



# Student Achievement Committee:

***May 21, 2013***

***Presentation/Discussion  
on Career Pathways also  
Known as Career and  
Technical Education (CTE)***

***(Set 1 of 3)***

## Introduction

The Department of Education Career and Technical Education (CTE) Programs offer real-world problem-based learning opportunities for students across the state. With a staff sharing years of industry experience and business and industry partners such as McDonald's® and Meadow Gold®, Hawaii's students are exposed to an enriching curriculum taught by teachers who are committed and a community who supports their efforts of being career-ready upon graduation.

## Career and Technical Education At A Glance

CTE Programs are open to all high school students in grades 9-12 enrolled in public and public-charter schools. Students who are confined to the Olomana School are also eligible to participate in a CTE program conducted on-site.

Table 1: Schools and Facilities Offering CTE Programs SY 2012-2013.

School Type	Number of Schools
High Schools	42
Charter School	1
Olomana School	1

Table 2: Students Serviced by Hawaii's Career and Technical Education Programs.

School Year	Number of Students
2010	27,469
2011	27,401
2012	27,852

## Career and Technical Education Career Pathways

The Hawaii Department of Education offers six (6) Career Pathways:

- Arts and Communication Pathway**
- Business Pathway**
- Health Services Pathway**
- Industrial and Engineering Technology Pathway**
- Natural Resources Pathway**
- Public and Human Services Pathway**

Career Pathways are broad groupings of careers or occupations that share common skills and knowledge. Within each pathway, the careers are organized into a sequenced program of study that focuses on specific knowledge and skills unique to that career.

Table 3: Career Pathway Offerings across the state during school year 2012 - 2013.

<b>Number of Schools</b>	<b>Career and Technical Education Career Pathway</b>
<b>39 schools</b>	Arts & Communication Pathway
<b>25 schools</b>	Business Pathway
<b>28 schools</b>	Health Pathway
<b>39 schools</b>	Industrial and Engineering Technology Pathway
<b>32 schools</b>	Natural Resources Pathway
<b>32 schools</b>	Public and Human Services Pathway

Refer to Tables 4 - Table 11 in the Appendix for Career Pathway Offerings by District from 2009 - 2012.

**Career and Technical Education Programs of Study**

A Career and Technical Education Program of Study (POS) is defined as a sequence of at least three courses within a career pathway. The courses consist of a core or foundational course, a cluster or a career-specific course, and a related academic requirement such as Geometry or Biology. High schools must offer the pathway core and cluster, and the related academic requirement before the program of study is recognized as complete.

During the 2012-2013 school year the Department of Education CTE Programs offered 64 programs of studies to students at the high school level.

Refer to Table 12 in the Appendix for a complete listing of CTE Programs of Study (POS) for SY 2012-2013.

**Dual Credit Articulated Agreements**

A dual credit articulated agreement enables a high school student to earn a free community college credit after successfully completing a high school program of study and by demonstrating mastery of career-specific knowledge and skills. Students are eligible for the free credit once the prerequisites of the agreement have been fulfilled. The Hawaii Department of Education has the following dual credit articulated agreements with several University of Hawaii Community College System campuses:

- Entrepreneurship
- Marketing
- Retailing
- A+ Certification
- CISCO Certification
- Exploration in Education

Pending dual credit articulated agreements with community college campuses:

- Culinary I
- Hotel Operations
- Travel Industry Management

## **Co-Operative Education Courses**

Cooperative Education courses are designed to offer students an opportunity outside of the classroom to gain realistic training through work-based learning experiences in industries such as Health Services and Business. Students attend school for part of the day, then during the other half gain on-the-job experience at a work site.

During the 2012 - 2013 school year 188 students were enrolled in the following Co-Operative Education Courses:

Health Services  
Arts & Communication  
Industrial and Engineering Technology  
Business  
Natural Resources

Current Co-Operative Education work sites include HI Board of Realtors, Kandi's Drive Inn, Pet Hospital, Kamaaina Kids, James Ho Farms, US Department of Agriculture, and WHS/Hilo Medical Center. The co-operative education contracts typically last from eight weeks to an entire school year. At the end of the intern period, some students are offered permanent positions at the work site. A partnership such as the co-operative education program solidifies the community's involvement with preparing students for future careers.

## **APPENDICES**

**Appendix A: Career Pathway Offerings by District school years 2009 - 2012**

**Appendix B: Career Pathway Programs of Studies**

**APPENDIX A: Career Pathway Offerings by District 2009 - 2012**

*(X- denotes a complete program of study is offered in the pathway)*

*Table 4. Central District Career Pathway Offerings from 2009 - 2012. Total CTE enrollment represents 9th -12th grade students in all pathway core courses, program of study cluster and concentration courses, directed studies, and capstone courses.*

Career and Technical Education Career Pathways	Aiea			Leilehua			Mililani			Moanalua			Radford			Waialua		
	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12
Arts & Communications	-	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X
Business	-	-	-	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-
Health Services	-	-	-	X	X	X	X	X	X	X	X	X	-	-	X	-	-	-
Industrial & Engineering Tech.	-	X	X	-	X	X	X	X	X	X	X	X	-	-	-	X	X	X
Natural Resources	-	-	-	-	X	X	X	X	X	-	-	-	-	-	-	-	-	-
Public & Human Services	X	X	X	X	X	X	X	X	X	X	-	X	-	-	X	-	X	X
<b>Total CTE Enrollment</b>	<b>645</b>	<b>576</b>	<b>533</b>	<b>1182</b>	<b>1144</b>	<b>1497</b>	<b>2033</b>	<b>2094</b>	<b>1984</b>	<b>595</b>	<b>549</b>	<b>607</b>	<b>517</b>	<b>548</b>	<b>843</b>	<b>211</b>	<b>527</b>	<b>479</b>

*Table 5. East Hawaii District Career Pathway Offerings from 2009 - 2012. Total CTE enrollment represents 9th -12th grade students in all pathway core courses, program of study cluster and concentration courses, directed studies, and capstone courses.*

Career and Technical Education Career Pathways	Keaau			Hilo			Laupahoehoe			Kau			Waiakea			Pahoa		
	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12
Arts & Communications	X	X	X	X	X	X	X	X	X	-	X	X	-	-	-	X	X	X
Business	X	-	-	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X
Health Services	-	-	-	X	X	X	-	-	-	-	-	-	X	X	X	-	-	X
Industrial & Engineering Tech.	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X
Natural Resources	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Public & Human Services	-	-	-	X	X	X	X	-	-	X	X	-	X	X	X	X	X	X
<b>Total CTE Enrollment</b>	<b>709</b>	<b>401</b>	<b>591</b>	<b>989</b>	<b>852</b>	<b>921</b>	<b>91</b>	<b>63</b>	<b>89</b>	<b>169</b>	<b>219</b>	<b>252</b>	<b>1068</b>	<b>1021</b>	<b>1109</b>	<b>478</b>	<b>470</b>	<b>541</b>

Table 6. Honolulu District Career Pathway Offerings from 2009 - 2012. Total CTE enrollment represent 9th - 12th grade students in all pathway core courses, program of study cluster and concentration courses, directed studies, and capstone courses.

Career and Technical Education Career Pathways	Farrington HS			Kaimuki HS			Kalani HS			McKinley HS			Roosevelt HS			Kaiser HS			Anuenue HS		
	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12
Arts & Communications	X	X	X	-	X	X	-	-	-	-	X	X	X	X	X	X	X	X	-	-	-
Business	X	X	X	X	-	-	X	X	X	X	X	X	-	-	-	-	X	X	-	-	-
Health Services	X	X	X	-	-	-	X	X	X	-	-	X	X	X	X	-	-	-	-	-	-
Industrial & Engineering Tech.	X	X	X	-	X	X	X	X	X	X	X	X	-	X	X	-	-	-	-	X	X
Natural Resources	-	-	-	-	-	-	-	-	X	-	X	X	-	-	-	-	-	-	-	X	X
Public & Human Services	X	X	X	-	X	X	-	-	-	X	X	X	X	X	X	-	-	X	-	-	-
<b>Total CTE Enrollment</b>	<b>2571</b>	<b>2383</b>	<b>2160</b>	<b>968</b>	<b>1468</b>	<b>1131</b>	<b>328</b>	<b>348</b>	<b>313</b>	<b>898</b>	<b>998</b>	<b>1002</b>	<b>432</b>	<b>804</b>	<b>780</b>	<b>585</b>	<b>666</b>	<b>677</b>	<b>59</b>	<b>37</b>	<b>52</b>

Table 7. Kauai District Career Pathway Offerings from 2009 - 2012. Total CTE enrollment represents 9th - 12th grade students in all pathway core courses, program of study cluster and concentration courses, directed studies, and capstone courses.

Career and Technical Education Career Pathways	Kapaa			Waimea			Kauai		
	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12
Arts & Communications	X	X	X	X	X	X	X	X	X
Business	X	X	X	-	X	-	X	X	X
Health Services	X	X	X	-	-	-	X	X	X
Industrial & Engineering Tech.	X	X	X	X	X	X	X	X	X
Natural Resources	X	X	-	X	X	X	X	X	X
Public & Human Services	X	X	X	X	X	X	-	-	X
<b>Total CTE Enrollment</b>	<b>866</b>	<b>921</b>	<b>832</b>	<b>768</b>	<b>669</b>	<b>613</b>	<b>582</b>	<b>704</b>	<b>709</b>

Table 8. Leeward District Career Pathway Offerings from 2009 - 2012. Total CTE enrollment represents 9th - 12th grade students in all pathway core courses, program of study cluster and concentration courses, directed studies, and capstone courses.

Career and Technical Education Career Pathways	Campbell			Nanakuli			Pearl City			Waianae			Waipahu			Kapolei		
	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12
Arts & Communications	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X
Business	X	X	X	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X
Health Services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Industrial & Engineering Tech.	X	X	X	X	X	X	-	-	-	X	X	X	X	X	X	X	X	X
Natural Resources	X	X	X	X	X	X	-	-	-	X	X	X	X	X	X	X	X	X
Public & Human Services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Total CTE Enrollment</b>	<b>1906</b>	<b>1704</b>	<b>1742</b>	<b>490</b>	<b>658</b>	<b>935</b>	<b>1795</b>	<b>956</b>	<b>1144</b>	<b>1495</b>	<b>1605</b>	<b>1683</b>	<b>2115</b>	<b>2129</b>	<b>2018</b>	<b>1662</b>	<b>1748</b>	<b>1801</b>

Table 9. Maui District Career Pathway Offerings from 2009 - 2012. Total CTE enrollment represents 9th - 12th grade students in all pathway core courses, program of study cluster and concentration courses, directed studies, and capstone courses.

Career and Technical Education Career Pathways	Baldwin			Hana			Lahinaluna			Maui			Molokai			Lanai		
	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12
Arts & Communications	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Business	X	X	X	-	-	-	X	X	X	X	X	X	X	-	X	X	X	X
Health Services	X	X	X	-	-	-	X	X	X	X	X	X	X	X	X	X	X	-
Industrial & Engineering Tech.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Natural Resources	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Public & Human Services	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	X	X	-
<b>Total CTE Enrollment</b>	<b>1004</b>	<b>1011</b>	<b>1274</b>	<b>156</b>	<b>90</b>	<b>110</b>	<b>1117</b>	<b>1377</b>	<b>1328</b>	<b>2072</b>	<b>2092</b>	<b>2188</b>	<b>264</b>	<b>281</b>	<b>321</b>	<b>212</b>	<b>176</b>	<b>147</b>

Table 10. Maui District Career Pathway Offerings continued.

Career and Technical Education Career Pathways	Kekaulike		
	SY 09/10	SY 10/11	SY 11/12
Arts & Communications	X	X	X
Business	X	X	-
Health Services	X	-	-
Industrial & Engineering Tech.	X	X	X
Natural Resources	X	X	X
Public & Human Services	X	X	X
<b>Total CTE Enrollment</b>	<b>1074</b>	<b>960</b>	<b>1001</b>

Table 11. West Hawaii Career Pathway Offerings from 2009 - 2012. Total CTE enrollment represents 9th - 12 grade students in all pathway core courses, program of study cluster and concentration courses, directed studies, and capstone courses.

Career and Technical Education Career Pathways	Kealahou			Honakaa			Kohala			Konawaena		
	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12
Arts & Communications	X	X	X	X	X	X	-	-	-	X	X	X
Business	X	X	-	-	-	-	X	X	X	X	X	X
Health Services	X	X	X	X	-	-	-	-	-	-	-	-
Industrial & Engineering Tech.	X	X	X		X	X	X	X	X	-	-	-
Natural Resources	X	X	X	X	X	X	-	-	-	X	X	X
Public & Human Services	X	X	X	X	X	X	-	-	-	X	X	X
<b>Total CTE Enrollment</b>	<b>681</b>	<b>788</b>	<b>835</b>	<b>510</b>	<b>551</b>	<b>457</b>	<b>143</b>	<b>157</b>	<b>160</b>	<b>536</b>	<b>605</b>	<b>625</b>

Table 12. Windward District Career Pathway Offerings from 2009 - 2012. Total CTE enrollment represents 9th - 12th grade students in all pathway core courses, program of study cluster and concentration courses, directed studies, and capstone courses.

Career and Technical Education Career Pathways	Castle			Kahuku			Kailua			Kalaheo			Olomana		
	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12	SY 09/10	SY 10/11	SY 11/12
Arts & Communications	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Business	X	X	X	-	-	-	-	-	X	-	-	-	-	-	-
Health Services	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Industrial & Engineering Tech.	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Natural Resources	X	X	X	X	X	X		X	X	-	-	-	-	-	-
Public & Human Services	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
<b>Total CTE Enrollment</b>	<b>1249</b>	<b>1244</b>	<b>1345</b>	<b>1506</b>	<b>1151</b>	<b>1063</b>	<b>786</b>	<b>690</b>	<b>718</b>	<b>535</b>	<b>426</b>	<b>543</b>	<b>111</b>	<b>50</b>	<b>49</b>

Appendix B

Career and Technical Education  
Programs of Study (POS)  
SY 2012-2013

Career Pathway	Occupational Cluster	Program of Study (POS) Name	POS Sequence	ACCN No.	*CP Std.	POS Sequence	ACCN No.	*CP Std.	POS Sequence	ACCN No.	*CP Std.	POS Related Academic Requirement	ACCN No.	CTE Honors Recognition Ready
			Core (Course 1)			Cluster (Course 2)			Concentration (Course 3)					
Arts and Communication	Graphic Design	Graphic Design Tech I	AC Core	TAC2010	Y	Graphic Design Technology I	TAU2124	D				Expository Writing; AP Language and Composition; AP Literature and Composition; IB Language A I Higher and Standard Levels; Running Start English 100	LWH5213; LAY6010; LAY6100; LIY9000; LIY9010; LIY9020; LIY9030; ZLS1000	
Arts and Communication	Advanced Graphic Design	Graphic Design Tech II	AC Core	TAC2011	Y	Graphic Design Technology I	TAU2124	D	Graphic Design Technology II	TAN2400		Expository Writing; AP Language and Composition; AP Literature and Composition; IB Language A I Higher and Standard Levels; Running Start English 100	LWH5213; LAY6010; LAY6100; LIY9000; LIY9010; LIY9020; LIY9030; ZLS1000	
Arts and Communication	Media Arts & Technologies	Digital Media	AC Core	TAC2010	Y	Digital Media Technology	TAU2210	Y				Expository Writing; AP Language and Composition; AP Literature and Composition; IB Language A I Higher and Standard Levels; Running Start English 100	LWH5213; LAY6010; LAY6100; LIY9000; LIY9010; LIY9020; LIY9030; ZLS1000	Yes
Arts and Communication	Media Arts & Technologies	Animation	AC Core	TAC2010	Y	Digital Media Technology	TAU2210	Y	Animation	TAN2210	Y	Expository Writing; AP Language and Composition; AP Literature and Composition; IB Language A I Higher and Standard Levels; Running Start English 100	LWH5213; LAY6010; LAY6100; LIY9000; LIY9010; LIY9020; LIY9030; ZLS1000	Yes
Arts and Communication	Broadcast Media	Broadcast Media	AC Core	TAC2010	Y	Digital Media Technology	TAU2210	Y	Broadcast Media	TAN2115		Expository Writing; AP Language and Composition; AP Literature and Composition; IB Language A I Higher and Standard Levels; Running Start English 100	LWH5213; LAY6010; LAY6100; LIY9000; LIY9010; LIY9020; LIY9030; ZLS1000	
Arts and Communication	Media Arts & Technologies	Game Design	AC Core	TAC2010	Y	Digital Media Technology	TAU2210	Y	Gaming	TAN2311	D	Expository Writing; AP Language and Composition; AP Literature and Composition; IB Language A I Higher and Standard Levels; Running Start English 100	LWH5213; LAY6010; LAY6100; LIY9000; LIY9010; LIY9020; LIY9030; ZLS1000	
Arts and Communication	Media Arts & Technologies	Web Design	AC Core	TAC2010	Y	Digital Media Technology	TAU2210	Y	Web Design	TAN2110		Expository Writing; AP Language and Composition; AP Literature and Composition; IB Language A I Higher and Standard Levels; Running Start English 100	LWH5213; LAY6010; LAY6100; LIY9000; LIY9010; LIY9020; LIY9030; ZLS1000	
Arts and Communication	Fashion Arts & Technologies	Fashion Design	AC Core	TAC2010	Y	Fashion Design	TAU2310	D				Geometry or Equivalency	MGX1150	
Arts and Communication	Applies to all	Entrepreneurship	AC Core	TAC2010	Y	Any Cluster Course in POS			Entrepreneurship	TBN3810	Y	Academic course req'd 1st 2 courses in POS		

KEY:  
\*CP Std. = Career Pathway Standards; Y = Completed; D = In Development; N = National Standards

Appendix B

Career and Technical Education  
Programs of Study (POS)  
SY 2012-2013

Career Pathway	Occupational Cluster	Program of Study (POS) Name	POS Sequence	ACCN No.	*CP Std.	POS Sequence	ACCN No.	*CP Std.	POS Sequence	ACCN No.	*CP Std.	POS Related Academic Requirement	ACCN No.	CTE Honors Recognition Ready
			Core (Course 1)			Cluster (Course 2)			Concentration (Course 3)					
Business	Accounting	Accounting I	Business Core	TBC3010	Y	Accounting I	TBU3110	D				Economics or Business Economics	CSD2500 or TBA1000	
Business	Advanced Accounting	Accounting II	Business Core	TBC3010	Y	Accounting I	TBU3110	D	Accounting II	TBN3116		Economics or Business Economics	CSD2500 or TBA1000	
Business	Business Law	Business Law	Business Core	TBC3010	Y	Business Law	TBU3020					Economics or Business Economics	CSD2500 or TBA1000	
Business	Finance	Finance	Business Core	TBC3010	Y	Finance	TBU3310	D				Economics or Business Economics	CSD2500 or TBA1000	
Business	Management	Management	Business Core	TBC3010	Y	Management	TBU3210	D				Economics or Business Economics	CSD2500 or TBA1000	
Business	Management	Travel Management	Business Core	TBC3010	Y	Management	TBU3210	D	Travel Industry Management	TBN3210	D	Economics or Business Economics	CSD2500 or TBA1000	
Business	Management Information Systems	Management Information Systems	Business Core	TBC3010	Y	Management Information Systems	TBU3410/ TBU3411 OR TBU3412/ TBU3413					Economics or Business Economics	CSD2500 or TBA1000	
Business	Marketing	Marketing	Business Core	TBC3010	Y	Marketing	TBU3510	Y				Economics or Business Economics	CSD2500 or TBA1000	Yes
Business	Office Administration Technology	Office Administration	Business Core	TBC3010	Y	Office Administration	TBU3610	D				Economics or Business Economics	CSD2500 or TBA1000	
Business	Retailing	Retailing	Business Core	TBC3010	Y	Retail	TBU3710	Y				Economics or Business Economics	CSD2500 or TBA1000	Yes
Business	Management Information Systems	Oracle Certification	Fundamentals Dbase control and Functions	TBU3410/ TBU3411	N	Special Programming Special Dbase & Applications	TBU3412/ TBU3413	N				Economics or Business Economics	CSD2500 or TBA1000	
Business	Applies to all	Entrepreneurship	Business Core	TBC3010	Y	Any Cluster Course in POS			Entrepreneurship	TBN3810	Y	Academic course req'd 1st 2 courses in POS		Yes
Health Services	Clinical Health	Clinical Health	Health Services Core	THC4010	Y	Clinical Health	THU4027	Y				Biology or Equivalency	SLH2203	Yes
Health Services	Emergency Medical Services	Emergency Medical Services	Health Services Core	THC4010	Y	Clinical Health	THU4027	Y	Emergency Medical Services	THN4410	N	Biology or Equivalency	SLH2203	
Health Services	Health Informatics	Health Informatics	Health Services Core	THC4010	Y	Clinical Health	THU4027	Y	Health Informatics	THN4413		Biology or Equivalency	SLH2203	
Health Services	Nurse Aide	Nurse's Aide Training	Health Services Core	THC4010	Y	Clinical Health	THU4027	Y	Nurse's Aide Training	THN4100	N	Biology or Equivalency	SLH2203	
Health Services	Health & Nutrition	Nutrition	Health Services Core	THC4010	Y	Health & Nutrition	THU4030	N				Biology or Equivalency	SLH2203	
Health Services	Medical Biotechnology	Medical Biotechnology	Health Services Core	THC4010	Y	Medical Biotechnology	THU4400	D				Biology or Equivalency	SLH2203	
Health Services	Applies to all	Entrepreneurship	Health Services Core	THC4010	Y	Any Cluster Course in POS			Entrepreneurship	TBN3810	Y	Academic course req'd 1st 2 courses in POS		
Industrial and Engineering Technology	Manufacturing	Autobody Repair and Refurbishing	IET Core	TIC5010	D	Autobody Repair and Refurbishing I	TIU5416					Physics or Physical Science	SPH5603 or SPH2603	

KEY:  
\*CP Std. = Career Pathway Standards; Y = Completed; D = In Development; N = National Standards

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**Career and Technical Education  
Programs of Study (POS)  
SY 2012-2013**

Career Pathway	Occupational Cluster	Program of Study (POS) Name	POS Sequence	ACCN No.	*CP Std.	POS Sequence	ACCN No.	*CP Std.	POS Sequence	ACCN No.	*CP Std.	POS Related Academic Requirement	ACCN No.	CTE Honors Recognition Ready
			Core (Course 1)			Cluster (Course 2)			Concentration (Course 3)					
Industrial and Engineering Technology	Manufacturing	Advanced Autobody Repair and Refurbishing	IET Core	TIC5010	D	Autobody Repair and Refurbishing I	TIU5416		Autobody Repair and Refurbishing II	TIN5422		Physics or Physical Science	SPH5603 or SPH2603	
Industrial and Engineering Technology	Transportation Systems	Automotive Technology	IET Core	TIC5010	D	Automotive Technology I	TIU5410					Physics or Physical Science	SPH5603 or SPH2603	
Industrial and Engineering Technology	Advanced Transportation Systems	Automotive Technology II	IET Core	TIC5010	Y	Automotive Technology I	TIU5410		Automotive Technology II	TIN5419		Physics or Physical Science	SPH5603 or SPH2603	
Industrial and Engineering Technology	Building & Construction	Building and Construction I	IET Core	TIC5010	Y	Building and Construction I	TIU5800	D				Geometry or Equivalency	MGX1150	
Industrial and Engineering Technology	Advanced Building & Construction	Building and Construction II	IET Core	TIC5010	Y	Building and Construction I	TIU5800	D	Building and Construction II	TIN5814		Geometry or Equivalency	MGX1150	
Industrial and Engineering Technology	Electronic & Computer System	Computer Technician	IET Core	TIC5010	D	Computer Electronics	TIU5610					Algebra I; IMP 3 yrs	MAX1150;	
Industrial and Engineering Technology	Design & Engineering	Design Technology I	IET Core	TIC5010	Y	Design Tech I	TIU5310	Y				Algebra I; IMP 3 yrs	MAX1150	Yes
Industrial and Engineering Technology	Advanced Design & Engineering	Design Technology II	IET Core	TIC5010	Y	Design Tech I	TIU5310	Y	Design Tech II	TIN5320		Algebra I; IMP 3 yrs	MAX1150	
Industrial and Engineering Technology	Building & Construction	Electrical Installation	IET Core	TIC5010	Y	Electricity and Electronic	TIU5710					Algebra I; IMP 3 yrs	MAX1150	
Industrial and Engineering Technology	Electronic Technology	Electronics and Electrical Engineering I	IET Core	TIC5010	Y	Electronic Technology I	TIU5620					Algebra I; IMP 3 yrs	MAX1150	
Industrial and Engineering Technology	Advanced Electronic Technology	Electronics and Electrical Engineering II	IET Core	TIC5010	Y	Electronic Technology I	TIU5620		Electronic Technology II	TIN5623		Algebra I; IMP 3 yrs	MAX1150	
Industrial and Engineering Technology	Engineering Technology I	Engineering I	IET Core	TIC5010	Y	Engineering Technology I	TIU5812					Algebra II	MAX1200	
Industrial and Engineering Technology	Manufacturing	Metal Working Technology I	IET Core	TIC5010	Y	Metals Technology I	TIU5210					Physics or Physical Science	SPH5603 or SPH2603	
Industrial and Engineering Technology	Advanced Manufacturing	Metal Working Technology II	IET Core	TIC5010	Y	Metals Technology I	TIU5210		Metals Technology II	TIN5216		Physics or Physical Science	SPH5603 or SPH2603	
Industrial and Engineering Technology	Electronic & Computer System	Computer Networking	IET Core	TIC5010	Y	Networking Fundamentals and LAN	TIU5713					Algebra I; IMP 3 yrs	MAX1150	
Industrial and Engineering Technology	Electronic & Computer System	A+ Certification	A+ Certification Intro / A+ Certifications Computer Systems	TIU5510/ TIU5511	N	A+ Certification Operating Systems / Internship	TIN5512/ TIN5513	N				Algebra I; IMP 3 yrs	MAX1150	
Industrial and Engineering Technology	Electronic & Computer System	CISCO Certification	Networking Fundamentals and LAN	TIU5713	N	WAN and Networking Architecture	TIN5716	N				Algebra I; IMP 3 yrs	MAX1150	
Industrial and Engineering Technology	Applies to all	Entrepreneurship	IET Core	TIC5010	Y	Any Cluster Course in POS			Entrepreneurship	TBN3810	Y	Academic course req'd 1st 2 courses in POS		
Natural Resource	Animal Systems	Animal Systems I	NR Core	TNC6010	Y	Animal Systems I	TNU6126					Biology	SLH2203	
Natural Resource	Advanced Animal Systems	Animal Systems II	NR Core	TNC6010	Y	Animal Systems I	TNU6126		Animal Systems II	TNN6206		Biology	SLH2203	
Natural Resource	Natural Resources Biotechnology	Natural Resources Biotechnology I	NR Core	TNC6010	Y	Natural Resources Biotechnology I	TNU6136			NA		Biology or Equivalency	SLH2203	

## KEY:

\*CP Std. = Career Pathway Standards; Y = Completed; D = In Development; N = National Standards

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Appendix B

Career and Technical Education  
Programs of Study (POS)  
SY 2012-2013

Career Pathway	Occupational Cluster	Program of Study (POS) Name	POS Sequence	ACCN No.	*CP Std.	POS Sequence	ACCN No.	*CP Std.	POS Sequence	ACCN No.	*CP Std.	POS Related Academic Requirement	ACCN No.	CTE Honors Recognition Ready
			Core (Course 1)			Cluster (Course 2)			Concentration (Course 3)					
Natural Resource	Advanced Natural Resources Biotechnology	Natural Resources Biotechnology II	NR Core	TNC6010	Y	Natural Resources Biotechnology I	TNU6136		Natural Resources Biotechnology II	TNN6223		Biology or Equivalency	SLH2203	
Natural Resource	Environmental Resource Management	Environmental Resource Management	NR Core	TNC6010	Y	Environmental Resource Management	TNU6123	D				Biology or Equivalency	SLH2203	
Natural Resource	Ocean/Fisheries	Fisheries	NR Core	TNC6010	Y	Environmental Resource Management	TNU6123	D	Fisheries	TNN6214		Biology or Equivalency	SLH2203	
Natural Resource	Forestry	Forestry	NR Core	TNC6010	Y	Environmental Resource Management	TNU6123	D	Forestry	TNN6217		Biology or Equivalency	SLH2203	
Natural Resource	Agriculture/ Aquaculture Production	Natural Resource Production I	NR Core	TNC6010	Y	Natural Resources Production I	TNU6133	Y				Biology or Equivalency	SLH2203	Yes
Natural Resource	Advanced Agriculture/ Aquaculture Production	Natural Resource Production II	NR Core	TNC6010	Y	Natural Resources Production I	TNU6133	Y	Natural Resources Production II	TNN6210		Biology or Equivalency	SLH2203	
Natural Resource	Agribusiness	Natural Resource Business Development	NR Core	TNC6010	Y	Natural Resources Production I	TNU6133	Y	Natural Resources Business Development	TNN6203		Economics or Business Economics	CSD2500 or TBA1000	
Natural Resource	Horticulture	Plant Systems I	NR Core	TNC6010	Y	Plant Systems I	TNU6242	D				Biology or Equivalency	SLH2203	
Natural Resource	Nursery/ Landscaping	Plant Design and Management	NR Core	TNC6010	Y	Plant Systems I	TNU6242	D	Plant Systems II	TNN6245		Biology or Equivalency	SLH2203	
Natural Resource	Environmental and Conservation Sciences	Program of study to be developed	NR Core	TNC6010	Y	Course to be developed								
Natural Resource	Applies to all	Enterpreneurship	NR Core	TNC6010	Y	Any Cluster Course in POS			Entrepreneurship	TBN3810	Y	Academic course req'd 1st 2 courses in POS		
Public and Human Service	Culinary	Culinary I	PHS Core	TPC7010	Y	Culinary I	TPU7216	D				Biology or Equivalency	SLH2203	
Public and Human Service	Advanced Culinary	Culinary II	PHS Core	TPC7010	Y	Culinary I	TPU7216	D	Culinary II	TPN7223		Biology or Equivalency	SLH2203	
Public and Human Service	Education	Explorations in Education	PHS Core	TPC7010	Y	Explorations in Education	TPU7210	Y				Psychology or Equivalency	CSD2200	Yes
Public and Human Service	Education	Early Childhood Education	PHS Core	TPC7010	Y	Explorations in Education	TPU7210	Y	Early Childhood Education	TPN7416		Psychology or Equivalency	CSD2200	
Public and Human Service	Education	Elementary Education	PHS Core	TPC7010	Y	Explorations in Education	TPU7210	Y	Elementary Education	TPN7419		Psychology or Equivalency	CSD2200	
Public and Human Service	Education	Secondary Education	PHS Core	TPC7010	Y	Explorations in Education	TPU7210	Y	Secondary Education	TPN7422		Psychology or Equivalency	CSD2200	
Public and Human Service	Hospitality	Hospitality Services	PHS Core	TPC7010	Y	Hotel Operations	TPU7416	Y				Psychology or Equivalency	CSD2200	Yes
Public and Human Service	Applies to all	Enterpreneurship	PHS Core	TPC7010	Y	Any Cluster Course in POS			Entrepreneurship	TBN3810	Y	Academic course req'd 1st 2 courses in POS		

KEY:  
\*CP Std. = Career Pathway Standards; Y = Completed; D = In Development, N = National Standards

**Career and Technical Education  
2013 Career Pathway  
Offerings by School**

<b>6 Pathways (12)</b>	<b>5 Pathways (12)</b>	<b>4 Pathways (8)</b>	<b>3 Pathways (6)</b>	<b>2 Pathways (3)</b>	<b>1 Pathway (2)</b>
Castle High	Baldwin High	Honokaa High	Aiea High	Kohala High	Anuenue High
Hilo High	Campbell High	Kahuku High	Hana High	Lanai High	Kaimuki High
Kailua High	Farrington High	Kalaheo High	Kaiser High	Laupahoehoe High	
Kapolei High	Kapaa High	Kalani High	Kau High		
Kauai High	Kealakehe High	Konawaena High	Keaau High		
Lahainaluna High	Kekaulike High	Molokai High	Waialua High		
Leilehua High	Moanualua High	Roosevelt High			
Maui High	Nanakuli High	Waimea High			
McKinley High	Pahoa High				
Mililani High	Pearl City High				
Waianae High	Radford High				
Waipahu High	Waiakea High				

*Note: All high schools that receive Perkins funding offer at least 1 career pathway.*