



Skilled and Technical Sciences

**Science, Technology, &  
Pre-Engineering  
Cluster Standards**

Delaware Department of Education (DE DOE)  
 Skilled and Technical Sciences Standards  
 for

**Biology Technician/Biotechnology Laboratory Technician**

Additional Teacher Requirements: Work experience and education that meets DE DOE certification requirements for Skilled and Technical Sciences teacher  
<http://regulations.delaware.gov/AdminCode/title14/1500> plus:

Pre-requisite Work Experience:

1. Prospective teachers must have a B.S. in Biology, Chemistry, Microbiology and/or a highly related field and a minimum of six years of work experience as a biotechnology laboratory technician and/or industry biochemist in one or more of the following areas:

- A. Biotechnology/ Pharmaceutical
- B. Biology/Chemistry
- C. Environmental/Agriculture
- D. Biochemistry
- E. Cellular Biology

<b>Biology Technician/Biotechnology Laboratory Technician Pathway</b>					
509 CIP#	Classification of Instructional Programs (CIP) Name	Skill Level	Credits	Standard	End of Pathway Assessment
41.010121	Biology Technician/ Biotechnology Laboratory Technician I	Foundational Skills	Minimum of 2	Education Development Center, Inc. and FFA Foundation, Inc. "Combined Academic Knowledge Technical Skills, and Employability Skills from Bioscience and Agricultural Biotechnology Skills Standards" <a href="http://www.biolink.org">www.biolink.org</a> & <a href="http://www.dtcc.edu">www.dtcc.edu</a>	Written Assessment to be selected during the 2009-2010 School Year  AND Biotechnology Technician Trainee Clinical Rating(s)
41.010122	Biology Technician/ Biotechnology Laboratory Technician II	Intermediate Skills	Minimum of 2		
41.010123	Biology Technician/ Biotechnology Laboratory Technician III	Employment-entry Skills, Cooperative Employment Opportunities, and Exam Preparation	Minimum of 2		
				AND  Clinical Biotechnology Technician Trainee Co-op and/or Job Shadowing Placement (minimum of 9-week full-time summer or co-op schedule for two marking periods)	

Standards Subcommittee Members:

- Dr. Karen Hutchison, DE DOE Agriscience
- Mrs. Sue Holloway, NCCVTSD
- Dr. Dale Derrickson, DE DOE Skilled & Technical Sciences
- Mr. Nick Mottola, NCCVTSD
- Ms. Florence Malinowski, St. Georges Technical H.S.

Delaware Department of Education (DE DOE)  
 Skilled and Technical Sciences Standards  
 for

**Electronics**

Additional Teacher Requirements: Work experience and education that meets DE DOE certification requirements for Skilled and Technical Sciences teacher

<http://regulations.delaware.gov/AdminCode/title14/1500> plus:

Pre-requisite Certification:

1. Associate’s Degree or Bachelor’s Degree in Electronics or Electronics and Computer Engineering from an accredited educational institution; OR
2. Current ETA® International Master Technician (CETma) certification from the Electronics Technicians Association (ETA) [www.etainternational.org](http://www.etainternational.org). (This includes basic ETA® certification in Associate Electronics Technician (CETA) and six additional specific Journeyman certifications.); OR
3. Journeyman Level Certified Electronics Technician (CET) fully certified technician certification from the International Society of Certified Electronics Technicians (ISCET); OR
4. A confirmed 70% or above score on each of the Written and Performance Assessments of the National Occupational Competency Testing Institute’s (NOCTI) Electronics Technology (0253) Experienced Worker (Teacher) Assessments [www.nocti.org](http://www.nocti.org).

For Delaware STS Teacher Certification, ETA® International Master Technician (CETma) certification from the Electronics Technicians Association (ETA) is equal to nine Career-Related credits, ISCET Journeyman Level CTE is equal to nine Career-Related credits, and a confirmed 70% or above score on each of the Written and Performance Assessments of the National Occupational Competency Testing Institute’s (NOCTI) Electronics Technology (0253) Experienced Worker (Teacher) Assessments is also equal to nine Career-Related credits.

<b>Electronics Technician Pathway</b>					
509 CIP#	Classification of Instructional Programs (CIP) Name	Skill Level	Credits	Standard	End of Pathway Assessment
15.030321	Elect/Electronic & Comm Engineering Technology/Technician I	Foundational Skills	Minimum of 2	Basic ETA Student Electronics Technician (SET) competencies:  1. Electrical Theory 2. Elect.Components 3. Soldering 4. Block Diagrams 5. Cabling 6. Power Supplies 7. Test Equipment 8. Safety 9. Mathematics 10.Electronic Circuits 11. Amplifiers 12. Interfacing 13. Digital Concepts 14. Computer Elect. 15. Computer Apps. 16. Audio & Video 17. Optical Elec. 18. Telecomm. 19. Procedures	Student Electronics Technician Certification from the Electronics Technicians Association (ETA)   ETA® International 5 Depot Street Greencastle, IN 46135 <a href="http://www.etainternational.org">www.etainternational.org</a>
15.030322	Elect/Electronic & Comm Engineering Technology/Technician II	Intermediate Skills	Minimum of 2		
15.030323	Elect/Electronic & Comm Engineering Technology/Technician III	Employment-entry Skills, Cooperative Employment Opportunities, and Exam Preparation	Minimum of 2		