



# Rio Salado College

## Furniture & Cabinet Making Program Review

**Review Period: Academic Years 2016-2020**

**Review Conducted: AY2020-21**

Rio's Academic Program Review Process is an essential component of the College's Strategic Plan. The 2020-2023 work is guided by the following college-wide goals:

**Rio Strategic Goal 1:** Increase student goal attainment 23% by 2023 with innovative and world-class experiences

**Rio Strategic Goal 2:** Offer 23 new micro-credentials by 2023

**Rio Strategic Goal 3:** Foster a culture of diversity, equity, inclusion, and belonging

Data relating to successful course completion, persistence, credentials awarded, and equity in program- and college-level outcomes across all student populations are aligned with the college-wide metrics that measure progress toward achieving the goals of the College's Strategic Plan.

### **I. Certificates in the Furniture Construction/Refinishing Program**

#### **CCL in Workforce Development: Furniture Construction/Refinishing Level I:**

Description: The Certificate of Completion (CCL) in Workforce Development: Furniture Construction/Refinishing Level I program is designed to prepare the incarcerated person with skills needed to work in the furniture construction/refinishing industry upon release. Courses focus on the design, construction, assembly, and finishing of furniture pieces. Topics also include types of wood, fasteners, hand and power woodworking tools as well as project planning.

#### **CCL in Workforce Development: Furniture Construction/Refinishing Level II:**

Description: The Certificate of Completion (CCL) in Workforce Development: Furniture Construction/Refinishing Level II program is an advanced program designed to prepare the incarcerated person with skills needed to work in the furniture construction/refinishing industry upon release. Courses focus on cabinet making skills, upholstery skills, and various finishing techniques.

## **II. Program Purpose and Mission**

The purpose of the program is to provide skill-based training to men currently incarcerated at Lewis prison. The program is designed to maximize hands-on experience requiring basic math and writing skills. It provides an opportunity for creative designs with functional purpose. This program was intended to provide the individual with employable skills in the construction sector following release from the prison system.

The program was intended to support a major and growing workforce need in Arizona and other regions: Construction. With minimal math and writing requirements, and very low use of computer skills, construction jobs are suited for entry-level workers while providing livable wages. Education has been shown to significantly reduce recidivism, thereby allowing these individuals an opportunity to contribute meaningfully to the community. Together, these program attributes support our college mission to provide "...educational experience by anticipating the needs of our students and future workforce. We support learners where they are and provide high-quality, flexible, and accessible education to empower individual goal attainment, foster partnerships, and strengthen communities."

Although this program was meeting all college expectations relative to learning objectives, it will no longer be offered due to several factors that negatively affected its viability. First, the programs offered at the prison locations statewide are provided under a contract with the State of Arizona and are reviewed periodically, with programs offered by Rio Salado scheduled for the 2021 academic year. Second, the Department of Corrections was no longer providing paid inmate labor to manufacture cabinetry on-site. Finally, the entire industry around custom cabinetry is very small, leading to few employment opportunities post-release.

An alternative program was needed to meet the needs of the Department of Corrections, contract requirements, and College expectations. It was determined that Construction Electrician was a good fit, and the current instructor in Construction Carpentry is qualified for this position. Unfortunately, the instructor currently teaching the cabinet making courses did not have transferable skills to satisfy the requirements of Construction Carpentry. The Cabinet Making instructor resigned, and the new contract will now have a full certificate program focused on Construction Electrician as a replacement for the Furniture and Cabinet Making program. This program review will focus on important lessons learned and issues to address as the new program is operationalized.

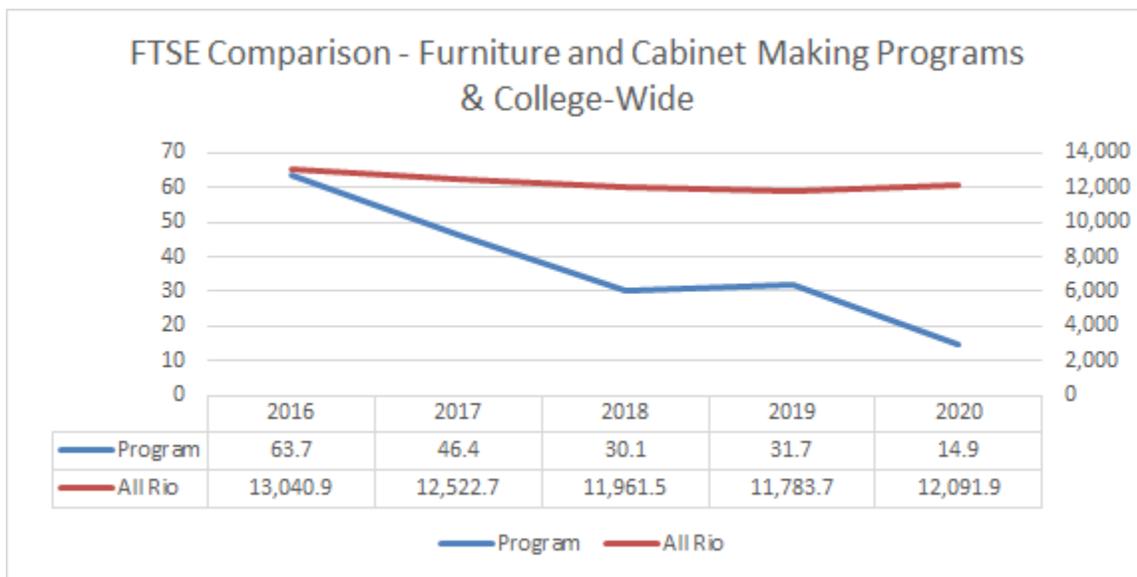
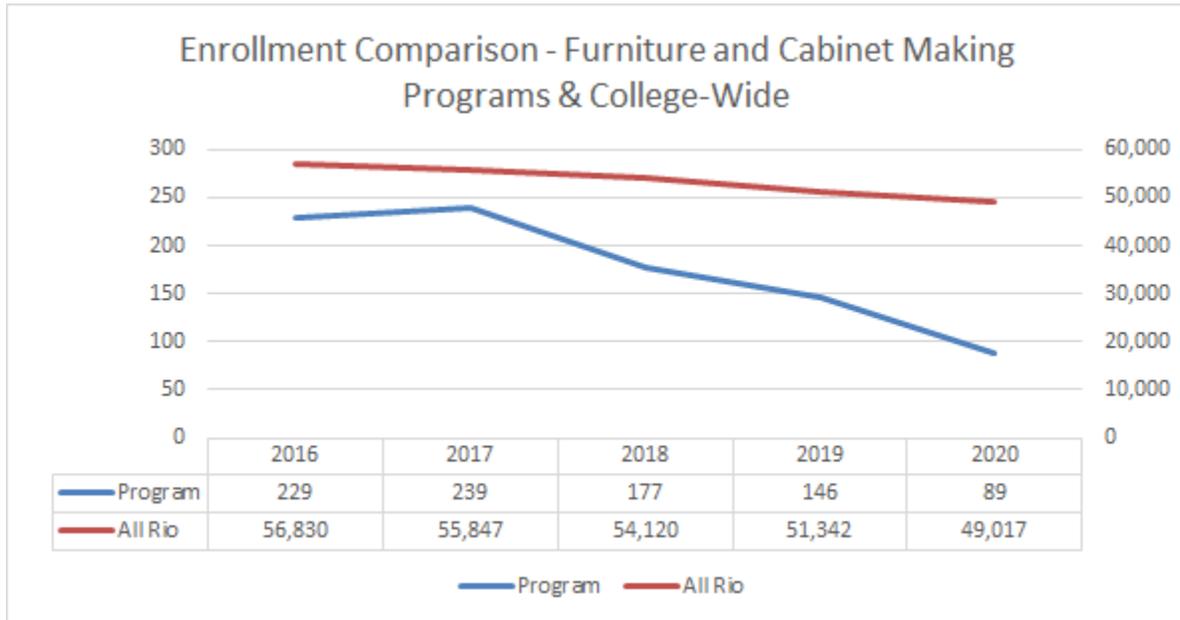
### III. Student Population of the Furniture Construction/Refinishing Program

These programs were only offered to the male population housed at the Lewis Correctional Facility. Students are placed in the course by the AZ Department of Corrections (ADOC) according to an internal selection rubric called the ‘priority ranking system’. In part, this rubric addresses previous education, risk to recidivate, and behavior while incarcerated. While not known, the data seems to indicate that placement in these programs is consistent with inmate ethnicity demographics. The age demographic may be slightly biased by the population housed on this ‘yard’. The ‘yard’ in this context is a sub-population of the complex based on custody rating, and only individuals from that ‘yard’ are eligible for these programs. Finally, as a ‘closed program’ and not offered to the general public, these programs are provided without cost to the student and, therefore, not eligible for financial aid.

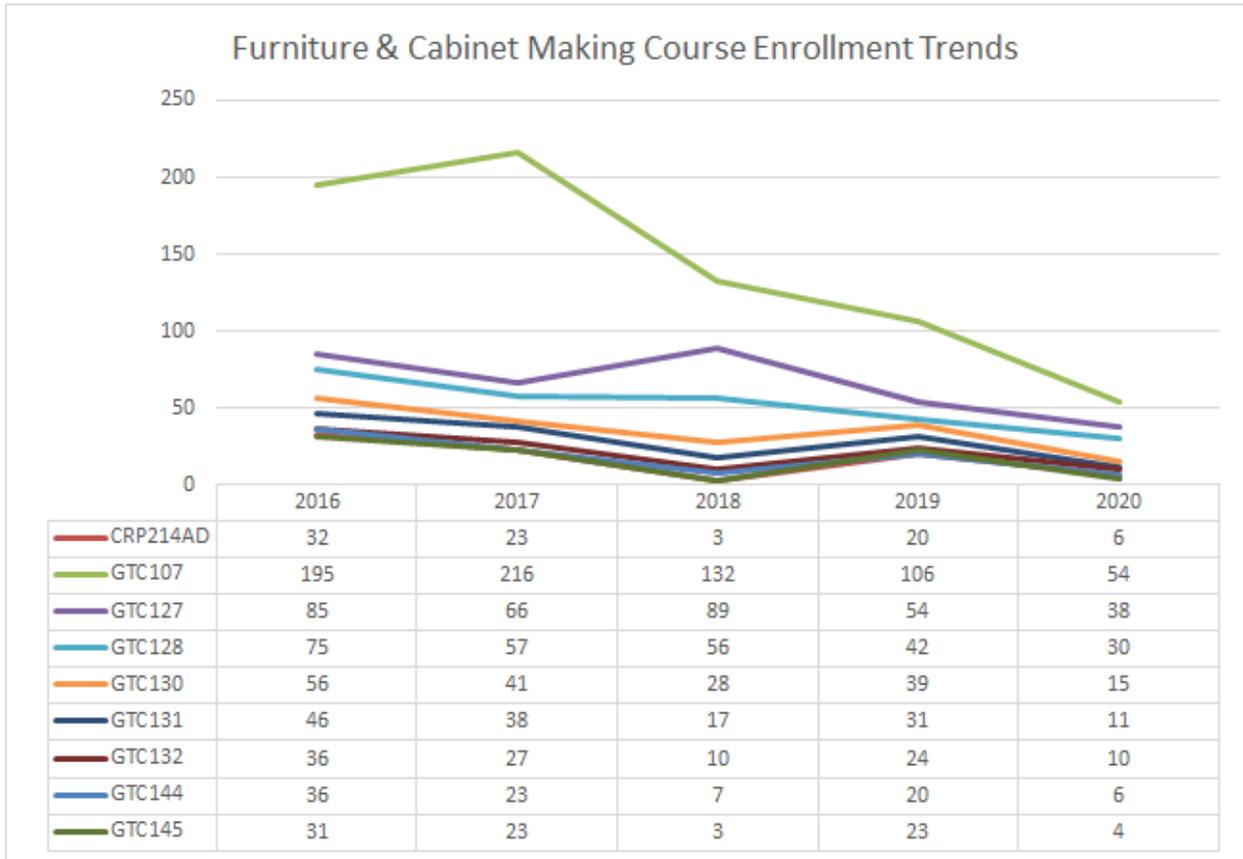
	2016		2017		2018		2019		2020	
	N	%	N	%	N	%	N	%	N	%
<b>Gender</b>										
Female										
Male	222	96.9%	234	97.9%	173	97.7%	145	99.3%	86	98.9%
Other/Not Specified	7	3.1%	5	2.1%	4	2.3%	1	0.7%	1	1.1%
<b>Ethnicity</b>										
American Indian	12	5.2%	14	5.9%	10	5.6%	11	7.5%	7	8.0%
Asian			1	0.4%	2	1.1%				
Black or African American	22	9.6%	24	10.0%	20	11.3%	7	4.8%	10	11.5%

<b>Hawaiian</b>						<b>3</b>	<b>2.1%</b>	<b>1</b>	<b>1.1%</b>	
<b>Hispanic or Latino</b>	<b>58</b>	<b>25.3%</b>	<b>76</b>	<b>31.8%</b>	<b>64</b>	<b>36.2%</b>	<b>67</b>	<b>45.9%</b>	<b>36</b>	<b>41.4%</b>
<b>White or Caucasian</b>	<b>98</b>	<b>42.8%</b>	<b>88</b>	<b>36.8%</b>	<b>98</b>	<b>55.4%</b>	<b>47</b>	<b>32.2%</b>	<b>29</b>	<b>33.3%</b>
<b>Other/Not Specified</b>	<b>39</b>	<b>17.0%</b>	<b>36</b>	<b>15.1%</b>	<b>39</b>	<b>22.0%</b>	<b>11</b>	<b>7.5%</b>	<b>4</b>	<b>4.6%</b>
<b>Age Group</b>										
<b>19 and under</b>	<b>8</b>	<b>3.4%</b>	<b>1</b>	<b>0.4%</b>	<b>1</b>	<b>0.5%</b>				
<b>20-20</b>	<b>64</b>	<b>27.2%</b>	<b>57</b>	<b>23.7%</b>	<b>44</b>	<b>24.0%</b>	<b>24</b>	<b>16.2%</b>	<b>13</b>	<b>14.4%</b>
<b>30-39</b>	<b>90</b>	<b>38.3%</b>	<b>96</b>	<b>39.8%</b>	<b>76</b>	<b>41.5%</b>	<b>62</b>	<b>41.9%</b>	<b>37</b>	<b>41.1%</b>
<b>40-49</b>	<b>54</b>	<b>23.0%</b>	<b>62</b>	<b>25.7%</b>	<b>44</b>	<b>24.0%</b>	<b>43</b>	<b>29.1%</b>	<b>34</b>	<b>37.8%</b>
<b>50 and over</b>	<b>19</b>	<b>8.1%</b>	<b>25</b>	<b>10.4%</b>	<b>18</b>	<b>9.8%</b>	<b>19</b>	<b>12.8%</b>	<b>6</b>	<b>6.7%</b>
<b>First Generation</b>										
<b>Yes</b>	<b>190</b>	<b>83.0%</b>	<b>183</b>	<b>79.9%</b>	<b>142</b>	<b>80.2%</b>	<b>107</b>	<b>73.3%</b>	<b>34</b>	<b>39.1%</b>
<b>No</b>	<b>39</b>	<b>17.0%</b>	<b>55</b>	<b>23.0%</b>	<b>34</b>	<b>19.2%</b>	<b>35</b>	<b>24.0%</b>	<b>19</b>	<b>21.8%</b>
<b>Other/Unknown</b>			<b>1</b>	<b>0.4%</b>	<b>1</b>	<b>0.6%</b>	<b>4</b>	<b>2.7%</b>	<b>34</b>	<b>39.1%</b>

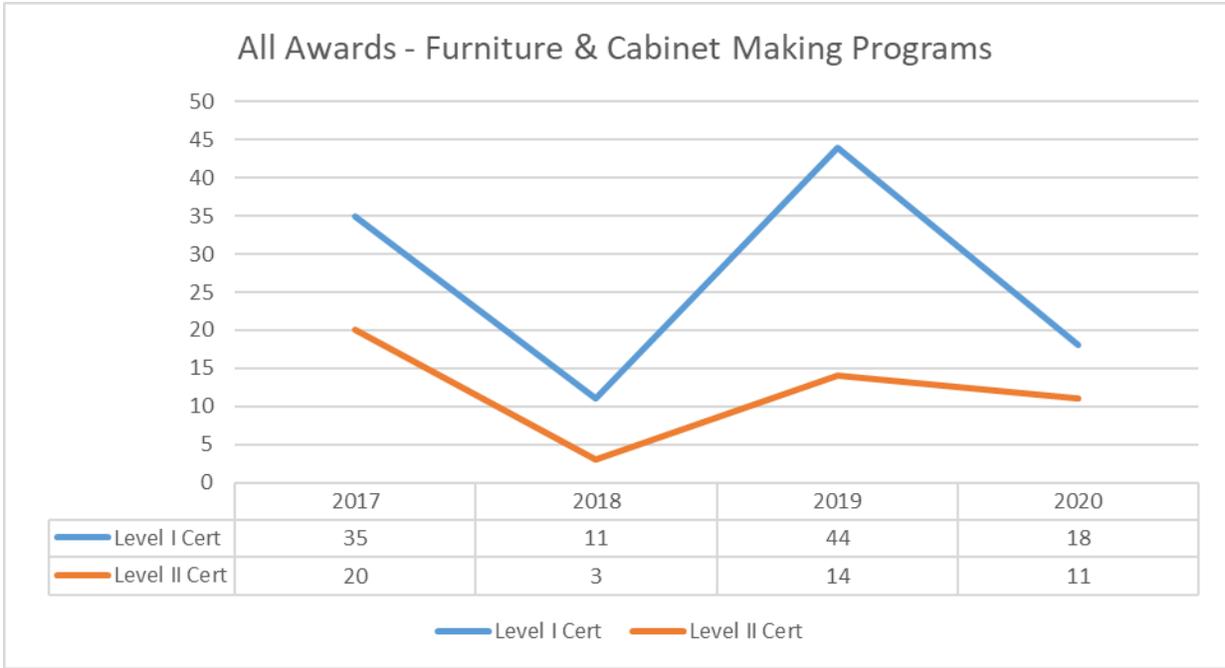
As evidenced by the charts below, enrollment in these programs was in consistent decline beginning in 2017. While changes were made to the program courses in 2014, students enrolled from 2016 on were all taking the new course sequence. Therefore, the reason for the decline in enrollment is not explained by the changes in curriculum alone. It should be noted that FTSE was somewhat stable for the two academic years just prior to the instructor resignation in February 2020.



The chart below indicates that top enrollments are consistent with the Level I program requirements. Specifically GTC107, 127, 128, and GTC130 make up the Level I certificate. Depending on decisions made by AZDOC, students may or may not continue in the Level II certificate. Additionally, the significant time to complete the program makes it highly likely that the student will be moved to a new yard or location. Again, the decline in enrollment in 2020 was due to the instructor's resignation, and it is anticipated that enrollments will bounce back with the transition to the new program post-pandemic.



The fluctuations in the number of completers in the following chart is due to the way these courses are scheduled and the varied times at which students complete. On average, completions are consistent from year to year, but appear inconsistent due to timing of awards.



**IV. Retention and Persistence**

Persistence is mainly impacted by inmate movement (transfer and release). These decisions of enrollment and movement are not made by the college and are outside our control.

The lowest retention rate is for GTC107, the technical math course. Normally this issue would be addressed, but for a multiplicity of reasons already presented and which will be discussed further in Section VIII, this particular program will no longer be offered. Retention rates increased with the courses beyond GTC107 that focus on application and skill-based learning.

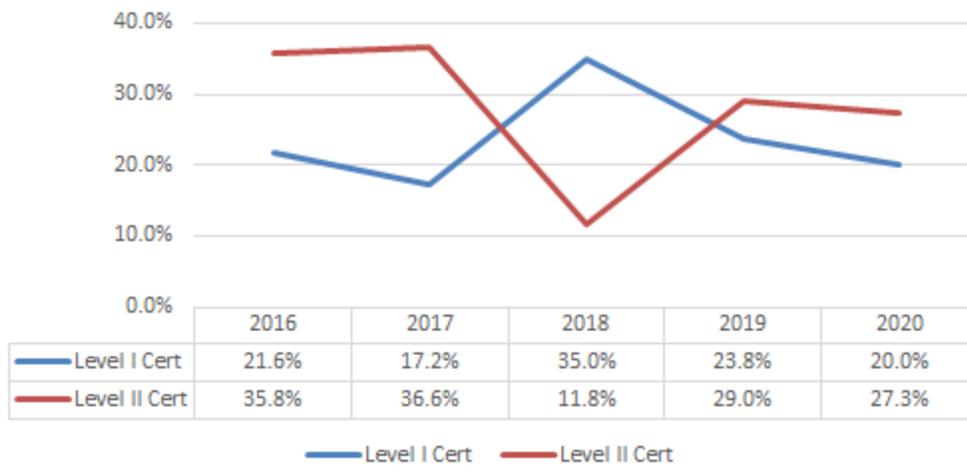
	2016		2017		2018		2019		2020	
	Retention Rate	Successful Retention								
CRP214 AD	100.0%	100.0%	95.7%	95.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
GTC107	75.9%	75.9%	71.7%	70.8%	64.4%	64.4%	68.9%	67.9%	88.9%	87.0%

GTC127	98.8%	98.8%	90.9%	90.9%	75.6%	75.6%	77.8%	77.8%	89.5%	78.9%
GTC128	75.3%	75.3%	79.3%	79.3%	69.6%	69.6%	69.8%	69.8%	73.3%	56.7%
GTC130	94.6%	94.6%	97.6%	97.6%	92.9%	92.9%	92.3%	92.3%	100.0%	100.0%
GTC131	89.1%	89.1%	78.9%	78.9%	76.5%	76.5%	80.6%	80.6%	81.8%	81.8%
GTC132	97.2%	97.2%	92.6%	92.6%	90.0%	90.0%	87.5%	87.5%	90.0%	80.0%
GTC144	94.4%	94.4%	100.0%	100.0%	85.7%	85.7%	100.0%	100.0%	100.0%	83.3%
GTC145	96.8%	96.8%	100.0%	100.0%	100.0%	100.0%	95.7%	95.7%	100.0%	100.0%
<b>Total</b>	<b>86.7%</b>	<b>86.7%</b>	<b>82.3%</b>	<b>81.9%</b>	<b>72.8%</b>	<b>72.8%</b>	<b>80.3%</b>	<b>80.0%</b>	<b>87.9%</b>	<b>81.0%</b>

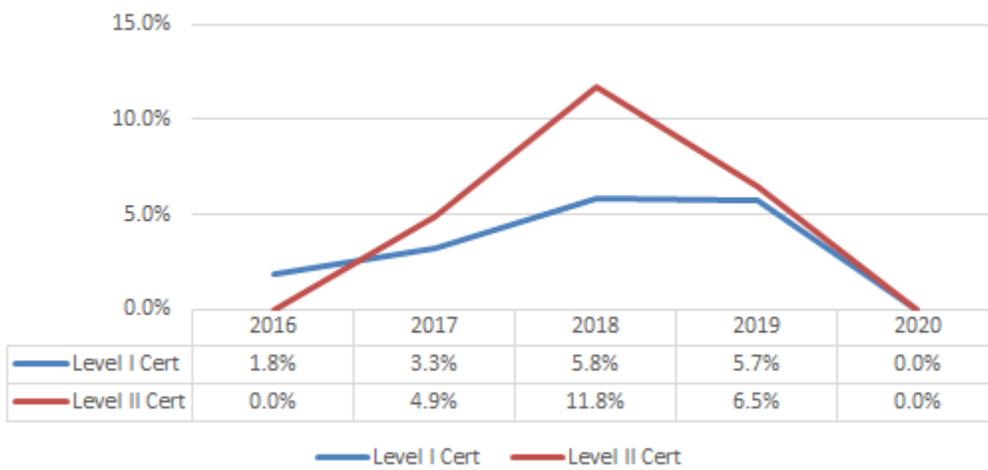
The persistence rates in the graphs below do not tell the whole story. While this is an important metric in a program where students attend class two or three days per week for a semester, it loses some significance given the format and schedule for students in these programs. Students attend class for 18 hours each week. Depending on course requirements, students can finish a class in a few weeks and complete the entire program in the same time typical students would spend in a single class. As stated previously, the timing of these events within the academic year further distorts the persistence by cohort year.

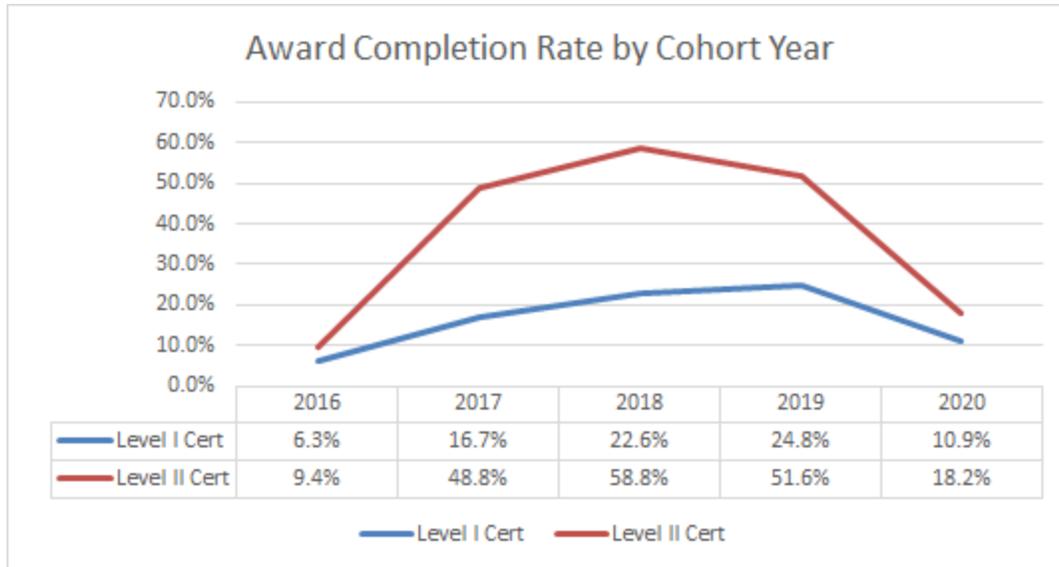
*Note: The following graphs represent student cohorts based on when students first declared their academic program. For example, students who declared their program in Summer 2015, Fall 2015, and Spring 2016 are grouped into cohort year 2016.*

First to Second Term Persistence Rate by Cohort Year



First to Second Year Persistence Rate by Cohort Year





## V. Program Learning Outcomes

CCL in Workforce Development: Furniture Construction/Refinishing Level I (5603N)

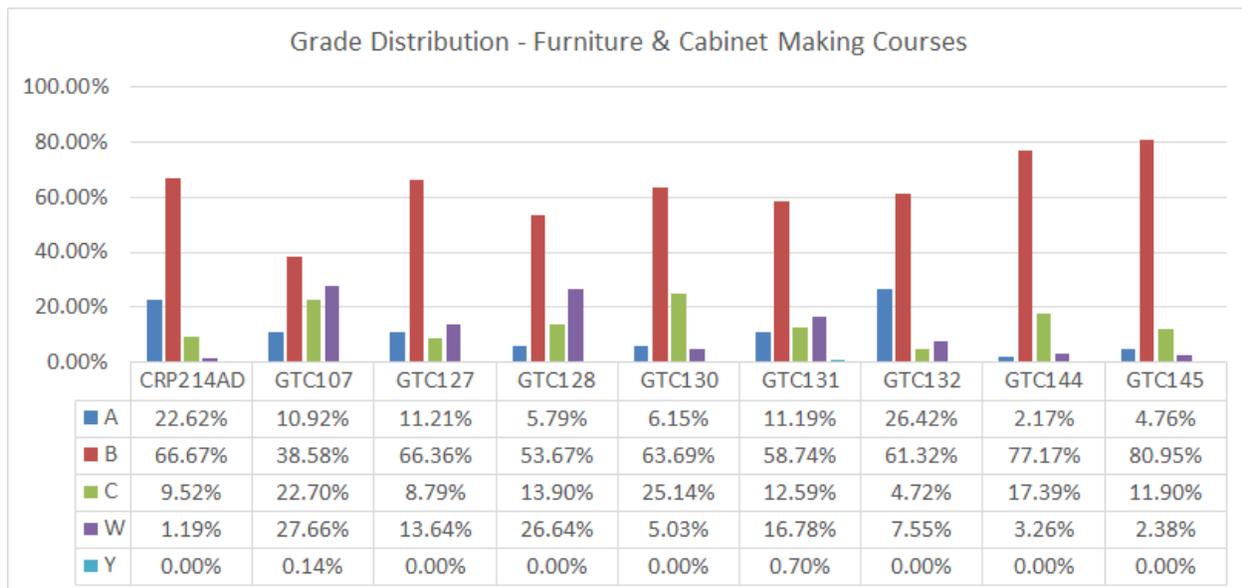
1. Review mathematical principles to include basic operations, significant digits, exponents, square roots, and order of operations. (GTC107)
2. Demonstrate safe and proper use of woodworking hand tools, stationary, and portable power tools. (GTC127, GTC128, GTC130)
3. Summarize details for planning a woodworking project. (GTC128)
4. Identify various woods and their uses. (GTC128)
5. Describe ways to secure wood projects together, including joints, glues, and metal fasteners. (GTC128)
6. Explain the process of building and completing a piece of furniture. (GTC128, GTC130)
7. Design, construct, assemble, and finish a piece of furniture. (GTC128, GTC130)
8. Calculate and buy appropriate material for furniture projects. (GTC130)

OR

CCL in Workforce Development: Furniture Construction/Refinishing Level II (5604N)

1. Examine the fundamentals of cabinet building and construction. (CRP214AD)

2. Utilize various bidding techniques in preparing a formal bid. (GTC131)
3. Explain the sequence of processes and materials used for finishing wood. (GTC132)
4. Apply stains, filler, sealers, and protective coatings. (GTC132)
5. Differentiate between various types of cabinet construction. (GTC144)
6. Demonstrate cutting, shaping, and assembling techniques for cabinetmaking. (GTC144)
7. Construct a wood cabinet which includes a drawer and door. (GTC145)



A relationship between program-level learning outcomes and associated course grade distribution can lead to an approximation of conformance to established standards. Using “A”, “B” and “C” grades in the courses aligned with each outcome to represent attainment, the chart above indicates that only approximately 70% of the GTC107 students demonstrated college-level competence. If a student is unable to perform basic math operations, success in the job is unlikely. GTC128 is another critical course and shows up in six of the eight program learning outcomes for the Level I certificate. This course also has only 73% college attainment against a goal of 85%. Finally GTC131 indicates historic achievement of 80% college readiness but this should not be surprising since the main program competency is bid preparation, a math skill. The key takeaway from this analysis is that math concepts should be highly contextualized to promote college level performance. However, during the period of this program review, the content was taught like a typical math class rather than contextualized.

This review highlights the need to track and monitor each program-level outcome, especially for these high-risk and underserved students. Over the past year, when in-person courses were not being held at the prison due to the pandemic, all of the course content has been migrated to RioLearn, our college-wide learning management system. Additionally, the assessments and

daily educational activities are being documented in CourseArc, a content platform integrated with RioLearn. This provides several opportunities and benefits to the students, instructors, and the college including monitoring and adjustment to assure these learning outcomes are met.

## **VI. Impact of Co-curricular Programs**

Due to the nature and setting of these programs, co-curricular programs are not offered

## **VII. Effective Teaching**

The requirement to teach these courses is just 5 years in the trade, which means that the instructors typically have not attended college themselves. Engaging them in higher-level pedagogical discussions is a challenge given that their students often have little interest in college-level education, and the instructors are dealing with issues generated by the fact that the inmates have access to dangerous materials that are worth a lot on the yard. The chair has spent time co-teaching to model certain practices and behaviors. Additionally, meetings on-site at the prisons are held at least twice each semester to discuss classroom management, assessment methods, grading, effective rubrics, and the need for consistent and defined rubrics.

## **VIII. Evaluation of Curriculum**

These two certificates are a great example of evaluation to ensure the relevance and currency of the curricula. In 2014 the program was changed from a focus on upholstery and furniture refinishing to furniture and cabinet making. This was in response to an industry that was no longer focused on reupholstery of older and custom furniture. The focus shifted to custom cabinetry, fabricating bookshelves and nightstands or small tables. By 2019 the industry could not even support an advisory board because the work was either mass produced or produced for user assembly. Additionally, the AZDOC no longer has a need internally for workers to support contracted cabinet finishing operations on the yard. These factors, in combination with the instructor resignation, led to this program being discontinued.

Timing of the program and contract changes, the pandemic, standardization of a District curriculum and this program review were unintentionally but constructively concurrent. Together these events allowed time, resources and a necessary focus on those issues critical to program effectiveness to improve student learning outcomes while simultaneously streamlining college processes for student tracking and evaluation.

As discussed above, changes are made based on many factors. Moving forward, there are improvements that need to be made for all in-person CTE courses and programs offered in the prison setting. These recommendations are the result of key needs highlighted by this program review. First, while instructors are not required to have any college education, every effort should be made to hire someone who, at minimum, completed a Journeyman training program. While not “college,” these training programs are robust enough to qualify for college credit in

most cases. Second, no program should be started without solid review of the industry under consideration. Factors such as pay, hiring opportunities for individuals with a prison record, promotions, and future trends or requirements must be considered. This is due to significant startup and equipment costs, as well as ongoing material requirements to support effective education and training. Third, no program should be started without documented and reviewed assessments, grading schema, rubrics and related documentation to support the course residing in an established learning management system. This assures standardization of learning outcomes, consistency of educational process, up to date records to support student movements and course management, and the ability to update content and competencies in response to industry needs. Failure to follow these and associated/related practices will result in a repeat of many of the issues identified in this program review.

The general area of Construction Technology is in high demand, is fairly blind to issues of previous incarceration, and there is significant overlap of tools and equipment between Carpentry and Cabinet making, thereby reducing some of the operational costs. There is one remaining opportunity for a microcredential in the program. This is in the area of what is typically considered a pre-apprentice training program and would include the following courses: CON103, CON104, CON105, CON107. All are already included in the Construction program which will replace Furniture and Cabinet Making. Together these courses are 5 credits, provide a student with OSHA 10 hour training, and would provide sufficient education to allow the student to take the Apprenticeship exam for entry into a registered training program. The courses are already available and the microcredential is being considered for Instructional Council approval, which is a critical milestone. Based on feedback and comments at the next meeting along with careful consideration of the issues detailed in this review, a microcredential in Construction Technology could be offered as early as the Fall 2021 term.

## **IX. Program Resources**

Due to the instructor's resignation from this program and replacing this program with Construction Electrical, a new instructor will need to be hired. This program change has been fully vetted with local industry and augments the existing program held on another yard. There are several advantages to this change of program and merging classroom space. First, the merged space already had upgraded lighting and instructional materials. Second, both programs are supported by the same "core" classes (the pre-apprenticeship described above), allowing students to learn both carpentry and electrical skills in a reduced time frame due to the overlap of courses and concurrent instruction facilitated by the second instructor. Third, although the equipment from this program would need to be moved, it supports the existing construction carpentry program. Fourth, two instructors in the same space increases safety and allows for collaboration. Finally, most of the equipment to support the electrical program is already available because we had already adopted sequential instruction in the two construction fields.

As a result of the program setting and structure, the only direct college resource available to this program is advising.

## **X. Program Recommendations, Decisions, and Action Plans**

### **a. Program Best Practices**

A best practice is to have documented curriculum assessments and a gradebook, both integrated in a learning management system. This was not in place for the certificates included in this review, but will be a standard for prison programs moving forward.

### **b. Program Viability**

The viability of the program is not favorable. A series of specific circumstances outside the college's control has contributed to this determination. First, the instructor for this program resigned. Second, the ADOC decided that the program was not a good fit for employment opportunities. This was the same recommendation from the Advisory Council, which indicated that furniture and cabinets are both mass-produced and, therefore, the custom skills taught in these courses were not marketable. Finally, during the pandemic, ADOC moved the equipment from the building and re-purposed the space. When in-person instruction resumes, classroom space will be shared. This situation will be addressed at that time.

### **c. Action Plans**

Assessment data for performance against the documented student learning outcomes will be reviewed annually, with adjustments being made if outcomes fall below 85%. Student retention will be reviewed semi-annually, and any necessary improvement plans will be included in the annual department report.

As previously discussed, the following actions should be in place for any program considered for implementation at the prison facility.

- Make a concerted effort to hire an instructor who has college-level courses or educational experiences
- Fully vet any new program to assure longevity, hiring opportunities, and acceptable startup/ongoing operational cost
- Assure assessments, grading schema, rubrics and related documentation to support the course reside in an established learning management system
- Review assessments and course material to assure all competencies are covered at a college level
- Assure the LMS has remote access that is not impacted by other (prison) networks to allow monitoring by college personnel and systems

#### **d. Assessment Team Recommendation**

- Continue program and implement stated action plan. Next review due {3-5 years}.
- Continue program, implement stated action plan, and address comments listed below. Spotlight follow-up report due {1-2 years}.
- Refer to college administration to determine program viability.
- Discontinue program.

**Comments:**

This program is being replaced by Construction Electrician, and that program will be reviewed during the 2025-26 academic year, unless an earlier review is scheduled by the State of Arizona.

Version 7. Last Updated by Assessment Committee 12/20