, community colleges and universities offer 1-4 year programs for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Agribusiness
- Agriculture & Food Products Processing
- Agriculture Production

Apprenticeship opportunities for farming & ranching occupations can be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are several certifications available to workers in this field. Professional organizations that offer certification testing include:

- Kansas Dept. of Agriculture:
 - KS Commercial Pesticide Applicators Certificate
 - Agriculture Skills & Competencies Certificate



Fact Sheet on Firefighter Careers, Training, & Certification

What does a Firefighter do?

Firefighters protect the public by responding to fires and other emergencies. They are frequently the first emergency personnel on the scene of an accident and most calls responded to are medical, not fire, emergencies.

What types of jobs are available?

Some firefighters specialize in a particular area such as fighting forest fires or working with hazardous material removal. Since most calls are for medical emergencies, firefighters are also trained Emergency Medical Technicians (EMT) and some are also paramedics. Advanced firefighter careers include fire inspectors and investigators and firefighter trainers.

What is the national job outlook?

It is estimated that there will be 26,600 new jobs in this industry by 2020. The national job growth rate firefighters by 2020 are +9% and for related protective service occupations it is +11%. The median salary for firefighters is \$45,250 per year.

The national job growth rate for Fire Inspectors and Investigators is +9% with a median salary of \$52,230 per year.

What is the job outlook in Kansas?

Firefighters are on the list of High Demand Jobs for Kansas. The Kansas job growth rate for Firefighters by 2018 is +18.6%, with a median salary of \$34,302 per year. Between the growth in new jobs for firefighters and replacement of retiring firefighters, Kansas is expected to need 1670 new firefighters by 2018.

Emergency Medical Technicians are expecting a job growth of +8% with a median salary of \$24,637 per year.

For all protective service occupations the expected job growth is +11% with median salary of \$32,624 per year.

Is this a high tech occupation?

Firefighting requires a high level of knowledge in the fields of science and health care. To perform the medical job duties, a firefighter must have a background in anatomy & physiology to obtain the EMT certification. In addition, knowledge of physics, chemistry and medical mathematics are very important. Firefighters must also be in very good physical condition to carry out the duties required to work in hazardous conditions, wear heavy equipment and protective gear, and to lift heavy loads.

What type of training/education do these jobs require?

Firefighters require technical training through a high school pathway, an apprenticeship, and/or 1-2 years of training at a technical or community college. In addition, they must obtain the national/state firefighter certification, along with the EMT certification.

Does my high school offer the training?

Some Kansas high schools have an approved career and technical education pathway in Emergency and Fire Management Services, through which you can obtain both the EMT and Firefighter One certifications. Many high schools also offer an approved Health Science pathway which may offer the EMT training.

What college programs offer this training?

Many Kansas technical colleges, community colleges and universities offer training for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Fire Science
- Paramedic
- EMT

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

The Firefighter One certification is offered through the Kansas Fire & Rescue Training Institute, housed at the University of Kansas.

Other applicable certifications that are available include EMT and Paramedic.

All occupations listed here require a certification for employment.



Fact Sheet on First-Line Supervisors/Managers of Food Preparation and Serving Workers

What does a Food Service Manager do?

First-line Supervisors/Managers of Food Preparation and Serving Workers are responsible for the daily operations of restaurants and other establishments that prepare and serve food and beverages to customers. Managers ensure that customers are satisfied with their dining experience.

What types of jobs are available?

Food Service Managers may work for a variety of local and/or national chain restaurants, hospitals, government institutions, hotels, etc.

What is the national job outlook?

Nationally, employment of Food Service Managers is expected to decline by 3% by 2020. Despite these reductions, new employment opportunities will emerge in grocery stores and other retail and recreation industries to meet the growing demand for quick food in a variety of settings. The median salary is \$48,130 per year.

What is the job outlook in Kansas?

Food Service Managers are on the list of High Demand Jobs for Kansas. The median salary for these workers in Kansas is \$25,610 per year. Due to new positions and retirements, Kansas is expected to need 2,819 new workers in this occupation by 2020. This is a job growth of 8%.

What skills are required for a Food Service Manager?

The skills required of an Food Service Manager are varied and include hiring and monitoring of employees, monitoring food preparation, resolving complaints, staff scheduling, coordinating activities of all staff, keeping employee records, complying with state and federal laws pertaining to the food industry and employees, and supply and equipment purchases. Training in both food service and business management are essential.

What type of training/education do these jobs require?

Food Service managers can obtain technical training through a high school pathway, and/or training at a technical or community college. Many are required to

continue their education to include a Bachelor's degree.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that include teaching culinary, restaurant management, and business management skills. Check with your high school counselor to see if these skills are included in your high school's Hospitality & Tourism, and/or Business Management & Entrepreneurship Pathways.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer short and/or long-term programs for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Cooking & Culinary Arts
- Business Management
- Restaurant Management
- Hospitality/Culinary Arts

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are certifications available to workers in this field. Professional organizations that offer certification testing are:

- National Restaurant Association – ProStart Certification



Fact Sheet on HVAC-R Careers, Training, & Certification

What is HVAC-R?

HVAC-R stands for Heating, Ventilation, Air Conditioning and Refrigeration. According to the HVACR Industry Alliance it is the 2nd fastest growing mechanical trade in the nation.

What types of jobs are available?

Jobs are available in installation, maintenance, environmental & building design, sales, and marketing.

What is the national job outlook?

It is estimated that there will be 136,000 new jobs in this industry by 2018. The national job growth rate for HVAC-R mechanics by 2018 is 26%, which is growth much faster than average.

What is the job outlook in Kansas?

HVAC-R Mechanics and installers are on the list of High Demand Jobs for Kansas. The Kansas job growth rate for HVAC-R Mechanics by 2018 is 9%, with a median salary of \$20.49 per hour.

Wholesale Sales Representatives are expecting a job growth of 9% with a median salary of \$29 per hour.

Sales & Marketing Managers are expecting a job growth of 11% - 16% with median salaries in the \$40 per hour range.

Environmental Engineering Technicians are expecting a job growth of 40% with a median salary of \$17.50 per hour.

Is this a high tech occupation?

New HVAC systems are highly technical and are now controlled by computers. Many systems allow you to control the heat and air in your home from your cell phone.

What type of training/education do these jobs require?

HVAC-R Installers & Mechanics require technical training through a high school pathway, an apprenticeship, and/or 1-2 years of training at a technical or community college. In addition, a professional certification is required to handle any type of refrigerant. Certifications are available through your educational or apprenticeship training.

Sales Representative positions require technical training through a high school business pathway and/or 1-2 years of training at a technical or community college.

Sales Marketing Manager positions usually require a 4-year business degree at a university.

Environmental Engineering Technician positions require a 2 year degree through a technical or community college.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that may include the courses you need. Check with your high school counselor to see if any of the following pathways are offered at your school:

- Construction
- Business Entrepreneurship and Management
- Engineering & Applied Mathematics
- Manufacturing Maintenance
- Marketing

What college programs offer this training?

Many Kansas technical colleges, community colleges and universities offer training for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Business Management
- Business Marketing
- HVAC & Refrigeration
- Industrial Engineering
- Industrial Maintenance & Installation

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

Scholarships are also available through the Air Conditioning, Heating & Refrigeration Institute (AHRI). Check out their website at: www.reescholarship.org

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are several professional certifications available for trained HVAC-R Mechanics & Installers that validate your skill levels. Each is available through a professional HVAC organization and up to half the cost of the certification exam may be paid for by your high school. Some of the organizations offering certification are North American Technician Excellence (NATE), HVAC Excellence, and the Air Conditioning, Heating, & Refrigeration Institute (AHRI).



Fact Sheet on Industrial Machinery Mechanic Training, & Certification

What does an Industrial Machinery Mechanic do?

Industrial Machinery Mechanics maintain and repair factory equipment and other industrial machinery, such as conveying systems, production machinery, and packaging equipment. They diagnose problems and repair or replace malfunctioning components, adjust and calibrate equipment, and perform routine maintenance.

What types of jobs are available?

Machinists usually work for manufacturing companies utilize conveyor belts, robotic arms, hydraulic lifts, and other large pieces of machinery that must be kept running smoothly.

Related job titles include Machinery Maintenance Worker, Maintenance Machinist, Industrial Machinery Repairers, and Millwrights.

What is the national job outlook?

It is estimated that there will be 66,400 available jobs in this industry by 2020. The national job growth rate for industrial machinery mechanics by 2020 is +22%, with a median salary of \$45,420 per year.

What is the job outlook in Kansas?

Industrial Machinery mechanics are on the list of High Demand Jobs for Kansas. The median salary for industrial machinery mechanics in Kansas is \$40,014 per year. Due to new positions and retirements, Kansas is expected to need 410 new workers in this occupation by 2018, which represents a job growth of +11%.

What skills are required for an Industrial Machinery Mechanic?

The physical skills required of an Industrial Machinery Mechanic include good manual dexterity, selective attention, depth perception, and careful observation abilities. Other skills include ability to read schematics and repair manuals, communication, use of lathes, grinders and drill presses, electrical and computer programming skills, attention to detail, and use of hand and power tools.

What type of training/education do these jobs require?

Industrial Machinery Mechanics can obtain technical training through a high school pathway, an

apprenticeship, and/or 1-2 years of training at a technical or community college.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that include teaching industrial machinery mechanic skills. Check with your high school counselor to see if these skills are included in your high school's Manufacturing Maintenance pathway.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer 1-2 year programs for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Industrial Engineering Technology
- Mechanical Technology
- Industrial Electronics Technician

Apprenticeship opportunities for Industrial Machinery mechanics can be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are several certifications available to workers in this field. Professional organizations that offer certification testing include:

- Manufacturing Skills Standards Council (MSSC)
- National Center for Construction Education & Research (NCCER) – Industrial Maintenance



Kansas State Department of Education Career and Technical Education (CTE)



Fact Sheet on Machinist/ CNC Machine Tool Operators Training, & Certification

What does a Machinist / CNC Operator do?

Machinists and Tool & Die Makers set up and operate a variety of computer-controlled or mechanically-controlled tools, such as lathes, milling machines, and grinders, to produce precision metal parts, instruments, and tools.

Closely related occupations include Tool Makers, Die Makers, and Maintenance Machinists.

What types of jobs are available?

Machinists usually work for manufacturing companies that produce items such as bolts, screws, hydraulic parts, anti-lock brakes, automobile pistons, and aircraft parts.

What is the national job outlook?

It is estimated that there will be 31,500 available jobs in this industry by 2020. The national job growth rate for machinists by 2020 is +8%, with a median salary of \$18.52 per hour.

What is the job outlook in Kansas?

Machinists are on the list of High Demand Jobs for Kansas. The median salary for sheet metal workers in Kansas is \$35,828 per year. Due to new positions and retirements, Kansas is expected to need 600 new workers in this occupation by 2018.

What skills are required for a Machinist?

The physical skills required of a Machinist include good manual dexterity, selective attention, depth perception, visualization, and stamina – including the ability to stand in place for long periods of time. Other skills include mathematical computations using a micrometer, communication, blueprint/schematic reading, attention to detail, ability to meet product specifications, follow inspection procedures, and ability to utilize CAD and CAM files.

What type of training/education do these jobs require?

Machinists can obtain technical training through a high school pathway, an apprenticeship, and/or 1-2 years of training at a technical or community college.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that include teaching machinist skills. Check with your high school counselor to see if these skills are included in your high school's Production pathway.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer 1-2 year programs for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Manufacturing Technology / Technician
- Machine Tool Technology / Machinist
- Machine Shop Technology / Assistant

Apprenticeship opportunities for Machinists can be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are several certifications available to workers in this field. Professional organizations that offer certification testing include:

- Manufacturing Skills Standards Council (MSSC)
- National Institute for Metalworking Skills (NIMS)



Kansas State Department of Education Career and Technical Education (CTE)



Fact Sheet on Plumbers, Pipefitters, & Steamfitters Careers, Training, & Certification

What do plumbers, pipefitters & steamfitters do?

Plumbers, Pipefitters, & Steamfitters install, maintain, and repair many different types of pipe systems in residential, commercial and industrial settings. Some of these systems carry water, dispose of waste, supply gas to ovens, or heat and cool buildings. Other systems, such as those in power plants, carry the steam that powers huge turbines. Pipes also are used in manufacturing plants to move acids, gases, and waste byproducts through the production process. About 14% of plumbers, pipefitters and steamfitters are self-employed.

What types of jobs are available?

Jobs are available in:

Plumbing	Gasfitting
Sprinkler Systems	Steamfitting
Pipefitting	

What is the national job outlook?

According to the Occupational Outlook Handbook, the national job growth rate for Plumbers, Pipefitters, and Steamfitters by 2020 is +26%, which is growth much faster than average. The national median salary in 2010 was \$22.43 per hour.

What is the job outlook in Kansas?

Plumbers, Pipefitters & Steamfitters are on the list of High Demand Jobs for Kansas. The Kansas job growth rate for these occupations by 2018 is +11%, with a median salary of \$20.15 per hour.

What kind of skills do I need?

These occupations require skilled knowledge in the trade which in addition to the hands-on skills, includes reading blueprints & schematics, technical mathematics, material and job estimating, use of hand and power tools, soldering, and knowledge of local, state & national building codes. Those who are self-employed must also have a good working knowledge of business practices including accounting, invoicing, and marketing.

What type of training/education do these jobs require?

Many Plumbers, Pipefitters and Steamfitters learn their trade through apprenticeships, although many high school pathways and postsecondary technical and community college programs offer courses that teach entry-level skills for these occupations.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that may include the

courses you need. Check with your high school counselor to see if either of the following pathways are offered at your school and include the necessary courses:

Construction Manufacturing Maintenance

What other opportunities are available for this training?

Many Kansas technical colleges, community colleges and universities offer one-year certification and/or two-year associate degree options for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

Plumbing Technology
Industrial Maintenance & Installation

The Plumbers & Pipefitters Apprenticeship Training of Kansas (located in Wichita) also has opportunities available, and can be contacted at 316-267-8508.

The Kansas Registered Apprenticeship Program also has opportunities available, and can be contacted at 316-771-6848 or www.KansasApprenticeship.org.

Other apprenticeship opportunities can be located by contacting the Kansas Department of Commerce.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

The National Center for Construction Education and Research (NCCER) has professional certifications available in these career areas. Once a student earns the NCCER certification for Introduction to Craft Skills, they can then work toward earning the certification in Plumbing & Pipefitting. These certifications can be earned through skills programs & pathways at local high schools, Kansas Technical Colleges and Kansas Community Colleges. Check with your local secondary and postsecondary institutions for certification availability.



Fact Sheet on Sheet Metal Worker Training, & Certification

What does a Sheet Metal Worker do?

Sheet Metal Workers fabricate, assemble, install and repair sheet metal products and equipment, such as ducts, control boxes, drain pipes, and furnace casings. The work requires some soldering and welding.

Closely related occupations include HVAC Sheet Metal Installer and HVAC Technician.

What types of jobs are available?

Sheet Metal Workers may work for large manufacturing companies that produce items such as furnaces and air conditioners, or they may work for companies that repair and install HVAC systems.

What is the national job outlook?

It is estimated that there will be 47,000 new jobs in this industry by 2020. The national job growth rate for sheet metal workers by 2020 is +10 - 19%, with a median salary of \$42,730 per year.

What is the job outlook in Kansas?

Sheet Metal Workers are on the list of High Demand Jobs for Kansas. The median salary for sheet metal workers in Kansas is \$35,958 per year. Due to new positions and retirements, Kansas is expected to need 1,020 new workers in this occupation by 2018.

HVAC Technicians have a projected Kansas job growth rate of 26%, with a median salary of \$40,388. Due to new positions and retirements, Kansas is expected to need 1,130 new workers in this occupation by 2018.

What skills are required for a Sheet Metal Worker?

The physical skills required of a Sheet Metal Worker include good manual dexterity, selective attention, depth perception, visualization, and good close vision. Other skills include controlling machinery, critical thinking, decision making, mathematics, communication, blueprint reading, attention to detail, process monitoring, and time management.

Sheet Metal Workers use a variety of hand tools, and if working in manufacturing, they will be required to operate large metal cutting and forming machinery.

What type of training/education do these jobs require?

Sheet Metal Workers can obtain technical training through a high school pathway, an apprenticeship, and/or 1-2 years of training at a technical or community college.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that include teaching sheet metal skills. Check with your high school counselor to see if these skills are included in your high school's Construction, Production or Manufacturing maintenance pathways.

What college programs offer this training?

Some Kansas technical colleges and community colleges offer 1-2 year programs for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Industrial Maintenance
- HVAC Technician
- Sheet Metal Technology

Apprenticeship opportunities for Sheet Metal Workers can be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are several certifications available to workers in this field. Professional organizations that offer certification testing include:

- Manufacturing Skills Standards Council (MSSC)
- Natl. Center for Construction Educ. & Research (NCCER)
- National Institute for Metalworking Skills (NIMS)



Fact Sheet on Truck Driving Careers, Training, & Certification

What is Truck Driving?

Heavy, light, service and tractor-trailer truck drivers transport goods from one location to another. Most tractor-trailer drivers are long-haul drivers and operate trucks with a capacity of at least 26,001 pounds per gross vehicle weight (GVW). The light truck and delivery services drivers will often deliver goods in local areas while heavy truck drivers deliver over intercity routes, sometimes spanning several states and can be away from home for days or weeks at a time.

What types of jobs are available?

Jobs are available as heavy truck operators, tractor-trailer truck drivers, light truck drivers, bus drivers, delivery services drivers and agricultural equipment operators.

What is the national job outlook?

It is estimated that there will be 330,100 new jobs in this industry by 2020. The national job growth rate for truck drivers by 2020 is 21%, which is about as fast as average. The median wage for a Heavy and Tractor-Trailer Truck Driver is \$37,770 per year.

What is the job outlook in Kansas?

Truck drivers are on the list of High Demand Jobs for Kansas. The Kansas job growth rate for drivers by 2018 is 15% with over 24,630 current jobs existing in the state. Drivers with moderate work experience (1-5 years) could expect a median salary of \$17.96 per hour or \$37,400 annual wage.

Entry level drivers are expecting a median salary of \$11.00 per hour or \$22,900 annual wage.

Experienced level drivers are expecting a median salary of \$28.53 per hour or \$59,300 annual wage.

Is this a high tech occupation?

Truck driving is not generally considered a high technology related occupation, but high technical skill and knowledge requirements increase in expertise and with added technology to trucks and buses.

What type of training/education do these jobs require?

This occupation requires a commercial driver's license (CDL) from your state department of transportation, but additional training or education may be required depending on the type of truck driven or goods transported from location to location. Drivers may choose to enroll in industry recognized training/schools to acquire the necessary driving skills to operate heavy or tractor-trailer trucks, which may last several weeks to a few months. Light and service truck drivers or bus drivers often receive on-the-job training.

Does my high school offer the training?

Kansas high schools do not currently have approved career and technical education pathways that include the courses you need. A student must be 18 years of age to participate in training for these careers.

What college programs offer this training?

Many Kansas technical colleges, community colleges and universities offer training for these occupations. Check with your local postsecondary institutions for programs/degrees in the following area:

- CDL Training

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student, 18 years of age, and choose to attend a truck driving technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

The main professional certifications available for trained truck drivers is a commercial drivers' license (CDL), but additional certifications may be required in accordance with other state and federal laws that apply to cargo type and weight/size restrictions.



Kansas State Department of Education Career and Technical Education (CTE)



Fact Sheet on Welding, Soldering, & Brazing Careers, Training, & Certification

What is Welding?

Welding is a process that joins materials, usually metals or thermoplastics, into a single form through coalescence. This process often uses high heat to melt the work pieces and then by adding a filler material to the mix of molten material becomes a single piece of metal or thermoplastic when it cools.

What types of jobs are available?

Jobs are available as welding inspector, pipe welder, aviation, refrigeration, HVAC, structural steel, plumbing, underwater welder, research engineer, auto manufacturing, electrical/mechanical & and robotics.

What is the national job outlook?

It is estimated that there will be 50,700 new jobs in this industry by 2020. The national job growth rate for Welders by 2020 is 15%, which is about as fast as average.

What is the job outlook in Kansas?

Welders, Solders, & Braziers are on the list of High Demand Jobs for Kansas. The Kansas job growth rate for Welders by 2018 is .2% with over 6,000 current jobs existing in the state. Welders with moderate work experience could expect a median salary of \$16.66 per hour or \$34,650 annual wage. With new job openings and retirements, Kansas will need up to 1,860 new welders by 2018.

Entry level welders are expecting a median salary of \$11.96 per hour or \$24,870 annual wage.

Experienced level welders are expecting a median salary of \$19.01 per hour or \$39,540 annual wage.

Is this a high tech occupation?

Welding, soldering, brazing is not generally considered a high technology related occupation, but high technical skill and knowledge requirements increase in expertise and with the fields of thermoplastics, aviation, and research engineering.

What type of training/education do these jobs require?

Welders, Solders, & Braziers require technical training through a high school pathway, an apprenticeship, and/or 6 months to 1 year of training at a technical or community college. In addition, a professional certification is beneficial for commercial and production welding.

Welders may choose to attend a variety of workshops and training to become an AWS certified welder (CW) in structural steel, pipe, and a variety of specialty welding types.

Does my high school offer the training?

Many Kansas high schools have approved career and technical education pathways that may include the courses you need. Check with your high school counselor to see if any of the following pathways are offered at your school:

- Manufacturing Production
- Manufacturing Maintenance
- Power, Structural & Technical Systems
- Business Entrepreneurship & Management

What college programs offer this training?

Many Kansas technical colleges, community colleges and universities offer training for these occupations. Check with your local postsecondary institutions for programs/degrees in the following areas:

- Welding Technology
- Automotive Technology
- Aviation
- Building Trades
- Electro-Mechanical Technologies
- Pipefitting
- Research Engineer – Mechanical/Structural

Apprenticeship opportunities for Sheet Metal Workers can be located through the Kansas Registered Apprenticeship Program at 316-771-6484 or www.KansasApprenticeship.org.

Are scholarships available?

All Kansas postsecondary institutions offer some type of scholarships. Check with the institution you are interested in attending to see what is available and what you qualify for.

What other financial assistance is available?

If you are a Kansas high school student and choose to attend a technical training program at a Kansas technical or community college while in high school, some or all of your tuition may be covered under Senate Bill 155, recently passed into legislation. Contact your high school counselor for details.

What Certifications are available?

There are several professional certifications available for trained welders that validate your skill levels. Each is available through a professional welding organization and up to half the cost of the certification exam may be paid for by your high school. A major organization offering certifications is the American Welding Society (AWS).