**CTE Course Description and Standards Crosswalk**

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| **Course Information** | |
| Course Name | A+, Part II |
| Course Number | BB830 |
| Number of High School Credits | .5 |
| Sequence or CTEPS (You must first have the Sequence or CTEPS entered into the  EED-CTE system.) | Information Technology, Support Technician |
| Date of district Course Revision | New |
| **Career & Technical Student Organization (CTSO)** | |
| CTSO embedded in this sequence | BPA |
| **Occupational Standards** | |
| Source of Occupational Standards | CompTIA |
| Names/Numbers of Occupational Standards | 220-802 |
| **Registration Information** | |
| Course Description (brief paragraph – as shown in your student handbook or course list) | This course prepares students to obtain the A+ Computer Certification. It is the next course to take following the A+ class.  The nationally recognized certification for the A+ certification is the CompTIA’s Exam 220-802. This course is designed to prepare students for competency in passing this exam. |
| Instructional Topic Headings (please separate each heading by a semi-colon) | A+ Exam 220-802 covers operating systems, security and troubleshooting. The following knowledge domains are addressed: Operating systems, security, mobile devices, troubleshooting |
| **Summative Assessments and Standards** | |
| Technical Skills Assessment (TSA) | Yes |
| Course addresses: | A+ certification (Exam 220-802) |
| New Alaska ELA and Math Standards | Yes |
| Alaska Cultural Standards | Yes |
| All Aspects of Industry (AAI) | Yes |
| Core Technical Standards | Yes |
| Employability Standards | Yes |
| **Employability Standards** | |
| Source of Employability Standards | State of Alaska |
| **Tech Prep** | |
| Current Tech Prep Articulation Agreement? (Y/N) | Yes |
| Date of Current Agreement | Dec. 2014 |
| Postsecondary Institution Name | AVTEC |
| Postsecondary Course Name | Fundamental PC Support |
| Postsecondary Course Number | IT 103 |
| # of Postsecondary Credits | 4 |

**Additional CTE Course Information**

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| **Author** | |
| Course developed by | Dan Bohrnsen (KPBSD) and Trish Hart (AVTEC) |
| Course adapted from |  |
| Date of previous course revision | New course |
| **Course Delivery Model** | |
| Is the course brokered through another institution or agency? (Y/N) | TestOut Corporation (REV 11/12) LabSim PC Pro |

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| **Standards Alignment** |

| **Student Performance Standards**  **(Learner Outcomes or Knowledge & Skill Statements)** | **Specific Occupational Skills Standard** | **Common Technical Core Standards** | **New**  **Alaska ENG/LA Standards** | **New**  **Alaska**  **Math**  **Standards** | **Alaska Cultural**  **Standards** | **Employability/ Career Readiness Standards** | **All Aspects of Industry/ Systems** | **Assessment** |
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| Students will learn the basics of operating systems and the basics of selecting and installing a CPU. | CompTIA 1.1 | IT11, 2 IT-PRG1 2,3,4,9 | SL.9- 12.1a-d  SL.9-12.4  SL.9-12.6  L.9-12.6  L.9-12.1a-  b RST.9- 12.4 RST.9- 12.10  WHST.9- 12.4 WHST.9- 12.8  WHST.9- 12.9 | A REI.2 N Q.1 | B2,4 | A2,5 | Technical Skills Technology | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will examine devices and components used for computer repair and maintenance, examine procedures for troubleshooting systems. | CompTIA 4.2, 4.1 | IT11,12 IT-  PRG1,2,3,4,9 | SL.9- 12.1a-d  SL.9-12.4  SL.9-12.6  L.9-12.6  L.9-12.1a-  b RST.9- 12.4  RST.9- 12.10 WHST.9- 12.4  WHST.9- 12.8  WHST.9-  12.9 | A REI.2 N Q.1 | B2,4 | A2,5 | Technical Skills Technology | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will learn guidelines and considerations to take into account when installing devices. | CompTIA 1.2, 1.4, 1.7 | IT11,12 IT-  PRG1,2,3,4,9 | SL.9- 12.1a-d  SL.9-12.4  SL.9-12.6  L.9-12.6  L.9-12.1a-  b RST.9- 12.4 RST.9- 12.10  WHST.9- 12.4 WHST.9- 12.8  WHST.9- 12.9 | A REI.2 N Q.1 | B2,4 | A2,5 | Technical Skills Technology | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will learn basic information about using a file system to organize and store data, and strategies for configuring a mount point and extending the volume. Students will also learn how to examine and optimize a hard disk and improve the computer’s overall performance. | CompTIA 1.2, 1.3, 1.4, 1.3, 1.7 | IT11,12 IT-  PRG1,2,3,4,9 | SL.9- 12.1a-d  SL.9-12.4  SL.9-12.6  L.9-12.6  L.9-12.1a-  b RST.9- 12.4  RST.9- 12.10 WHST.9- 12.4 WHST.9-  12.8  WHST.9- 12.9 | A REI.2 N Q.1 | B2,4 | A2,5 | Technical Skills Technology | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will be provided an overview of storage devices including: floppy drives, parallel ATA (IDE), Serial ATA, SCSI, Optical Media and RAID | CompTIA 1.4, 1.5, 1.2, 1.7, 1.3 | IT11,12  IT-PRG1,2 | SL.9- 12.1a-d  SL.9-12.4  SL.9-12.6  L.9-12.6  L.9-12.1a-  d RST.9-  12.4  RST.9- 12.10  WHST.9- 12.4 WHST.9- 12.8  WHST.9- 12.9 | A REI.2 N Q.1 | B2,4 | A2,5 | Technical Skills Technology | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will understand the basics of networking, networking hardware, configuration settings required to connect to a TCP/IP network, the basics of wireless networks, tools to troubleshoot network problems, using HomeGroup to manage authentication of resources on a home network. | CompTIA 1.6, 1.3, 4.5 | IT11,12 IT-  PRG1,2,3,4,9 IT-NET 3,5 IT-WD 5, 9 | SL.9- 12.1a-d  SL.9-12.4  SL.9-12.6  L.9-12.6  L.9-12.1a-  b RST.9- 12.4  RST.9- 12.10 | A REI.2 N Q.1 | B2,4 | A2,5 | Technical Skills Technology | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will be exposed to the basics of configuring network printing, and managing printing on a Windows system. | CompTIA 1.6 1.4 | IT11,12 IT-  PRG1,2,3,4,9 IT-NET 3,4 | SL.9- 12.1a-d SL.9-12.4  SL.9-12.6  L.9-12.6  L.9-12.1a-  b RST.9-  12.4  RST.9- 12.10  WHST.9- 12.4 WHST.9- 12.8  WHST.9- 12.9 | A REI.2 N Q.1 | B2,4 | A2,5 | Technical Skills Technology | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will learn about configuring power management on portable devices and key features of table PC’s, including: touch screen interface, accelerometer, gyroscope, internal storage, phone, operating system, architecture and apps. | CompTIA 1.5, 3.1, 3.2, 3.3, 3.4, 3.5 | IT11,12 IT-  PRG1,2,3,4,9 | SL.9- 12.1a-d SL.9-12.4  SL.9-12.6  L.9-12.6  L.9-12.1a-  b RST.9-  12.4  RST.9- 12.10 WHST.9-  12.4  WHST.9- 12.8 WHST.9-  12.9 | A REI.2 N Q.1 | B2,4 B2 | A2,5 | Technical Skills Technology | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will use system tools and utilities, customize windows, learn how to monitor components and improve system performance, understand user accounts, learn how to use remote services to access a computer from a remote location, learn the basics of managing applications, installing updates, protecting a system through backups and using virtual memory. | CompTIA 1.4, 1.1, 1.2, 1.5, 1.8, 1.6, 1.7, 4.6, 4.7 | IT11,12 IT-  PRG1,2,3,4 ,9 | SL.9- 12.1a-d SL.9-12.4  SL.9-12.6  L.9-12.6  L.9-12.1a-  b RST.9-  12.4  RST.9- 12.10 WHST.9-  12.4  WHST.9- 12.8 WHST.9-  12.9 | A REI.2 N Q.1 | B2,4 B2 | A2,5 | Technical Skills Technology | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will learn how to run the upgrade advisor, install a windows operating system and migrate user settings and data using the Easy Transfer wizard and USMT and create a and run a virtual machine. | CompTIA 1.1, 1.2, 1.9 | IT1,4 | L.9-12.3a  L.9-12.6 RST.9- 12.3 RST.9- 12.4 | S ID.9 | B2,4 | A2,5,6 | Technical Skills Technology Health/Safe ty | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will understand the elements involved in managing files, configure NTFS permissions, sharing files and permissions, using offline files. | CompTIA 1.1, 1.8, 1.3, 1.4, 2.1, 1.5 |  |  |  |  |  |  | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will apply the Principle of Least Privilege to increase security, learn how to wipe data from a hard drive, configure a screen saver, apply and use common prevention methods, compare and contrast common security threats, install malware protection, scan and repair infected files and systems, unlock a locked user account, reset a password, log on to a remote computer, encrypt files and add authorized users, physically secure a wired or wireless network, prevent data emanation from a wireless network, enable the windows firewall, configure a network-based firewall using port forwarding and triggering and configure internet explorer to use a proxy server. | 2.1, 2.3, 2.4, 2.2, 4.7, 1.4, 1.8, 2.5, 2.6, 1.1, 1.6 | IT11,12 IT-  PRG1,2,3,4,9 IT-NET 2, 3, 5 | SL.9- 12.1a-d  SL.9-12.4  SL.9-12.6  L.9-12.6  L.9-12.1a-  b RST.9- 12.4  RST.9- 12.10 WHST.9- 12.4  WHST.9- 12.8  WHST.9-  12.9 | A REI.2 N Q.1 | B2,4 | A2,5 | Technical Skills Technology | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will learn about troubleshooting the motherboard, RAM the CPU, storage devices, common video problems, network problems, operating system problems, repairing an installation, restoring to a restore point or restoring using a system image, troubleshooting system errors, troubleshooting workstation security issues, notebook components, printers and devise problems. | 4.2, 4.3, 4.4, 4.5, 4.6, 1.3, 1.5, 1.7 | IT1,4 IT-NET 5 | L.9-12.3a  L.9-12.6 RST.9- 12.3 RST.9- 12.4 | S ID.9 | B2,4 | A2,5,6 | Technical Skills Technology Health/Safe ty | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will build a computer from scratch and troubleshoot a malfunctioning computer using the LabSim PC Pro simulated capstone exercise. | 1.7, 1.1, 4.2, 4.2, 1.2, 4.6, | IT11,12 IT-  PRG1,2,3,4, 9 | SL.9- 12.1a-d  SL.9-12.4  SL.9-12.6  L.9-12.6  L.9-12.1a-  b RST.9- 12.4  RST.9- 12.10 WHST.9- 12.4 WHST.9-  12.8  WHST.9- 12.9 | A REI.2 N Q.1 | B2,4 | A2,5 | Technical Skills Technology | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Students will participate in a “Certification Practice Exam” consisting of 15 simulation questions that are selected from practice exams from all 13 PC Pro Domains. | 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0 | IT11,2, IT-SUP 3,4, 5,7 IT-PRG 3,6, 8,9, 10 | L.9-12.3a  L.9-12.6 RST.9- 12.3 RST.9- 12.4 | S ID.9 | B2,4 | A2,5,6 | Technical Skills Technology | PC Pro Certification Practiced Exams  CompTIA A+ Exam |
| Encourage CTSO involvement. |  | CRP1,2,7,8  ,9,11 | L 9-12.6  SL 9-  12.1,6 |  | B2,4 E7,8 | A2,5 | Technical Skills  Community  Planning Management | Portfolio |

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| **Instructional Resources** |

**List the major instructional resources used for this course: (websites, textbooks, essential equipment, reference materials, supplies)**

**2012 TestOut Corporation (R 11/12)**

**LabSim PC PRO** [**http://www.testout.com/docs/lesson-plans/pcpro\_nf\_arl-p.pdf?sfvrsn=4**](http://www.testout.com/docs/lesson-plans/pcpro_nf_arl-p.pdf?sfvrsn=4)

**CompTIA A+ (2012 Edition) Exam 220-801 Objectives:** [**http://certification.comptia.org/**](http://certification.comptia.org/)

**Business Professionals of America:** [**http://www.bpa.org**](http://www.bpa.org)