

Culinary and Hospitality Program Demand

Prepared for Yavapai College

June 2013



In the following report, Hanover Research assesses the opportunity and demand for an associate's degree in culinary arts and/or hospitality management at Yavapai College. The first section assesses potential student demand through an analysis of recent degree completion trends, while the second section examines the labor market outlook for degree graduates. The final section of the report profiles relevant programs at peer and selected regional institutions.

TABLE OF CONTENTS

Executive Summary and Key Findings	3
INTRODUCTION	3
KEY FINDINGS	5
Section I: Program Demand	7
METHODOLOGY	7
NATIONAL COMPLETIONS TRENDS	9
REGIONAL COMPLETIONS TRENDS	12
ARIZONA COMPLETIONS TRENDS.....	17
Section II: Labor Market Outlook	19
ACADEMIC PROGRAM/OCCUPATIONAL CROSSWALK.....	19
NATIONAL EMPLOYMENT PROJECTIONS.....	21
REGIONAL EMPLOYMENT PROJECTIONS.....	23
ARIZONA EMPLOYMENT PROJECTIONS	29
JOB POSTINGS TRENDS IN THE FIELD OF CULINARY ARTS AND HOSPITALITY MANAGEMENT	30
Section III: Profiles of Similar Programs at Peer Institutions	32
METROPOLITAN COMMUNITY COLLEGE (OMAHA, NEBRASKA)	33
EL PASO COMMUNITY COLLEGE (EL PASO, TEXAS)	36
PIMA COMMUNITY COLLEGE (TUCSON, ARIZONA)	39
SCOTTSDALE COMMUNITY COLLEGE (SCOTTSDALE, ARIZONA)	42
CENTRAL ARIZONA COLLEGE (COOLIDGE, ARIZONA)	48
CABRILLO COLLEGE (APTOS, CALIFORNIA).....	52

EXECUTIVE SUMMARY AND KEY FINDINGS

INTRODUCTION

In recent years, culinary arts and management has become an increasingly popular field for postsecondary education, mainly due to the bright business and employment outlook of the food and restaurant industries. According to the National Restaurant Association, there are approximately 980,000 restaurants located in the United States, employing 13.1 million restaurant industry employees. The projected total sales are \$660.5 billion for 2013, a 3.8 percent increase from 2012 in current dollars.¹ In Arizona, particularly, restaurants are a driving force of its economy. In 2013, its restaurants are projected to generate \$10.5 billion in sales and offer 262,200 jobs, 10 percent of the total employment in the state.²

Moreover, a significant portion of the U.S. workforce belongs to the restaurant industry, whose job creation continues to outpace that of other industries. In 2012, restaurant job growth rose 3 percent, compared to 1.4 percent for overall U.S. employment. This year, restaurant job growth is expected to rise 2.4 percent, compared to a projected 1.5 percent gain for total U.S. employment. In addition, 2013 is projected to be the 14th straight year that restaurant-industry employment will outpace overall employment.³

On the hospitality side, the overall industry is showing an upward trend in employment activities. Based on the data collected from the U.S. Bureau of Labor Statistics (BLS) (see Figure 0.1 on the following page), the total employment in the Leisure and Hospitality sector has experienced a steady increase since January 2010. Popular occupations such as *Meeting, Convention, and Event Planners* and *Logging Managers* are projected to grow at 44 percent and 8 percent nationwide respectively between 2010 and 2020, faster than the average growth of all occupations.⁴

Furthermore, recent data from BLS also show signs of encouragement for hospitality related occupations. According to the employment statistics highlights issued in June 2013, employment in leisure and hospitality grew by 43,000 in May, similar to its prior three-month average job gain of 44,000. Among all the growing fields, food and beverage services accounted for most of the job growth, but modest gains also occurred in amusements, gambling, and recreation. Job growth in leisure and hospitality has increased in 2013 has averaged 41,000 per month since the beginning of the year, compared to an average of 30,000 per month in 2012.⁵

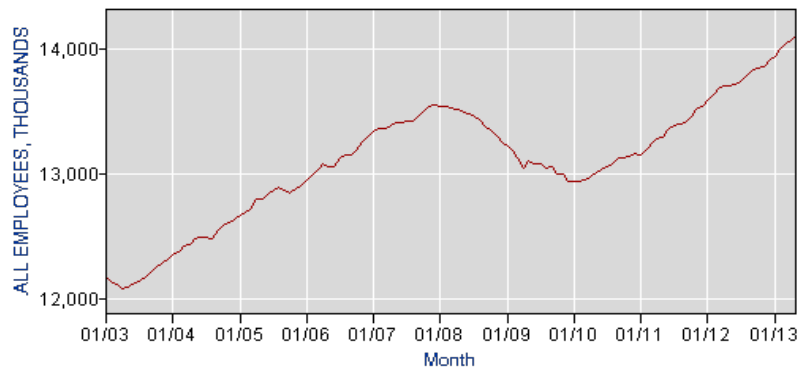
¹ "News & Research." *National Restaurant Association*. <http://www.restaurant.org/News-Research/Research/Facts-at-a-Glance>

² "Arizona Restaurant Industry at A Glance." *National Restaurant Association*. <http://www.restaurant.org/Downloads/PDFs/State-Statistics/arizona>

³ "Forecast 2013." *National Restaurant Association*. <http://www.restaurant.org/News-Research/Research/Forecast-2013>

⁴ "Occupational Outlook Handbook." *Bureau of Labor Statistics*. <http://www.bls.gov/ooh/>

⁵ "Current Employment Statistics Highlights." *BLS, June 2013*. <http://www.bls.gov/web/empsit/ceshighlights.pdf>

Figure 0.1 Overall Employment Trends of the Leisure and Hospitality Industry

Nevertheless, even with promising industrial outlook, higher education institutions, including Yavapai College (YC), still need to be cautious about adding new educational programs in culinary arts and hospitality management. A thorough investigation of program demand and career prospects will certainly provide critical information for decision-making.

REPORT OUTLINE

In this report, Hanover Research provides information and analyzes the market for an associate's degree in culinary arts, hospitality management, and/or a combined degree. We examine prospective student demand, labor market outlook, and potential models for such program by reviewing state and national data, as well as similar programs available at peer institutions. Accordingly, our report is broken down into three sections.

SECTION I: STUDENT DEMAND FOR AN ASSOCIATE'S DEGREE IN CULINARY ARTS AND HOSPITALITY MANAGEMENT

Section I assesses potential student demand for degrees similar to that proposed by YC by analyzing five years of completions data compiled by the National Center for Education Statistics (NCES) at the state, regional, and national levels.

SECTION II: LABOR MARKET OUTLOOK

The second section reviews employment projections from various sources—the Bureau of Labor Statistics (BLS), the Arizona Department of Administration, and various labor projection departments from California, Nevada, New Mexico, Utah, and Colorado—to identify relevant career options and associated labor market demand for graduates from an associate's degree program in culinary arts and hospitality management. We also include a subsection on other indicators of potential demand, such as data from occupational listings and employer demands.

SECTION III: INSTITUTIONAL PROFILES

The final section of this report profiles academic programs similar to YC's prospect degree in culinary arts and/or hospitality management at selected two-year colleges. These institutions examined include:

- Metropolitan Community College (Nebraska)
- El Paso Community College (Texas)
- Pima Community College (Arizona)
- Scottsdale Community College (Arizona)
- Central Arizona College (Arizona)
- Cabrillo College (California)

KEY FINDINGS

Our research yielded a number of key findings, summarized below:

- Job creation in the restaurant industry continues to outpace that of other industries in the United States, with a projected growth of 2.4 percent, compared to an estimated 1.5 percent gain for total U.S. employment. In Arizona, restaurants are projected to generate **\$10.5 billion in sales and offer 262,200 jobs** in 2013, 10 percent of the total employment in the state.
- To capture the trends of program completions for associate's degrees in culinary arts and hospitality management, Hanover selected an array of programs covering cooking training, culinary services, and hospitality management. Our findings reveal that the aggregate national growth of degree completions for selected programs was slow-to-moderate between 2007 and 2011, **suggesting an upward demand for such programs.**
- Regional and state completion trends for culinary arts and hospitality management programs are consistent with our national discovery; however, the rates of growth and the categories of reported programs vary by state. Among all the states examined, **Arizona appears to be the most appealing ground for an associate's degree in culinary arts and/or hospitality management due to the state's high growth rates and overall levels of degree completions.**
- In addition to program completions, Hanover also collected employment projections from BLS for occupations closely associated with the culinary and hospitality programs discussed in Section I of the report. The national projections data illustrate that **employment for occupations associated with programs related to culinary arts and hospitality management is expected to trend upward, with a high growth rate of 8.9 percent between 2010 and 2020.** This is matched by high projected

growth found in Arizona and its surrounding states, with 16.6 percent (Utah) being the lowest projected increase in employment regionally.

- At the national level, data from BLS indicate that the employment projections for **cooks at restaurants and lodging managers are expected to increase at high rates of 12.9 percent and 8.3 percent respectively between 2010 and 2020**. In Arizona, the corresponding growth figures for the two popular occupations in culinary and hospitality are 28.9 percent and 17.4 percent respectively, highlighting the desirability of job candidates in both fields. In addition, food service managers are projected to experience high growth in all the regional states examined, except for Nevada.
- Hanover's scan of possible peer programs revealed that it is generally **more common to have separate associate's degrees for culinary arts and hospitality management** in order to include more focused skills training. Among all the programs profiled, the relevant programs at Pima Community College and Scottsdale Community College in Arizona have reported the strongest growth of completions between 2007 and 2011. Notably, Cabrillo College is one of the few institutions in YC's immediate region that offer a combined degree in culinary arts and hostility management.
- **Types of degrees profiled in this report include Associate of Applied Science, Associate of Arts, and Associate of Science**. Common core coursework includes cooking-related coursework, food culture, nutrition studies, food services, hospitality management, communications, and with a growing trend, business administration. Most institutions market their programs by emphasizing their special real-life experience training programs and career prospective.

SECTION I: PROGRAM DEMAND

In this section, Hanover Research examines national and state degree completions trends for programs related to culinary arts and hospitality management. We use several methods to assess student demand, as described below.

METHODOLOGY

One of Hanover's main methods of estimating potential demand for a new academic program is to examine recent trends in degree completions among similar programs. By examining degree completion trends in related fields, potential student demand for a program can be roughly anticipated. If degree completions for a certain type of program have increased over time within a certain geographical area, for instance, it is reasonable to infer that demand for such programs is trending upward within that region.

Data and information on completions, which we obtain primarily from NCES's Integrated Postsecondary Education Data System (IPEDS), provide us with a useful index of trends in demand for an associate's degree in culinary arts and hospitality management. NCES uses a taxonomic system of numeric codes to classify higher education academic programs, known as the Classification of Instructional Programs (CIP). All institutions of higher education nationwide submit completions data, classified by CIP code and award level, to IPEDS. The completions data that are used for this report were drawn from IPEDS.⁶

NCES currently has specific CIP classifications for culinary arts and hospitality management programs. Nevertheless, to better understand program trends, Hanover decided to broaden the examination and include completions data for several academic program classifications that are relevant and more specific defined under culinary arts and hospitality management. We identified nine CIP classifications most relevant to YC's query. Degree completions data for these classifications were collected for academic years 2006–2007 through 2010–2011 and are displayed in Figures 1.2 through 1.8.

It is important to note, however, that completions data for 2011 are **early release data**. This means that the data may be incomplete, particularly when examining aggregate nationwide or statewide data. Nevertheless, 2011 data are included here to provide the most recent information and to determine if completions have increased from 2010 to 2011 despite possible incompleteness of the data.

The figure below provides the fields and definitions of the nine classifications selected for comparison to a potential program at YC. Such a degree program may be a combination of the selected areas listed or a more narrowly defined program that places emphasis on some areas more than others. Hanover's local, regional, and national analysis on student demand, discussed later in the report, will be based upon the data drawn under these classifications.

⁶ The Integrated Postsecondary Education Data System. <http://nces.ed.gov/ipeds/datacenter/>

Figure 1.1: CIP Codes for Culinary and Hospitality Related Programs

CIP CODE	TITLE	DEFINITION
12.0500	Cooking and Related Culinary Arts, General	A program that focuses on the general study of the cooking and related culinary arts, and that may prepare individuals for a variety of jobs within the food service industry. It includes instruction in food preparation, cooking techniques, equipment operation and maintenance, sanitation and safety, communication skills, applicable regulations, and principles of food service management.
12.0501	Baking and Pastry Arts/Baker/Pastry Chef	A program that prepares individuals to serve as professional bakers and pastry specialists in restaurants or other commercial baking establishments. It includes instruction in bread and pastry making, bread and pastry handling and storage, cake and pastry decorating, baking industry operations, product packaging and marketing operations, and counter display and service.
12.0503	Culinary Arts/Chef Training	A program that prepares individuals to provide professional chef and related cooking services in restaurants and other commercial food establishments. It includes instruction in recipe and menu planning, preparing, and cooking of foods, supervising and training kitchen assistants, the management of food supplies and kitchen resources, aesthetics of food presentation, and familiarity or mastery of a wide variety of cuisines and culinary techniques.
12.0504	Restaurant, Culinary, and Catering Management/Manager	A program that prepares individuals to plan, supervise, and manage food and beverage preparation and service operations, restaurant facilities, and catering services. This program includes instruction in food/beverage industry operations, cost control, purchasing and storage, business administration, logistics, personnel management, culinary arts, restaurant and menu planning, executive chef functions, event planning and management, health, and safety, insurance, and applicable law and regulations.
12.0505	Food Preparation/Professional Cooking/Kitchen Assistant	A program that prepares individuals to serve under the supervision of chefs and other food service professionals as kitchen support staff and commercial food preparation workers. It includes instruction in kitchen organization and operations, sanitation and quality control, basic food preparation and cooking skills, kitchen and kitchen equipment maintenance, and quantity food measurement and monitoring.
52.0901	Hospitality Administration/Management, General	A program that prepares individuals to serve as general managers and directors of hospitality operations on a system-wide basis. This includes travel arrangements and promotion as well as the provision of traveler facilities. It includes instruction in principles of operations in the travel and tourism, hotel and lodging facilities, food services, and recreation facilities industries; hospitality marketing strategies; hospitality planning; management and coordination of franchise and unit operations; business management; accounting and financial management; hospitality transportation and logistics; and hospitality industry policies and regulations.
52.0903	Tourism and Travel Services Management	A program that prepares individuals to manage travel-related enterprises and related convention and/or tour services. This includes instruction in travel agency management, tour arranging and planning, convention and event planning, travel industry operations and procedures, tourism marketing and promotion strategies, travel counseling, travel industry law, international and domestic operations, and travel and tourism policy.

CIP CODE	TITLE	DEFINITION
52.0904	Hotel/Motel Administration/Management	A program that prepares individuals to manage operations and facilities providing lodging services to the traveling public. Includes instruction in hospitality industry principles; supplies purchasing, storage and control; hotel facilities design and planning; hospitality industry law; personnel management and labor relations; financial management; marketing and sales promotion; convention and event management; front desk operations; and applications to specific types of hotels and motel operations.
52.0905	Restaurant/Food Services Management	A program that prepares individuals to plan, manage, and market restaurants, food services in hospitality establishments, food service chains and franchise networks, and restaurant supply operations. It includes instruction in hospitality administration, food services management, wholesale logistics and distribution, franchise operations, business networking, personnel management, culinary arts, business planning and capitalization, food industry operations, marketing and retailing, business law and regulations, finance, and professional standards and ethics.

Source: NCES

These program classifications present a broader understanding of culinary arts and hospitality management. Degree completions data for such programs can help indirectly assess the overall demand for academic qualifications related to YC's proposed program, as the curriculum of these programs described above would likely overlap with YC's potential program, particularly in regards to *Culinary Arts/Chef Training, Restaurant, Culinary, and Catering Management, as well as Hospitality Administration/Management*.

One should exercise caution in interpreting completions data reported by IPEDS because there is no standardized system used to classify programs; universities are self-reporting and thus allowed to choose any specific code under which they consider a program is classified. For example, programs at two separate universities comprising essentially the same content related to culinary arts might be classified under *Cooking and Related Culinary Arts, General* at one university and under *Culinary Arts/Chef Training* at another. Moreover, a single school may have a new program that has not yet been classified by IPEDS, or one sufficiently new that no students have finished all two years (and therefore would not add to completions data at this time). However, despite these limitations, the data provided by IPEDS provide a highly useful approximation of recent, present, and future student demand.

NATIONAL COMPLETIONS TRENDS

The review of degree completions data for culinary arts and hospitality management begins at the national level. Figure 1.2 examines the completions data for related programs across the United States over the past five years. In addition, we calculate the compound annual growth rate (CAGR), the average annual change, and the standard deviation of annual change for completions in each program type. While CAGR provides a measure of annual growth over a period of time that disregards the volatility of individual year-to-year changes in growth, the standard deviation shows how consistent the growth has been for each program field. NCES collects completions data for a variety of academic award levels, for example, bachelor's degrees, master's degrees, and multiple other award types. While our

analysis focuses on completions data for associate's degrees, we also collect data for bachelor's degrees to demonstrate broader trends at the national level.

The aggregate completions data for culinary arts and hospitality management reveal a trend of slow growth nationally, with CAGR at 2.8 percent and 1.1 percent respectively from 2007 to 2011. As demonstrated in Figure 1.2, the *Baking and Pastry Arts* classification has shown the highest cumulative growth over the period examined. Meanwhile, the completions data for *Hospitality Administration/ Management, General* demonstrate consistent and strong growth between 2007 and 2011, with a CAGR at 12.7 percent. Other areas displayed promising trends in degree completions were *Food Preparation/ Professional Cooking/ Kitchen Assistant* and *Cooking and Related Culinary Arts*, with the former demonstrating a much lower level of degree completions. It is worth noting that the completions of *Restaurant/Food Services Management* experienced the sharpest decrease over the period examined.

Figure 1.2: National Completions of Associate's Degrees in Fields Related to Culinary Arts and Hospitality Management, 2007–2011

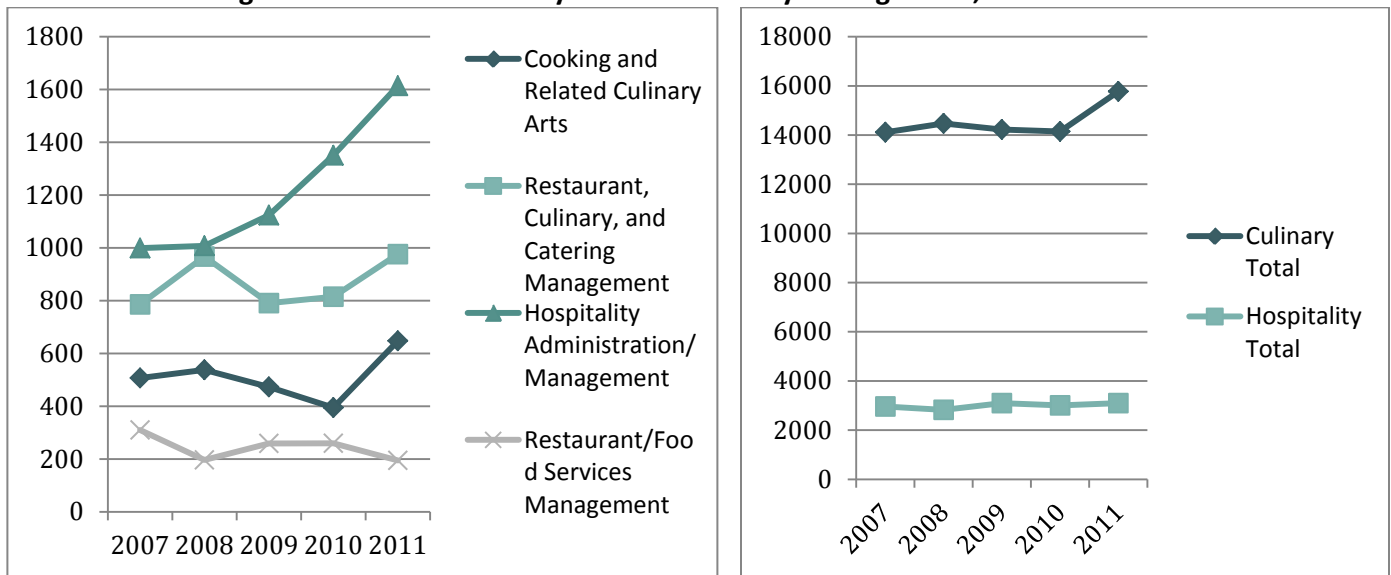
CIP CODE	ACADEMIC PROGRAM	2007	2008	2009	2010	2011	CAGR	AVERAGE ANNUAL CHANGE	STANDARD DEVIATION OF ANNUAL CHANGES
12.0500	<i>Cooking and Related Culinary Arts, General</i>	507	538	473	395	648	6.3%	35.3	133
12.0501	<i>Baking and Pastry Arts/Baker/Pastry Chef</i>	1,242	1,476	1,691	1,820	2,357	17.4%	278.8	154
12.0503	<i>Culinary Arts/Chef Training</i>	11,563	11,471	11,249	11,097	11,772	0.4%	52.3	362
12.0504	<i>Restaurant, Culinary, and Catering Management/ Manager</i>	786	967	791	815	976	5.6%	47.5	142
12.0505	<i>Food Preparation/ Professional Cooking/ Kitchen Assistant</i>	15	17	24	17	20	7.4%	1.3	5
Total Culinary		14,113	14,496	14,228	14,144	15,773	2.8%	415	734
52.0901	<i>Hospitality Administration/ Management, General</i>	999	1,008	1,124	1,351	1,614	12.7%	153.8	99
52.0903	<i>Tourism and Travel Services Management</i>	521	520	453	494	456	-3.3%	-16.3	40
52.0904	<i>Hotel/Motel Administration/Management</i>	1,133	1,102	1,262	901	833	-7.4%	-75	186
52.0905	<i>Restaurant/Food Services Management</i>	310	197	259	260	195	-10.9%	-28.8	66
Total Hospitality		2,936	2,827	3,098	3,006	3,098	1.1%	33.8	161
Grand Total		17,076	17,296	17,326	17,150	18,871	2.5%	448.8	748

Source: IPEDS

A closer look at popular programs under culinary arts and hospitality management reveals a stable demand for degrees in related fields. While the classification for *Restaurant Culinary and*

Catering displayed only minor movement from 2007 to 2011, the *Cooking and Related Culinary Arts* program experienced particularly strong growth from 2009 to 2011(see Figure 1.3). The graph on the right below illustrates the large completions gap between culinary related programs and hospitality related program, indicating the strong, established demand in the culinary field. The growth trends and levels of completions for all classifications examined in Figure 1.2 and Figure 1.3 infer **that there is ample demand for associate’s degrees in culinary programs or combined programs with hospitality management at the national level.**

Figure 1.3: Completions of Associate’s Degrees in Programs Related to Culinary Arts and Hospitality Management, 2007– 2011



Source: IPEDS

In addition to trends drawn from completions data for associate’s degrees, Hanover also collected completions for bachelor’s degrees in related fields. As shown in Figure 1.4 on the following page, the completion numbers for hospitality related programs are much higher for bachelor studies, while the opposite is true for culinary related programs. The data collected also indicate that management programs are more popular among bachelor’s degrees, with all but one management programs examined below demonstrating moderate to high growth from 2007 to 2011. The program classification that is most unlikely to have sustainable demand for bachelor studies is the *Food Preparation/ Professional Cooking/ Kitchen Assistant*, which in general is not a popular field of study in higher education.

Figure 1.4: National Completions of Bachelor's Degrees in Fields Related to Culinary Arts and Hospitality Management, 2007–2011

CIP CODE	ACADEMIC PROGRAM	2007	2008	2009	2010	2011	CAGR	AVERAGE ANNUAL CHANGE	STANDARD DEVIATION OF ANNUAL CHANGES
12.0500	<i>Cooking and Related Culinary Arts, General</i>	20	30	35	1	0	-100%	-5	17
12.0501	<i>Baking and Pastry Arts/Baker/Pastry Chef</i>	53	62	56	62	73	8.3%	5	7
12.0503	<i>Culinary Arts/Chef Training</i>	321	421	440	281	321	0%	0	96
12.0504	<i>Restaurant, Culinary, and Catering Management/ Manager</i>	159	208	271	405	616	40.3%	114.3	64
12.0505	<i>Food Preparation/ Professional Cooking/ Kitchen Assistant</i>	--	15	18	--	--	--	--	--
52.0901	<i>Hospitality Administration/ Management, General</i>	4,686	5,418	6,020	6,358	6,827	9.9%	535.3	147
52.0903	<i>Tourism and Travel Services Management</i>	560	621	835	701	685	5.2%	31.3	126
52.0904	<i>Hotel/Motel Administration/Management</i>	1,860	1,919	1,909	1,962	2,042	2.4%	45.5	34
52.0905	<i>Restaurant/Food Services Management</i>	447	418	559	571	638	9.3%	47.8	64
Grand Total		7,659	8,694	9,584	9,770	10,564	8.4%	726.3	323

Source: IPEDS

REGIONAL COMPLETIONS TRENDS

In order to better depict the demand for culinary and hospitality programs in the Southwest states of United States, Hanover reviewed the completions of associate's degrees for previously mentioned programs in Arizona and its surrounding states, where we chose to include California, Nevada, New Mexico, Utah, and Colorado. Since our analysis places an emphasis on examining two-year programs in order to maintain the maximum relevance to YC's prospective program, the completions data collected and presented in this section that demonstrate regional and state trends are for associate's degrees only.

The overall data for the region, presented in Figure 1.5, **revealed a small, yet very inconsistent, decrease for program completions related to culinary arts programs.** The data indicate that high growth rates of *Baking and Pastry Arts* as well as *Restaurant, Culinary and Catering Management* are offset by the sharp decrease in *Culinary Arts/Chef Training* regionally. On the other hand, **the overall completions for hospitality related programs in the region experienced a high growth, with CAGR at 26.7 percent, although**

demands for programs related to *Tourism and Travel Services Management*, *Hotel/Motel Administration/Management*, and *Restaurant/Food Services Management* were all on the decline.

In addition, compared to the national data collected in the previous section, regional data show Arizona and its surrounding states may have more room for growth in the hospitality field, especially those related to hospitality administration and management in general. Meanwhile, since all but one culinary program displayed different degrees of growth over the period examined, a combined program of culinary and hospitality should be a good prospect in the region.

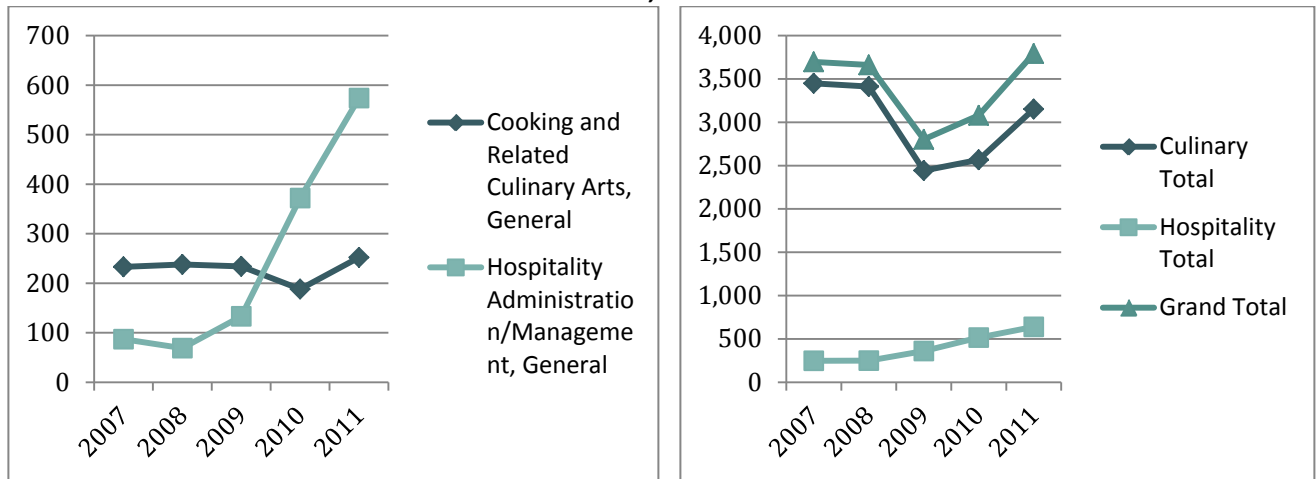
Figure 1.5: Regional Completions of Associate’s Degrees in Fields Related to Culinary Arts and Hospitality Management, 2007–2011

CIP CODE	ACADEMIC PROGRAM	2007	2008	2009	2010	2011	CAGR	AVERAGE ANNUAL CHANGE	STANDARD DEVIATION OF ANNUAL CHANGES
12.0500	<i>Cooking and Related Culinary Arts, General</i>	233	238	234	188	252	2.0%	4.8	39
12.0501	<i>Baking and Pastry Arts/Baker/Pastry Chef</i>	109	152	172	216	530	48.5%	105.3	121
12.0503	<i>Culinary Arts/Chef Training</i>	3,007	2,925	1,957	2,089	2,183	-7.7%	-206	447
12.0504	<i>Restaurant, Culinary, and Catering Management/Manager</i>	100	97	80	73	188	17.1%	22	54
Culinary Total		3,449	3,412	2,443	2,566	3,153	-2.2%	-74	565
52.0901	<i>Hospitality Administration/Management, General</i>	87	69	133	372	574	60.2%	121.8	104
52.0903	<i>Tourism and Travel Services Management</i>	46	43	36	24	13	-27.1%	-8.3	4
52.0904	<i>Hotel/Motel Administration/Management</i>	100	126	104	56	44	-18.6	-14	27
52.0905	<i>Restaurant/Food Services Management</i>	15	12	88	63	8	-14.5	-1.8	49
Hospitality Total		248	250	361	515	639	26.7%	97.8	57
Grand Total		3,697	3,662	2,804	3,081	3,792	0.6%	23.8	574

Source: IPEDS

A parallel examination of culinary and hospitality programs points to similar completion trends over the period examined. As demonstrated in Figure 1.6, *Hospitality Administration/Management* has experienced significantly high growth from 2009 to 2011, partially contributing to a recovering economy regionally, while *Cooking Related Culinary Arts, General* remained somewhat steady over the five-year period. The growth trends for culinary related programs and all programs selected demonstrate almost parallel movement, which indicate hospitality programs’ low degree of influence in regional completions.

Figure 1.6: Comparison of Associate’s Degrees in Culinary Arts and Hospitality Administration, 2007–2011



Source: IPEDS

In order to gain a comprehensive overview of the educational landscape for culinary and hospitality programs in Arizona and its surrounding states, Hanover also prepared a breakdown of completions by state, shown in Figure 1.7 below, for the same academic program classifications examined nationally. Notably, among all the states examined, **Arizona appears to be the most appealing ground for an associate’s degree in culinary arts or/and hospitality management due to the state’s high growth rates and overall levels of degree completions.** Meanwhile, California data suggest that the state have the highest level of degree completions for programs in related fields; however, the growth of these programs stayed steady from 2007 to 2011, with demand shifting from *Culinary Arts/Chef Training* to *Baking and Pastry Arts*. Lastly, the high growth rates in Nevada and New Mexico indicate that culinary and hospitality programs are relatively new to higher education institutions in these two states, and future demand for these programs is difficult to predict because of the low level of completions over the period examined.

Figure 1.7: Completions of Associate's Degrees in Related Fields to Culinary Arts and Hospitality Management (Breakdown by State), 2007–2011

CIP CODE	ACADEMIC PROGRAM	2007	2008	2009	2010	2011	CAGR	AVERAGE ANNUAL CHANGE	STANDARD DEVIATION OF ANNUAL CHANGES
ARIZONA									
12.0501	<i>Baking and Pastry Arts/Baker/Pastry Chef</i>	67	82	56	59	99	10.3%	8	24
12.0503	<i>Culinary Arts/Chef Training</i>	537	492	285	340	296	-13.8%	-60.3	94
12.0504	<i>Restaurant, Culinary, and Catering Management/Manager</i>	49	33	9	11	42	-3.8%	-1.8	21
52.0901	<i>Hospitality Administration/Management, General</i>	17	13	17	203	429	124.1%	103	104
52.0904	<i>Hotel/Motel Administration/Management</i>	21	18	21	23	20	-1.2%	-0.3	3
52.0905	<i>Restaurant/Food Services Management</i>	2	2	27	19	5	25.7%	0.8	15
Total		693	640	415	655	891	6.5%	49.5	198
CALIFORNIA									
12.0500	<i>Cooking and Related Culinary Arts, General</i>	194	195	183	150	202	1.0%	2	31
12.0501	<i>Baking and Pastry Arts/Baker/Pastry Chef</i>	0	0	31	59	271	195.7%	67.8	84
12.0503	<i>Culinary Arts/Chef Training</i>	1,719	1,877	970	1,153	1,337	-6.1%	-95.5	469
12.0504	<i>Restaurant, Culinary, and Catering Management/Manager</i>	48	58	67	59	146	32.1%	24.5	37
52.0901	<i>Hospitality Administration/Management, General</i>	34	33	80	77	49	9.6%	3.8	27
52.0904	<i>Hotel/Motel Administration/Management</i>	11	11	11	9	11	0	0	1
Total		2,006	2,147	1,342	1,507	2,016	0.1%	2.5	502
NEVADA									
12.0501	<i>Baking and Pastry Arts/Baker/Pastry Chef</i>	--	6	12	11	26	62.2%	6.5	6
12.0503	<i>Culinary Arts/Chef Training</i>	456	270	365	306	211	-17.5%	-61.3	101
52.0901	<i>Hospitality Administration/Management, General</i>	6	7	5	65	66	82.1%	15	26
52.0903	<i>Tourism and Travel Services Management</i>	15	20	17	8	5	-24.0%	-2.5	5
52.0904	<i>Hotel/Motel Administration/Management</i>	39	62	44	7	6	-37.4%	-8.3	22
52.0905	<i>Restaurant/Food Services Management</i>	6	6	9	2	2	-24.0%	-1	4
Total		522	371	452	399	316	-11.8%	-51.5	84

CIP CODE	ACADEMIC PROGRAM	2007	2008	2009	2010	2011	CAGR	AVERAGE ANNUAL CHANGE	STANDARD DEVIATION OF ANNUAL CHANGES
NEW MEXICO									
12.0503	<i>Culinary Arts/Chef Training</i>	22	34	33	27	43	18.2%	5.3	9
52.0901	<i>Hospitality Administration/Management, General</i>	7	5	13	9	11	12.0%	1	5
Total		29	39	46	36	54	16.8%	6.3	10
UTAH									
12.0501	<i>Baking and Pastry Arts/Baker/Pastry Chef</i>	0	0	0	5	22	340%	--	--
12.0503	<i>Culinary Arts/Chef Training</i>	22	24	60	37	76	36.3%	13.5	26
52.0901	<i>Hospitality Administration/Management, General</i>	6	2	3	5	6	0	0	2
Total		28	26	63	47	104	38.8%	19	29
COLORADO									
12.0500	<i>Cooking and Related Culinary Arts, General</i>	39	43	49	34	33	-4.1%	-1.5	8
12.0501	<i>Baking and Pastry Arts/Baker/Pastry Chef</i>	42	64	73	82	109	26.9%	16.8	8
12.0503	<i>Culinary Arts/Chef Training</i>	251	228	244	226	220	-3.2%	-7.8	15
12.0504	<i>Restaurant, Culinary, and Catering Management/Manager</i>	3	6	4	3	0	-100%	-0.8	2
52.0901	<i>Hospitality Administration/Management, General</i>	17	9	15	13	13	-6.5%	-1	5
52.0903	<i>Tourism and Travel Services Management</i>	21	21	19	15	7	-24.0%	-3.5	3
52.0904	<i>Hotel/Motel Administration/Management</i>	29	35	28	17	7	-30.0%	-5.5	7
52.0905	<i>Restaurant/Food Services Management</i>	7	4	9	4	1	-38.5%	-1.5	4
Total		409	410	441	394	390	-1.2%	-4.8	28

Source: IPEDS

ARIZONA COMPLETIONS TRENDS BY INSTITUTION

Trends arising from the completions data of culinary and hospitality programs in Arizona are aligned with national and regional discoveries. Figure 1.8 breaks down completions at the institutional level and outlines demand trends among the identified institutions. While the *Culinary Arts/Chef Training* is the most popular program field among higher education institutions, the highest growth appeared in the field of *Hospitality Administration/Management, General*. However, the low level of completions for hospitality related programs infers that many educational institutions are still testing out their associate programs. According to IPEDS data, institutions in Arizona that report programs in both culinary arts and hospitality management include Estrella Mountain Community College, Scottsdale Community College, and Pima Community College.

Figure 1.8: Completions in Associate Programs Related to Culinary Arts and Hospitality Management in Arizona (Breakdown by Institution), 2007–2011

PROGRAMS	2007	2008	2009	2010	2011	CAGR	AVERAGE ANNUAL CHANGE	STANDARD DEVIATION OF ANNUAL CHANGES
Baking and Pastry Arts/Baker/Pastry Chef (CIP 12.0501)								
<i>Le Cordon Bleu College of Culinary Arts-Scottsdale</i>	67	82	56	49	69	0.7%	0.5	18
<i>The Art Institute of Phoenix</i>	--	--	--	9	23	155.6%	--	--
<i>The Art Institute of Tucson</i>	--	0	0	1	7	600%	--	--
Total	67	82	56	59	99	10.3%	8	24
Culinary Arts/Chef Training (CIP 12.0503)								
<i>Cochise College</i>	2	2	2	4	6	31.6%	1	1
<i>Estrella Mountain Community College</i>	4	8	9	8	4	0	0	3
<i>Le Cordon Bleu College of Culinary Arts-Scottsdale</i>	480	438	236	276	216	-18.1%	-66	87
<i>Mesa Community College</i>	--	--	1	2	3	73.2%	1	0
<i>Mohave Community College</i>	--	1	2	5	4	58.0%	1	2
<i>Phoenix College</i>	4	8	4	7	3	-6.9%	-0.3	4
<i>Scottsdale Community College</i>	13	11	16	17	18	8.5%	1.3	2
<i>The Art Institute of Phoenix</i>	34	24	15	17	32	-1.5%	-0.5	10
<i>The Art Institute of Tucson</i>	--	0	0	4	10	150%	3.3	2
Total	537	492	285	340	296	-13.8%	-60.3	94
Restaurant, Culinary, and Catering Management/Manager (CIP 12.0504)								
<i>Le Cordon Bleu College of Culinary Arts-Scottsdale</i>	42	22	--	--	19	--	--	--
<i>Pima Community College</i>	7	11	9	11	23	34.6%	4	5
Total	49	33	9	11	42	-3.8%	-1.8	21
Hospitality Administration/Management, General (CIP 52.0901)								
<i>Coconino Community College</i>	2	3	1	4	3	10.7%	0.3	2
<i>Pima Community College</i>	13	10	8	9	10	-6.3%	-0.8	2
<i>University of Phoenix-Online Campus</i>	--	--	8	188	415	620.2%	203.5	24

PROGRAMS	2007	2008	2009	2010	2011	CAGR	AVERAGE ANNUAL CHANGE	STANDARD DEVIATION OF ANNUAL CHANGES
Total	15	13	17	201	428	131.1%	103.3	103
Hotel/Motel Administration/Management (CIP 52.0904)								
<i>Central Arizona College</i>	3	3	--	1	0	--	--	--
<i>Estrella Mountain Community College</i>	2	2	0	0	0	--	--	--
<i>Scottsdale Community College</i>	16	13	21	22	20	5.7%	1	4
Total	21	18	21	23	40	-1.2%	-0.3	3
Restaurant/Food Services Management (CIP 52.0905)								
<i>Le Cordon Bleu College of Culinary Arts-Scottsdale</i>	--	--	19	14	--	--	--	--
<i>Scottsdale Community College</i>	2	2	8	5	5	25.7%	0.8	3
Total	2	2	27	19	5	25.7%	0.8	15

Source: IPEDS

In sum, national, regional, and statewide completions data indicate an increasing demand for associate's degrees in culinary arts and hospitality management, mostly reflected through the upward trends for programs related to *Baking and Pastry Arts* and *Restaurant, Culinary, and Catering Management* in the field of culinary arts and *Hospitality Administration or Management* in the field of hospitality management. Hospitality education is relatively new; however, the high growth rate of the classification *Hospitality Administration or Management* from 2007 to 2011 (124.1 percent in Arizona comparing to 12.7 percent nationally), exhibit a strong, emerging demand from students. Nevertheless, YC should bear in mind that the future of the prospect associate program in culinary arts and/or hospitality is still far from certain due to high volatility in growth displayed for related programs.

SECTION II: LABOR MARKET OUTLOOK

In this section, Hanover Research provides employment information for occupations that are most directly relevant to graduates of an associate's degree in culinary arts and/or hospitality management. This information offers another index of the desirability of a particular degree from the standpoint of prospective students. Here we examine occupational data and employment projections provided by BLS and state departments of labor and employment to assess the growth of relevant labor markets.

ACADEMIC PROGRAM/OCCUPATIONAL CROSSWALK

Similar to NCES, which uses the CIP classification system to identify academic programs, BLS maintains a classification system for occupations using Standard Occupational Classification (SOC) codes.⁷ In order to identify relevant occupations that are associated with certain academic programs, Hanover uses a crosswalk provided by the NCES that links these CIP codes discussed above with SOC codes.⁸

Applying the 2010 CIP-SOC crosswalk matrix, Hanover identified nine occupations to be particularly relevant to the culinary arts and/or hospitality management program classifications selected and analyzed in Section I. These occupations are listed and defined in Figure 2.1 below.

Figure 2.1: Occupations Related to Culinary Arts and Hospitality Management Degrees

SOC CODE	OCCUPATION	SOC DEFINITION
35-1011	Chefs and Head Cooks	Direct and may participate in the preparation, seasoning, and cooking of salads, soups, fish, meats, vegetables, desserts, or other foods. May plan and price menu items, order supplies, and keep records and accounts.
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	Directly supervise and coordinate activities of workers engaged in preparing and serving food.
35-2012	Cooks, Institution and Cafeteria	Prepare and cook large quantities of food for institutions, such as schools, hospitals, or cafeterias.
35-2013	Cooks, Private Household	Prepare meals in private homes. This includes personal chefs.
35-2014	Cooks, Restaurant	Prepare, season, and cook dishes such as soups, meats, vegetables, or desserts in restaurants. May order supplies, keep records and accounts, price items on menu, or plan menu.
51-3011	Bakers	Mix and bake ingredients to produce breads, rolls, cookies, cakes, pies, pastries, or other baked goods. Pastry chefs in restaurants and hotels are included with "Chefs and Head Cooks" (35-1011).

⁷ "Standard Occupational Classification (SOC) System." BLS. <http://www.bls.gov/soc/>

⁸ "CIP User Site." NCES. <http://nces.ed.gov/ipeds/cipcode/resources.aspx?y=55>

SOC CODE	OCCUPATION	SOC DEFINITION
11-9051	Food Service Managers	Plan, direct, or coordinate activities of an organization or department that serves food and beverages.
11-9081	Lodging Managers	Plan, direct, or coordinate activities of an organization or department that provides lodging and other accommodations. This excludes "Food Service Managers" (11-9051) in lodging establishments.
39-7012	Travel Guides	Plan, organize, and conduct long distance travel, tours, and expeditions for individuals and groups.

Source: BLS

In the following pages, Hanover Research presents the BLS occupational projections, along with regional projections gathered from state governments of Arizona, California, Nevada, New Mexico, Utah, and Colorado. The corresponding data for these discussions appear in Figures 2.2 through 2.8. When reviewing these tables, it is important to consider that both BLS and state's own departments may classify several occupations under one or more general code. Therefore, there is not always a one-to-one match between the SOC codes listed in Figure 2.1 and the SOC codes used in the national and state projections. Differences of categorization will be noted as they arise.

According to BLS, most of the positions selected above generally require a high school diploma or equivalent, although **a growing number of manager positions require postsecondary education** in hospitality or food service management program.⁹ Nevertheless, we include all occupations, even those that require only a high school diploma, in order to provide a more specific analysis of high-growth jobs found in the field of culinary arts and hospitality management. Among all the occupations identified above, *Travel Guides* are expected to grow at the fastest pace from 2010 to 2020, at a rate of 10 percent nationally. *Cooks* in general and *Lodging Managers* are projected to growth at eight percent over the same period, about the same as the average growth rate for all occupations. In particular, applicants for lodging manager related jobs would most likely face strong competitions since larger employers prefer to hire people with a college degree in hotel or hospitality management.¹⁰

Survey results about the entry-level education desired for all occupations selected above, found on the Department of Labor's O*NET's occupational website, are aligned with BLS's summary. Most of the respondents (all of whom have the job about which they respond or are "very knowledgeable" about the job) consider high school diploma or equivalent is sufficient for all the occupations selected above. Merely 28 percent of respondents believe that a person being hired as a lodging manager should have a postsecondary degree, and approximate 27 percent of them consider an associate's degree necessary for the type of cooks that require the highest education level for job entry—chefs and head cooks.¹¹

⁹ "Occupational Outlook Handbook." BLS. <http://www.bls.gov/ooh/home.htm>

¹⁰ "Occupational Outlook Handbook." BLS. <http://www.bls.gov/ooh/food-preparation-and-serving/cooks.htm>

¹¹ Various Occupations. O*NET Online. <http://www.onetonline.org/>

NATIONAL EMPLOYMENT PROJECTIONS

Hanover Research gathered BLS employment projection data for each occupational category related to our selected academic program classifications and included their statistics in Figure 2.2 below.¹²

Figure 2.2: National Employment Projections for Careers Related to Culinary Arts and Hospitality Management, 2010–2020, (Numbers in Thousands)

2010 NATIONAL EMPLOYMENT MATRIX TITLE AND CODE		EMPLOYMENT NUMBER		EMPLOYMENT CHANGE, 2010-20		AVERAGE ANNUAL JOB OPENINGS DUE TO GROWTH AND REPLACEMENT NEEDS, 2010-2020
		2010	2020	No.	%	
Chefs and Head Cooks	35-1011	100.6	99.8	-0.8	-0.8	1.8
First-Line Supervisors of Food Preparation and Serving Workers	35-1012	801.1	879.6	78.5	9.8	24.8
Cooks, Institution and Cafeteria	35-2012	405.3	455.1	49.8	12.3	13.6
Cooks, Private Household	35-2013	3.6	4.1	0.5	14.4	0.1
Cooks, Restaurant	35-2014	915.4	1033.2	117.8	12.9	31.3
Bakers	51-3011	149.8	153.3	3.5	2.3	4.7
Food Service Managers	11-9051	320.6	310.0	-10.6	-3.3	5.9
Lodging Managers	11-9081	51.4	55.7	4.3	8.3	1.8
Travel Guides	39-7012	4.2	5.2	1.0	23.6	0.3
Grand Total		2,752	2,996	244	8.9	84.3

Source: BLS

As the figures above indicate, **nationwide employment for occupations associated with culinary arts and hospitality management is expected to trend upward, with an overall growth rate of 8.9 percent between 2010 and 2020.** However, projected growth among these occupations is somewhat uneven. For instance, while *Bakers* are projected to expand at the slowest rate among all the growing occupations examined, cooks at institutions, private households, and restaurants appear to have the brightest future. Also worth noting is that the employment of *Food Service Managers* is estimated to decrease 3.3 percent from 2010 to 2020. Since the occupation *Chefs and Head Cooks* represents a very skilled and small pool of professionals, BLS predicts that future employment in this field will stay stable in the coming years. On the hospitality side, the employment for *Lodging Managers* and

¹² "Employment Projections", BLS. http://www.bls.gov/emp/ep_table_102.htm

Travel Guides is projected to be on the rise during the same period, with the latter increasing at a much faster rate.

According to BLS, the high growth for cooks in general is expected to occur due to the stable demand in the restaurant industry. BLS offers the following projection summary for the expected growth:¹³

People continue to eat out, buy take-out meals, or have food delivered. In response, more restaurants will open, and nontraditional food-service operations, such as those found inside grocery stores, will serve more prepared food dishes, spurring demand for cooks. Employment growth for cooks will also increase as, in an effort to lower costs; however, **many full-service restaurants will hire lower level cooks instead of chefs and head cooks.** Cooks with formal training will have the best job prospects. Candidates who demonstrate eagerness and are able to do more refined tasks will have the best job opportunities at restaurant chains, upscale restaurants, and hotels. Nonetheless, those seeking full-time jobs at upscale restaurants and hotels are likely to face competition, as the number of job applicants often exceeds the number of job openings.

Lodging Managers, on the other hand, will grow slower than the average pace for all occupations. Despite expected growth in tourism and travel, fewer managers will be needed as the lodging industry shifts to building more limited-service hotels and fewer full-service properties that have separate departments to manage. In addition, some lodging places are streamlining operations to cut expenses by either eliminating some managers or scaling back the total number. Those seeking jobs at hotels with the highest level of guest services are expected to face strong competition as these jobs are highly sought after by people trained in hospitality management or administration. Those with a college degree in hotel or hospitality management are expected to have the best job opportunities, particularly at upscale and luxury hotels.¹⁴

In addition, *Food Service Managers'* projected employment decline will likely come from the drop of the number of eating and drinking establishments in the coming years. BLS projects that new employment opportunities for food service managers will emerge in grocery stores and other retail and recreation industries to meet the growing demand for quick food. In addition, job opportunities for food service managers are expected to be highly competitive, and most openings will result from the need to replace managers who retire or transfer to other occupations.¹⁵

¹³ "Job Outlook: Cooks." BLS. <http://www.bls.gov/ooh/food-preparation-and-serving/cooks.htm#tab-6>

¹⁴ "Job Outlook: Lodging Managers." BLS. <http://www.bls.gov/ooh/management/lodging-managers.htm#tab-6>

¹⁵ "Job Outlook: Food Service Managers." BLS. <http://www.bls.gov/ooh/management/food-service-managers.htm#tab-6>

REGIONAL EMPLOYMENT PROJECTIONS

This section examines regional career projections for academic programs related to culinary arts and hospitality management in California, Nevada, New Mexico, Utah, and Colorado. Our data show that employment projections at the state level reflect the national projections. Arizona's surrounding states expect **an overall employment growth rate at approximately 20 percent for occupations related to culinary arts and hospitality management**. As illustrated in Figure 2.3, *Cooks, Restaurant* and *First-Line Supervisors of Food Preparation and Serving Workers* have brighter prospects than other occupations, due to their large numbers of employment projected and high rates of growth. Note all selected states but Colorado provide long-term projections between 2010 and 2020. In addition, the SOC code used to collect projections for Travel Guides vary by state, as they report their data under different, but similar, SOC classifications (See Figure 2.4 through 2.8).

Figure 2.3: Summary of Occupational Projections for Careers Related to Culinary Arts and Hospitality Management in Arizona's Surrounding States, 2010-2020 (Colorado's projections are for 2011-2021)

2010 NATIONAL EMPLOYMENT MATRIX TITLE AND CODE	EMPLOYMENT CHANGE (%)						AVERAGE ANNUAL OPENINGS					
	CA	NE	MN	UT	CO*	Avg	CA	NE	MN	UT	CO*	Total
<i>Chefs and Head Cooks</i>	20.9	4.1	10.6	8.8	8.3	10.5	460	63	16	20	57	616
<i>First-Line Supervisors of Food Preparation and Serving Workers</i>	25.7	13.7	24.1	16.8	23.0	20.7	4,260	280	297	240	649	5,726
<i>Cooks, Institution and Cafeteria</i>	20.7	11.1	13.3	11.8	21.9	15.8	1,010	38	118	130	256	1,552
<i>Cooks, Private Household</i>	--	50	--	--	22.2	36.1	--	0	--	--	0	0
<i>Cooks, Restaurant</i>	27.4	18.4	28.6	20.3	28.3	24.6	4,960	640	328	320	1,186	7,434
<i>Bakers</i>	14.9	4.8	16.6	19.1	11.1	13.3	910	70	34	90	113	1,217
<i>Food Service Managers</i>	30.3	-2.5	7.8	3.8	9.6	9.8	2,350	62	29	30	97	2,568
<i>Lodging Managers</i>	21.2	10	13.6	24.4	4.2	14.7	320	23	27	20	25	415
<i>Travel Guides</i>	19.5	15.4	15.5	22.2	17.7	18.1	250	18	13	20	7	308
Grand Total	25.5	12.9	21.7	16.6	22.9	19.9	14,520	1,194	862	870	2,390	19,836

Source: State of California Employment Development Department,¹⁶ Nevada Workforce Informer,¹⁷ New Mexico Workforce Connection,¹⁸ Utah Department of Workforce Services,¹⁹ and Colorado LMI Gateway²⁰

¹⁶ "Occupational Projection of Employment." *State of California Employment Development Department*.

<http://www.labormarketinfo.edd.ca.gov/cgi/dataanalysis/areaselection.asp?tablename=occpri>

¹⁷ "10 Year Occupational Employment Projections." *Nevada Workforce Informer, Nevada Department of Employment, Training, and Rehabilitation*.

<http://www.nevadaworkforce.com/cgi/dataanalysis/AreaSelection.asp?tableName=Occprj>

¹⁸ "Occupation Data." *New Mexico Workforce Connection*.

https://www.jobs.state.nm.us/analyzer/session/session.asp?cat=HST_EMP_WAGE_OCC

¹⁹ "Utah Job Outlook." *Utah Department of Workforce Services*.

<http://jobs.utah.gov/wi/pubs/outlooks/utahjoboutlook/index.html>

²⁰ "Occupation Employment Projections." *Colorado LMI Gateway*.

http://www.colmigateway.com/analyzer/session/session.asp?cat=HST_EMP_WAGE_OCC

To better understand the prospective job market for graduates from culinary and hospitality programs in Arizona's surrounding states, Hanover collected and analyzed long-term occupational projections for each state selected, as illustrated in Figures 2.4 through 2.8. These statistics should be examined in concert with those of Arizona, shown in Figure 2.9, to assess the larger employment trends within YC's immediate and surrounding areas.

CALIFORNIA

California's employment projection data for relevant occupations, as displayed in Figure 2.4, suggest that **all occupations related to YC's prospective program will experience high overall growth**, averaging 25.5 percent, between 2010 and 2020. The high employment numbers for all occupations selected also suggest that California is the largest job market in culinary and hospitality for YC's future graduates. In addition, figures below indicate that the highest rate of growth is expected for *Food Service Managers*, whose numbers are projected to rise by approximately 30.3 percent by 2020. On the other hand, the occupation that has the slowest growth among all occupations examined is *Bakers*. This finding coincides with our national projections, and a possible reason for this slow growth may be the increase use of more automated and computerized production processes in manufacturing facilities.²¹ Please note that we altered the SOC used to collect projections for *Travel Guides*, as California only has data available under the more general SOC category listed below.

Figure 2.4: Occupational Projections for Careers Related to Culinary Arts and Hospitality Management in California, 2010–2020

2010 NATIONAL EMPLOYMENT MATRIX TITLE AND CODE		EMPLOYMENT NUMBER		EMPLOYMENT CHANGE, 2010-2020		AVERAGE ANNUAL OPENINGS DUE TO GROWTH AND REPLACEMENT NEEDS, 2010-20
		2010	2020	No.	%	
Chefs and Head Cooks	35-1011	11,500	13,900	2,400	20.9	460
First-Line Supervisors of Food Preparation and Serving Workers	35-1012	90,800	114,100	23,300	25.7	4,260
Cooks, Institution and Cafeteria	35-2012	24,100	29,100	5,000	20.7	1,010
Cooks, Restaurant	35-2014	101,900	129,800	27,900	27.4	4,960
Bakers	51-3011	20,800	23,900	3,100	14.9	910
Food Service Managers	11-9051	48,200	62,800	14,600	30.3	2,350
Lodging Managers	11-9081	6,600	8,000	1,400	21.2	320
Tour and Travel Guides*	39-7000	4,100	4,900	800	19.5	250
Grand Total		308,000	386,500	78,500	25.5	14,520

Source: State of California Employment Development Department

²¹ "Job Outlook: Bakers." BLS. <http://www.bls.gov/ooh/production/bakers.htm#tab-6>

NEVADA

Figure 2.5 below displays detailed projections for related occupations in Nevada, which has a median job market size among the five surrounding states. The data collected from the Nevada Department of Employment, Training, and Rehabilitation **predict a moderate-to-high growth overall for all relevant occupations**. The occupation *Food Service Managers* is projected to experience slight drop in employment during the projection period, whereas all occupations related to cooking are expected to increase by large margins. However, the high growth rate of *Cooks, Private Household* does not reflect the actual job market trend due to the extremely small number of employment projected. Similar to California, Nevada only has projection data available under a more general SOC code for *Travel Guides*.

Figure 2.5: Occupational Projections for Careers Related to Culinary Arts and Hospitality Management in Nevada 2010–2020

2010 NATIONAL EMPLOYMENT MATRIX TITLE AND CODE		EMPLOYMENT NUMBER		EMPLOYMENT CHANGE, 2010- 2020		AVERAGE ANNUAL OPENINGS DUE TO GROWTH AND REPLACEMENT NEEDS, 2010-20
		2010	2020	No.	%	
Chefs and Head Cooks	35-1011	2,834	2,951	117	4.1	63
First-Line Supervisors of Food Preparation and Serving Workers	35-1012	7,996	9,093	1,097	13.7	280
Cooks, Institution and Cafeteria	35-2012	1,181	1,312	131	11.1	38
Cooks, Private Household	35-2013	2	3	1	50	0
Cooks, Restaurant	35-2014	16,123	19,088	2,965	18.4	640
Bakers	51-3011	2,082	2,182	100	4.8	70
Food Service Managers	11-9051	3,381	3,297	-84	-2.5	62
Lodging Managers	11-9081	628	691	63	10	23
Tour and Travel Guides*	39-7000	350	404	54	15.4	18
Grand Total		34,577	39,021	4,444	12.9	1,194

Source: Nevada Department of Employment, Training, and Rehabilitation

NEW MEXICO

New Mexico's long-term projections suggest that **all the occupations examined below will experience high growth at a rate of 21.7 percent between 2010 and 2020**. However, the small numbers of projected annual job openings indicate that the job market in New Mexico is likely to be quite competitive for occupations related to culinary arts and hospitality management. Among all the relevant occupations, *Cooks, Restaurant* are expected to have the highest growth from 2010 to 2020, followed by *First-Line Supervisors of Food Preparation and Serving Workers*. Although the growth for hospitality related positions are anticipated to be high for years to come, the small numbers of job openings suggest that the state is not an ideal ground for job seekers in the hospitality field. Please note that we also used a different SOC code to look up projections for *Travel Guides*, as New Mexico reports projections for all travel service related occupations under this new code below.

Figure 2.6: Occupational Projections for Career Related to Culinary Arts and Hospitality Management in New Mexico, 2010 – 2020

2010 NATIONAL EMPLOYMENT MATRIX TITLE AND CODE		EMPLOYMENT NUMBER		EMPLOYMENT CHANGE, 2010- 2020		AVERAGE ANNUAL OPENINGS DUE TO GROWTH AND REPLACEMENT NEEDS, 2010-20
		2010	2020	No.	%	
Chefs and Head Cooks	35-1011	577	638	61	10.6	16
First-Line Supervisors of Food Preparation and Serving Workers	35-1012	6,546	8,125	1,579	24.1	297
Cooks, Institution and Cafeteria	35-2012	3,413	3,866	453	13.3	118
Cooks, Restaurant	35-2014	6,568	8,446	1,878	28.6	328
Bakers	51-3011	745	869	124	16.6	34
Food Service Managers	11-9051	1,109	1,195	86	7.8	29
Lodging Managers	11-9081	647	735	88	13.6	27
Tour Guides and Escorts*	39-7011	239	276	37	15.5	13
Grand Total		19,844	24,150	4,306	21.7	862

Source: New Mexico Workforce Connection

UTAH

Utah's employment projections for relevant occupations appear to be quite similar to those of New Mexico's, with an **overall growth rate of 16.6 percent between 2010 and 2020**. As demonstrated in Figure 2.7, the strong upward trend for overall employment projections is primarily supported by the employment increase in *Lodging Managers, Travel Guides, and Cooks, Restaurant*. Projection data collected also suggest that culinary related occupations will be more popular than hospitality related positions in Utah. Moreover, Utah's projection data also show that the entry-level requirement for the majority of occupations examined below is high school diploma or equivalent with one to five years of experience, except for *Cooks, Institution and Cafeteria* and *Bakers*, who do not have any education requirements for entry-level positions.

**Figure 2.7: Occupational Projections for Careers
Related to Culinary Arts Hospitality Management in Utah, 2010 – 2020**

2010 NATIONAL EMPLOYMENT MATRIX TITLE AND CODE		EMPLOYMENT NUMBER		EMPLOYMENT CHANGE, 2010-2020		AVERAGE ANNUAL OPENINGS DUE TO GROWTH AND REPLACEMENT NEEDS, 2010-20
		2010	2020	No.	%	
Chefs and Head Cooks	35-1011	680	740	60	8.8	20
First-Line Supervisors of Food Preparation and Serving Workers	35-1012	6,370	7,440	1,070	16.8	240
Cooks, Institution and Cafeteria	35-2012	3,980	4,450	470/	11.8	130
Cooks, Restaurant	35-2014	7,770	9,350	1,580	20.3	320
Bakers	51-3011	1,940	2,310	370	19.1	90
Food Service Managers	11-9051	1,320	1,370	50	3.8	30
Lodging Managers	11-9081	450	560	110	24.4	20
Travel Guides	39-7012	360	440	80	22.2	20
Grand Total		22,870	26,660	3,790	16.6	870

Source: Utah Department of Workforce Services

COLORADO

Among all the states examined in this section, **Colorado is ranked second in terms of the size of its employment market and the overall growth of occupations related to culinary arts and hospitality management.** Different from other states, Colorado makes its employment projections based on the period of 2011 to 2021. As demonstrated in Figure 2.8, the growth rates for culinary related occupations are particularly high in Colorado, indicating ample demand in this field. On the other hand, *Lodging Managers* are expected to experience the slowest growth, at merely 4.2 percent, during the projection period. It is worth noting that the majority of the state's job openings will come from *Cooks (institutions and restaurants)* and *First-Line Supervisors of Food Preparation and Serving Workers*.

**Figure 2.8: Occupational Projections for Careers
Related to Culinary Arts Hospitality Management in Colorado, 2011 – 2021**

2010 NATIONAL EMPLOYMENT MATRIX TITLE AND CODE		EMPLOYMENT NUMBER		EMPLOYMENT CHANGE, 2011- 2021		AVERAGE ANNUAL OPENINGS DUE TO GROWTH AND REPLACEMENT NEEDS, 2011-21
		2011	2021	No.	%	
Chefs and Head Cooks	35-1011	2,163	2,343	180	8.3	57
First-Line Supervisors of Food Preparation and Serving Workers	35-1012	14,690	18,069	3,379	23.0	649
Cooks, Institution and Cafeteria	35-2012	5,939	7,240	1,301	21.9	256
Cooks, Private Household	35-2013	9	11	2	22.2	0
Cooks, Restaurant	35-2014	23,880	30,646	6,766	28.3	1,186
Bakers	51-3011	2,838	3,152	314	11.1	113
Food Service Managers	11-9051	3,445	3,775	330	9.6	97
Lodging Managers	11-9081	812	846	34	4.2	25
Travel Guides	39-7012	124	146	22	17.7	7
Grand Total		53,900	66,228	12,328	22.9	2,390

Source: Department of Labor and Employment

ARIZONA EMPLOYMENT PROJECTIONS

Figure 2.9 below displays statewide long-term projections for the occupations identified above. Please note that we also altered the SOC used to collect projections for *Travel Guides*. The Arizona Department of Administration's employment projection data largely reflect broader regional as well as national trends. In Arizona, these **relevant occupations are projected to expand at an overall rate of 21.9 percent from 2010 to 2020**. The fastest growing occupation goes to *Cooks, Restaurant*, for which demand is expected to increase by 28.9 percent over the projection period. Even the slowest growing occupations in the state, *Food Service Managers* and *Bakers*, are expected to expand at rates over 10 percent in coming years. The encouraging projections infer that Arizona will remain as a promising state for culinary and hospitality related occupations.

**Figure 2.9: Arizona Occupational Projections for Careers
Related to Culinary Arts and Hospitality Management, 2010–2020**

2010 NATIONAL EMPLOYMENT MATRIX TITLE AND CODE		EMPLOYMENT NUMBER		CHANGE, 2010-20		AVERAGE ANNUAL OPENINGS DUE TO GROWTH AND REPLACEMENT NEEDS, 2010-20
		2010	2020	No.	%	
Chefs and Head Cooks	35-1011	2,881	3,245	364	12.6	88
First-Line Supervisors of Food Preparation and Serving Workers	35-1012	15,085	19,125	4,040	26.8	724
Cooks, Institution and Cafeteria	35-2012	5,046	5,749	703	13.9	178
Cooks, Restaurant	35-2014	18,927	24,401	5,474	28.9	950
Bakers	51-3011	3,106	3,445	339	10.9	124
Food Service Managers	11-9051	8,126	8,956	830	10.2	233
Lodging Managers	11-9081	1,417	1,663	246	17.4	63
Tour and Travel Guides*	39-7000	1,414	1,658	244	17.3	78
TOTAL		56,002	68,242	12,240	21.9	2,438

Source: Arizona Department of Administration²²

In sum, as indicated by our analysis in this section, **employment demand for occupations related to culinary arts and hospitality management will experience high overall growth in coming years**, with some occupations growing much faster than others do. Cooking and food supervision related occupations, such as *Cooks, Restaurants* and *First-Line Supervisors of Food Preparation and Serving Workers*, have shown and will continue to show impressively high rates of growth and large numbers of job openings in the next few years. Meanwhile, prospects for hospitality related occupations differ by state, with California standing out as the most promising land for future employment.

²² "Employment Forecasts." *Arizona Department of Administration, Office of Employment and Population Statistics*.
<http://www.workforce.az.gov/employment-forecasts.aspx>

JOB POSTINGS TRENDS IN THE FIELD OF CULINARY ARTS AND HOSPITALITY MANAGEMENT

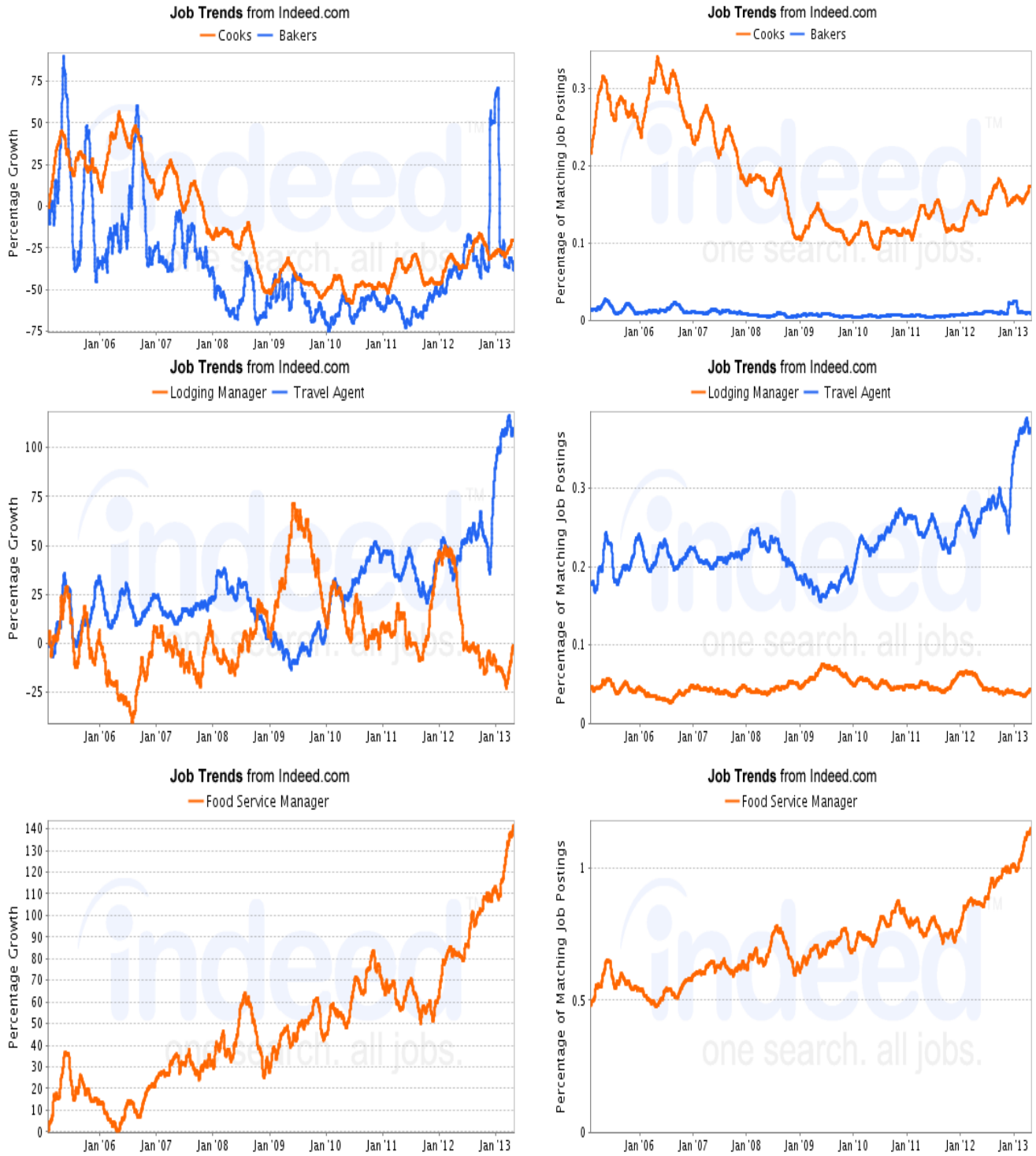
Job search engine Indeed.com provides job trends based on the number of openings published on its website to demonstrate different positions' general popularity. Although the data only display occupational demand over the past seven years, they can be useful indicators for elucidating trends and determining future projections.

Figure 2.10 on the next page gathers past, national trends on job positions related to some culinary and hospitality occupations we examined earlier.²³ While graphs on the left demonstrate the relative percentage growth of job postings from 2006 to 2013, graphs on the right depict the percentage share of the postings related to one occupation within the entire job market.

Overall, data collected from Indeed.com indicate that **there may be more job openings in the culinary field in the near future.** As displayed below, both the relative and absolute job trends for *Food Service Managers* have shown steady growth between 2006 and 2013, uncovering a promising job field in the coming years. Nevertheless, it is important to note that the samples pulled by indeed.com for this category also included food managers and service staffs in food production industries. Meanwhile, although the relative growth of job postings for *Cooks* and *Bakers* stayed negative from 2008 to mid-2012, the employment market for bakers experienced a sharp increase in growth that topped at approximately 70 percent recently. However, since the labor market size for bakers is much smaller than that of cooks, the majority of new job opening will likely come from the cooking field. On the hospitality side, the demand for *Travel Agents* has been on the rise since 2012, while job openings for *Lodging Managers* have declined since the peak in mid-2009, despite a recent surge around January 2012.

²³ "Job Trends." *Indeed.com*. <http://www.indeed.com/jobtrends>

Figure 2.9: Job Trends for Occupations Related to Culinary Arts from Indeed.com



SECTION III: PROFILES OF SIMILAR PROGRAMS AT PEER INSTITUTIONS

In the remainder of this report, Hanover profiles several institutions with on-campus associate's degrees in culinary arts, hospitality management, and/or combined culinary-hospitality programs. In addition to profiling two peer institutions identified by YC—Metropolitan Community College and El Paso Community College, we also selected three Arizona based two-year colleges that have robust culinary arts and hospitality programs. While a combined degree is not as common among community colleges, Cabrillo College in California is one of the few colleges in the southwestern part of the United States that offer combined degree programs in culinary arts and hospitality management. Each college profiled in this report contains the following information, when available, from institutional offices and university websites:

- Program overview
- Admission criteria
- Graduation requirements (including curriculum)
- Tuition rates
- Career opportunities

Before outlining the details of each degree program, Hanover collected and analyzed the sum of completions for all profiled programs at each college mentioned in Section III, as displayed in Figure 3.1 below.

Figure 3.1 Program Completions for Profiled Associate's Degrees in Section III

INSTITUTION	2007	2008	2009	2010	2011	CAGR	AVERAGE ANNUAL CHANGE	STANDARD DEVIATION OF ANNUAL CHANGES
Metropolitan Community College	24	33	29	36	31	6.6%	1.8	6
El Paso Community College	20	8	18	9	13	-10%	-1.8	9
Pima Community College	20	21	17	20	33	13.3%	3.3	6
Scottsdale Community College	31	26	45	44	43	8.5%	3	9
Central Arizona College	3	3	--	1	3	--	--	--
Cabrillo College	13	7	7	9	15	3.6%	4.3	4

Source: IPEDS

METROPOLITAN COMMUNITY COLLEGE (OMAHA, NEBRASKA)

Associate in Applied Science Degree (AAS) for Culinary Arts and Management

Associate in Applied Science Degree for Hospitality and Restaurant Leadership

The Institute for the Culinary Arts (ICA) at Metropolitan Community College (MCC) consists of two AAS Degree programs—Culinary Arts and Management as well as Hospitality and Restaurant Leadership. Both of these degrees have various course track options for students with different interests. For instance, the Associate’s Degree in Culinary Arts and Management offers options in Culinary Arts, Bakery and Pastry, and Culinary Research/Culinology Transfer, while the Degree in Hospitality and Restaurant Leadership has tailored programs for Food and Event Management as well as Hospitality Entrepreneurship.

CIA’s programs also offer students hands-on experience in the industry. Students at the Institute prepare food for the Brick Hearth (an American Bakery and Café), and operate Sage student bistro, a fine-dining restaurant that is open to the public for dinner Monday through Thursday. The new building at CIA also includes separate classrooms for meat fabrication, a chocolate lab, bakeshop, production kitchen, banquet server kitchen, theory labs, and a demonstration lab. In addition, the second floor of the ICA building features the Swanson Conference Center, which will allow students the opportunity for real life experience with hospitality, food service/catering for large and small groups.²⁴

ADMISSIONS CRITERIA

MCC does not require a formal application or application fee for admission or registration. The College admits students who are at least 18 years of age and have a high school diploma or equivalent. MCC accepts high school diplomas from accredited high schools and those earned through the Correspondence High School online program offered by University of Nebraska-Lincoln (UNL) and accredited by the Nebraska Department of Education; however, other high school diplomas earned online will not be accepted. Additionally, high school students may be enrolled through the early entry process if they meet specific criteria by MCC.

GRADUATION REQUIREMENTS FOR DIFFERENT DEGREE PROGRAMS

Graduation of the AAS Degree in Culinary Arts and Management requires the completion of 106.5 to 115.5 credits in total, including 27 credits for general education, 41.5 credits for major requirements, and 38 to 47 credits for option requirements. Figure 3.2 below displays required program coursework for different options to complete the degree.

²⁴ “Culinary Arts Program History.” *Metropolitan Community College*.
<http://www.mccneb.edu/chrm/culinaryartsprogramhistory.asp>

Figure 3.2: Required Coursework for AAS in Culinary Arts and Management

AREA	COURSEWORK AND CREDIT HOURS	
General Education Core	<ul style="list-style-type: none"> ▪ English-Level I (4.5) ▪ English-Level II (4.5) ▪ Business Mathematics (4.5) 	<ul style="list-style-type: none"> ▪ Humanities/Social Sciences (4.5) ▪ Human Relations Skills (4.5) ▪ Information Systems and Literacy (4.5)
Major Requirements	<ul style="list-style-type: none"> ▪ CHRM Orientation (2.0) ▪ Sanitation (2.0) ▪ Culinary Foundations 1: Skills (4.0) ▪ Culinary Foundations 2: Cuisines (4.0) ▪ Baking Basics (4.0) ▪ Stagiaire (2.0) 	<ul style="list-style-type: none"> ▪ Nutrition (4.5) ▪ Cost Management (4.5) ▪ Purchasing (4.5) ▪ Banquet and Catering (4.0) ▪ Internship (3.0) ▪ Food Cultivation (3.0)
Option 1: Culinary Arts	<ul style="list-style-type: none"> ▪ Soup and Sauce Basics (3.0) ▪ Protein Fabrication (3.0) ▪ A la Carte Cookery (3.0) ▪ Skills Demonstration for Culinarians (2.0) ▪ Quantity Production (4.0) ▪ Garde Manger (4.0) 	<ul style="list-style-type: none"> ▪ Fine Dining (4.0) ▪ Hospitality Supervision (4.5) ▪ Table Service (4.0) ▪ Student Manager (4.5) ▪ Portfolio Development for Culinarians (2.0)
Option 2: Bakery and Pastry	<ul style="list-style-type: none"> ▪ Pastries (3.0) ▪ Artisan Bread (4.0) ▪ Cakes (4.0) ▪ Skills Demonstration for Bakers (2.0) ▪ Baking Production (4.0) ▪ International Breads (3.0) 	<ul style="list-style-type: none"> ▪ Chocolate, Sugar, and Decorations (3.0) ▪ Plated Desserts (4.0) ▪ Hospitality Supervision (4.5) ▪ Bakery Student Manager (4.5) ▪ Portfolio Development for Bakers (2.0)
Option 3: Culinary Research	<ul style="list-style-type: none"> ▪ General Chemistry I: Accelerated (6.0) ▪ General Chemistry II (3.0) ▪ Soup and Sauce Basics (3.0) ▪ Protein Fabrication (3.0) ▪ A la Carte Cookery (3.0) ▪ Skills Demonstration for Culinarians (2.0) ▪ Portfolio Development for Culinarians (2.0) 	<ul style="list-style-type: none"> ▪ Garde Manger (4.0) ▪ Physiology of Flavor (4.5) ▪ Food Science (4.5) ▪ Sensory Science Products (Winter only) (4.5) ▪ Research and Development of Food Products (Spring only) (4.5)

Source: 2012-2013 College Catalog, Metropolitan Community College²⁵

Meanwhile, graduation of the AAS Degree in Hospitality and Restaurant Leadership requires the completion of 100 to 103.5 credits in total, including 27 credits for general education, 54 credits for major requirements, and 19 to 22.5 credits for different course track offerings. Figure 3.3 below displays required program coursework of two course tracks to complete the degree.

²⁵ "2012-2013 College Catalog." *Metropolitan Community College*. <http://www.mccneb.edu/catalog/pdf/2012-13%20MCC%20Catalog.pdf>

Figure 3.3: Required Coursework for AAS in Hospitality and Restaurant Leadership

AREA	COURSEWORK AND CREDIT HOURS	
General Education Core	<ul style="list-style-type: none"> ▪ English-Level I (4.5) ▪ English-Level II (4.5) ▪ Business Mathematics (4.5) 	<ul style="list-style-type: none"> ▪ Humanities/Social Sciences (4.5) ▪ Human Relations Skills (4.5) ▪ Information Systems and Literacy (4.5)
Major Requirements	<ul style="list-style-type: none"> ▪ Principles of Marketing (4.5) ▪ CHRM Orientation (2.0) ▪ Sanitation (2.0) ▪ Culinary Foundations 1: Skills (4.0) ▪ Marketing and Industry Perspectives (4.5) ▪ Cost Management (4.5) ▪ Food Service Financial Management (4.5) 	<ul style="list-style-type: none"> ▪ Hospitality Supervision (4.5) ▪ Leadership Principles (4.5) ▪ Purchasing (4.5) ▪ Table Service (4.0) ▪ Beverage Management (3.0) ▪ Student Manager (4.5) ▪ Hospitality Management Intern Or Restaurant Consulting Practicum (3.0)
Option 1: Food and Event Management	<ul style="list-style-type: none"> ▪ Business Law I (4.5) ▪ Basics of Quantity Production Or A la Carte Cookery (1.5 or 3.0) 	<ul style="list-style-type: none"> ▪ Nutrition (4.5) ▪ Event Planning (4.0) ▪ Banquet and Catering (4.0)
Option 2: Hospitality Entrepreneurship	<ul style="list-style-type: none"> ▪ Introduction to Entrepreneurship (4.5) ▪ Entrepreneurship Feasibility Study (4.5) ▪ Legal Issues for the Entrepreneur (4.5) 	<ul style="list-style-type: none"> ▪ Financial Topics for the Entrepreneur (4.5) ▪ Entrepreneurship Business Plan (4.5)

Source: 2012-2013 College Catalog, Metropolitan Community College

TUITION RATES

The tuition charges at MCC are based on credit hours completed and students' residential status. Starting from fall 2013, MCC's tuition charge is \$53 per credit for Nebraska residents and \$79.5 per credit for out of state residents. MCC also charges \$5 per credit hour as facility fee.²⁶

CAREER OPPORTUNITIES

MCC's programs in Culinary Arts and Management are designed to prepare students for a career as a chef, sous chef, culinarian, pastry chef, professional baker, or food development specialists. Meanwhile, the AAS Degree in Hospitality and Restaurant Leadership prepares students to become leaders in the career fields of restaurant manager, event coordinator, hospitality consultant, beverage director, or many other related careers. Hospitality Entrepreneurship course track, in particular, provides entrepreneurial education for students wanting to own and operate a business in the hospitality industry.

According to ICA, with proper training, experience, and determination, it is possible for students to have a rewarding career and good pay careers in the culinary and hospitality industry in the Midwest. For example, an Executive Chef in the Midwest could potentially

²⁶ "Tuition per Credit Hour." *Metropolitan Community College*.
<http://www.mccneb.edu/futurestudents/tuition.asp?Theme=1>

make up to \$95,000 annually, the average Executive Chef makes about \$60,000, and an Executive Pastry chef makes over \$70,000.²⁷

EL PASO COMMUNITY COLLEGE (EL PASO, TEXAS)

Associate of Applied Science Degree in Culinary Arts and Related Sciences

Associate of Applied Science Degree in Hospitality Operations

El Paso Community College (EPCC) offers AAS Degree in the fields of Culinary Arts and Hospitality Operations. Within Culinary Arts, EPCC also provides students with three distinguish course tracks: Culinary Arts, Pastry, and Restaurant Management. EPCC's AAS Degree in Culinary Arts emphasizes basic concepts and techniques related to food, bakeries, and beverage production, services, and control. The Degree is designed for the following individuals: those currently employed in the industry who desire increased skills for eventual advancement, those who desire to increase their knowledge of food preparation for the entry into the industry, and those who are a novice to the foodservice industry. Meanwhile, the AAS Degree in Hospitality Operations provides students with the fundamental knowledge necessary for a professional career in the hospitality industry.²⁸

ADMISSIONS CRITERIA

EPCC has an "Open Door" policy, which means there is no competitive admissions application process for students who want to be enrolled in the college. New EPCC students must have their official high school, GED, or college transcripts sent to the EPCC Admissions and Registration Department. To be considered "official", transcripts must be sent directly to EPCC from the other school(s). Every student coming from another college or university must either take a placement assessment test and/or have transcripts evaluated for appropriate placement into courses.²⁹

GRADUATION REQUIREMENTS FOR DIFFERENT DEGREE PROGRAMS

The Board of Trustees of EPCC approved an institutional guarantee graduate policy on September 23, 1992 and agrees to guarantee the graduate of AAS and AA Degrees accordance with the policy adopted by the Texas Higher Education Coordinating Board.³⁰ In general, to graduate with an AAS Degree, students must have a minimum of 60 semester hours of college level credits, of which at least six credit hours in the declared major are taken at EPCC (25% of semester- credit hours must be fulfilled for residency). A cumulative grade point average of at least 2.0, which is a grade of "C", is required for all coursework applied toward a degree at EPCC.

²⁷ "Jobs and Salary Expectations." *Metropolitan Community College*.
<http://www.mccneb.edu/chrn/cculinaryartsandmanagement.asp>

²⁸ "El Paso Community College 2013-2014 Catalog." *El Paso Community College*.
<http://viewer.zmags.com/publication/64975066#/64975066/1>

²⁹ "Registration." *El Paso Community College*. <http://www.epcc.edu/Registration/Pages/default.aspx>

³⁰ "El Paso Community College 2013-2014 Catalog." Op. cit., p. 297

In the rest of the section, Hanover will outline the details of the course work requirements for each relevant program. Figure 3.4 displays EPCC’s course requirements for the AAS Degree in Culinary Arts. To graduate, students need to complete 69 credit hours total in assigned course fields. The program introduces the creation, preparation, and presentation of foods for both commercial and institutional foodservice establishments. Students will be required to be uniformed, which includes two chef coats, each with appropriate emblem, black oil-resistant, non-skid shoes, and black neckerchief. An equipment kit is also required by the program.³¹

Figure 3.4: AAS Degree in Culinary Arts and Related Sciences with a Focus on Culinary Arts

SEMESTER	COURSEWORK AND CREDIT HOURS	
Summer Session	<ul style="list-style-type: none"> ▪ Nutrition and Diet Therapy (3) 	<ul style="list-style-type: none"> ▪ Food Service Management (4)
First Year	<ul style="list-style-type: none"> ▪ Basic Food Preparation (3) ▪ Sanitation and Safety (3) ▪ Fundamentals of Baking (3) ▪ Introductory Sociology (3) 	<ul style="list-style-type: none"> ▪ American Regional Cuisine (3) ▪ International Cuisine (3) ▪ Expository English Composition (3) ▪ Introduction to Computers (3) ▪ College Mathematics (3)
Summer Session	<ul style="list-style-type: none"> ▪ Professional Cooking and Meal Service (3) 	<ul style="list-style-type: none"> ▪ Purchasing for Hospitality Operations (3)
Second Year	<ul style="list-style-type: none"> ▪ A La Carte Cooking (3) ▪ Garde Manger (4) ▪ Saucier (3) ▪ Menu Management (2) ▪ Facilities Layout and Design (3) 	<ul style="list-style-type: none"> ▪ Principles of Accounting I (3) ▪ Practicum (or Field Experience)-Culinary Arts/Chef Training I (2) ▪ Advanced Food Preparation (3) ▪ Ethics (3) ▪ Organizational and Professional Communication (3)

Source: 2013-2014 Catalog, El Paso Community College

Figure 3.5 displays EPCC’s course requirements for the AAS Degree in Pastry. Students are required to complete 69 credit hours of courses related to pastry production to graduate. This degree emphasizes basic concepts and techniques related to baked goods production and control. Students under this program study the creation, preparation, and presentation of foods for both commercial and institutional bakery establishments. They are also exposed to the business aspects of baking, along with practical hands-on training. Similarly, students will need to be uniformed and prepared with equipment kit to attend specific classes.³²

³¹ “El Paso Community College 2013-2014 Catalog.” Op. cit., p. 179

³² “El Paso Community College 2013-2014 Catalog.” Op. cit., p. 180

Figure 3.5: AAS Degree in Culinary Arts and Related Sciences with a Focus on Pastry

SEMESTER	COURSEWORK AND CREDIT HOURS	
Summer Session	<ul style="list-style-type: none"> ▪ Nutrition and Diet Therapy (3) 	<ul style="list-style-type: none"> ▪ Food Service Management (4)
First Year	<ul style="list-style-type: none"> ▪ Basic Food Preparation (3) ▪ Sanitation and Safety (3) ▪ Fundamentals of Baking (3) ▪ Introductory Sociology (3) 	<ul style="list-style-type: none"> ▪ Expository English Composition (3) ▪ Introduction to Computers (3) ▪ College Mathematics (3) ▪ Pies, Tarts, Teacakes and Cookies (3) ▪ Bakery Operations and Management (3)
Summer Session	<ul style="list-style-type: none"> ▪ Advanced Pastry Shop (3) 	<ul style="list-style-type: none"> ▪ Purchasing for Hospitality Operations (3)
Second Year	<ul style="list-style-type: none"> ▪ Breads and Rolls (3) ▪ Laminated Dough, Pate a Choux, and Donuts (3) ▪ Practicum (or Field Experience)-Baking and Pastry Arts/Baker/Pastry Chef I (2) ▪ Menu Management (2) ▪ Facilities Layout and Design (3) 	<ul style="list-style-type: none"> ▪ Principles of Accounting I (3) ▪ Ethics (3) ▪ Plated Desserts (3) ▪ Practicum (or Field Experience)-Baking and Pastry Arts/Baker/Pastry Chef II (2) ▪ Mexican Breads and Pastries (3) ▪ Organizational and Professional Communication (3)

Source: 2013-2014 Catalog, El Paso Community College

Figure 3.6 displays EPCC’s course requirements for the AAS Degree in Restaurant Management. Students are also required to complete 69 credit hours of courses in related fields to graduate. This degree provides instruction focusing on the concepts necessary for successful food and beverage service and operation. The Restaurant Management AAS Degree includes emphasis on marketing, sales, catering, cost controls, and foodservice-related accounting. Students will need to be uniformed and prepared with equipment kit to attend classes.³³

Figure 3.6: AAS Degree in Culinary Arts and Related Sciences With a Focus on Restaurant Management

SEMESTER	COURSEWORK AND CREDIT HOURS	
Summer Session	<ul style="list-style-type: none"> ▪ Nutrition and Diet Therapy (3) 	<ul style="list-style-type: none"> ▪ Introduction to the Casino and Gaming Industry (3)
First Year	<ul style="list-style-type: none"> ▪ Basic Food Preparation (3) ▪ Sanitation and Safety (3) ▪ Fundamentals of Baking (3) ▪ Introductory Sociology (3) 	<ul style="list-style-type: none"> ▪ Expository English Composition (3) ▪ Introduction to Computers (3) ▪ College Mathematics (3) ▪ Introduction to Hospitality Industry (3) ▪ Beverage Management (2)
Summer Session	<ul style="list-style-type: none"> ▪ Management of Food Production and Service (4) 	<ul style="list-style-type: none"> ▪ Purchasing for Hospitality Operations (3)
Second Year	<ul style="list-style-type: none"> ▪ Hospitality Legal Issues (3) ▪ Dining Room Service (2) ▪ Menu Management (2) ▪ Facilities Layout and Design (3) ▪ Viticulture and Enology (3) ▪ Customer Sales and Service (2) 	<ul style="list-style-type: none"> ▪ Principles of Accounting I (3) ▪ Ethics (3) ▪ Wine and Food Pairing (2) ▪ Catering (4) ▪ Organizational and Professional Communication (3)

Source: 2013-2014 Catalog, El Paso Community College

³³ “El Paso Community College 2013-2014 Catalog.” Op. cit., p. 181

Figure 3.7 displays EPCC’s course requirements for the AAS Degree in Hospitality Operations. This degree prepares students for a variety of entry-level positions in the hospitality industry. Students are also required to complete 69 credit hours of courses in related fields to graduate.³⁴

Figure 3.7: AAS Degree in Hospitality Operations

SEMESTER	COURSEWORK AND CREDIT HOURS	
Summer Session	<ul style="list-style-type: none"> ▪ Cruises (2) 	<ul style="list-style-type: none"> ▪ Introduction to the Casino and Gaming Industry (3)
First Year	<ul style="list-style-type: none"> ▪ Front Office Procedures (3) ▪ Computers in Hospitality (3) ▪ Customer Sales and Service (2) ▪ Introduction to Travel and Tourism (3) ▪ Travel Destinations I-Western Hemisphere (3) 	<ul style="list-style-type: none"> ▪ Sanitation and Safety (3) ▪ Introduction to Hospitality Industry (3) ▪ Guest Room Management (3) ▪ College Mathematics (3) ▪ Travel Destinations II-Eastern Hemisphere (3)
Summer Session	<ul style="list-style-type: none"> ▪ Principles of Accounting I (3) 	<ul style="list-style-type: none"> ▪ Purchasing for Hospitality Operations (3)
Second Year	<ul style="list-style-type: none"> ▪ Expository English Composition (3) ▪ Technical and Business Writing (3) ▪ Hospitality Legal Issues (3) ▪ Introductory Sociology (3) ▪ Elective (3) 	<ul style="list-style-type: none"> ▪ Business Computer Applications OR Introduction to Computers (3) ▪ Recreational Services (3) ▪ Practicum (or Field Experience)-Hospitality Administration/Management, General (2) ▪ Hospitality Security and Loss Prevention (3) ▪ Organizational and Professional Communication (3)

Source: 2013-2014 Catalog, El Paso Community College

TUITION RATES

Similar to MCC, tuition rates for credit courses at EPCC are established based on credits completed and students’ residential status as defined by the Texas Education Code and Rules and Regulations of the Texas Higher Education Coordinating Board. During the 2013-2014 school year, the tuition charge is \$76 per credit hour for state residents, while the rate for out of state residents is \$200 for the first credit hour and \$141 for each additional credit hour. Total tuition charge will also need to include an additional General Use Fee of \$10 per credit hour.³⁵

PIMA COMMUNITY COLLEGE (TUCSON, ARIZONA)

Associate of Applied Science in Culinary Arts

Associate of Arts (AA) in Hotel and Restaurant Management

Pima Community College (PCC) currently provides an AAS Degree in Culinary Arts and an AA Degree in Hotel and Restaurant Management. Courses for the Culinary Arts program focus

³⁴ “El Paso Community College 2013-2014 Catalog.” Op. cit., p. 182

³⁵ “El Paso Community College 2013-2014 Catalog.” Op.cit., p. 38

on culinary management, budgeting, and hands-on food preparation. They are suitable for working professionals since courses are offered during weekdays, evenings, and weekends. While this program was not designed to transfer to a four-year university, it may apply toward Bachelor of Applied Science (BAS) or other programs.³⁶

Meanwhile, students enrolled in the Hotel and Restaurant Management program learn basic principles of hotel and restaurant management while completing lower-division required courses for a bachelor's degree in hotel-Restaurant management. They may complete this program by taking classes exclusively on weekdays, or in a combination of weekdays and evenings, and/or online. Graduates of this program may go on to earn a bachelor's degree in Hotel and Restaurant Management in Tucson through a partnership with Northern Arizona University (NAU). Completion of required program courses, including Arizona General Education Curriculum (AGEC-A) requirements, allows students to waive 12 upper-division liberal studies courses upon transfer to NAU.³⁷

ADMISSIONS CRITERIA

PCC currently employs open-door admission policy and individuals meet one of the following criteria are eligible to apply for admission as degree seeking students:

- Graduate of an accredited high school;
- Recipient of a GED certificate of high school equivalency;
- Graduate of an accredited college or university or a transfer student in good standing from an accredited college or university;
- Non-high school graduate or GED recipient, at least 16 years old, and demonstrate evidence of potential success; and
- Post-secondary transfer student and do not have a HS diploma or GED, you must demonstrate evidence of potential success.

Students who have taken classes at another college or university may transfer their credits to PCC. The College may accept class credits (with a grade of C, its equal, or better) from colleges and schools accredited by any of the following regional accreditation commissions: Middle States Association of Colleges and Schools; New England Association of Schools and Colleges, Inc.; North Central Association of Colleges and Schools; Northwest Commission on Schools, Colleges and Universities; Southern Association of Colleges and Schools; and Western Association of Schools and Colleges.³⁸

In addition, the AAS Degree in Culinary Arts also requires students to have an interview with a Culinary Arts faculty member before enrolling.

³⁶ "Pima Community College 2013-2014 Catalog." *Pima Community College*. p. 149 <http://www.pima.edu/programs-courses/college-catalog/1314/1314-Catalog.pdf>

³⁷ "Pima Community College 2013-2014 Catalog." *Op.cit.* p.201

³⁸ "Pima Community College 2013-2014 Catalog." *Op.cit.* p.23

GRADUATION REQUIREMENTS

PCC’s degree programs normally include general education courses, core/major courses, and support/elective courses. For all degrees and certificates, students are required to complete 30 or more credit hours of general education courses to graduate.³⁹ Detailed course information for AAS and AA degrees are available on the College’s website.

Figure 3.8 provides a detailed list of the course requirements necessary to complete the AAS program in Culinary Arts at PCC. To graduate, students are required to acquire 62 to 64 credit hours and receive grades of C or better for all courses taken.

Figure 3.8: Required Courses for AAS Degree in Culinary Arts

AREA	COURSEWORK AND CREDIT HOURS	
General Education Requirements for AAS Degrees	<ul style="list-style-type: none"> ▪ Communication Requirement (6) ▪ Analysis and Critical Thinking Requirement (6) 	<ul style="list-style-type: none"> ▪ Humanities and Social Science Requirement (6) ▪ Computer and Information Literacy Requirement (1-3)
Required Core Courses	<ul style="list-style-type: none"> ▪ Principles of Restaurant Operations (3) ▪ Food Service Nutrition (2) ▪ Food Service Sanitation and Safety (3) ▪ Hot Foods I (3) ▪ Culinary Principles (3) ▪ Garde Manger (3) 	<ul style="list-style-type: none"> ▪ Bakery and Pastry Production I (3) ▪ Food In History (3) ▪ Catering Operations (2) ▪ Hot Foods II (3) ▪ International Cuisine: World of Flavor (3) ▪ Bakery and Pastry Production II (3)
Required Support Courses (9 Credits Required)	<ul style="list-style-type: none"> ▪ Practical Accounting Procedures (3) ▪ Cake Decorating and Candy Making (3) ▪ Art of Chocolate (1) 	<ul style="list-style-type: none"> ▪ Sauces (3) ▪ Co-op Work: Culinary Arts (1-3) ▪ Advanced Cake Decorating (3)

Source: Pima Community College 2013-2014 Catalog

Figure 3.9 outlines the course requirements necessary to complete the AA program in Hotel and Restaurant Management at PCC. Since this is a transfer programs, students need to take at least 26 credit hours from the AGEC-A Requirements. To graduate, students are required to acquire 61 credit hours and receive grades of C or better for all courses taken.

³⁹ “Earning a Degree or Certificate.” *Pima Community College*. <http://www.pima.edu/programs-courses/credit-programs-degrees/earning-degree/index.html>

Figure 3.9: Required Courses for AA Degree in Hotel and Restaurant Management

AREA	COURSEWORK AND CREDIT HOURS	
Arizona General Education Curriculum Requirements	<ul style="list-style-type: none"> ▪ English Composition (6) ▪ Humanities and Fine Arts (6) ▪ Biological and Physical Sciences (8) 	<ul style="list-style-type: none"> ▪ Mathematics (3) ▪ Social and Behavioral Sciences (3)
Required Core Courses	<ul style="list-style-type: none"> ▪ Introduction to Hospitality Industry (3) 	<ul style="list-style-type: none"> ▪ Front Office Procedures (3) ▪ Executive Housekeeping (3)
Required Support Courses (9 Credits Required)	<ul style="list-style-type: none"> ▪ Financial Accounting (3) ▪ Computer Fundamentals (3) ▪ Food Service Systems Management (3) 	<ul style="list-style-type: none"> ▪ Commercial Food (3) ▪ Basic Economic Principles (3) ▪ Second Language (8) ▪ Other Elective (3)

Source: Pima Community College 2013-2014 Catalog

TUITION RATES

Tuition rates for credit courses at PCC are established based on credits completed and students' residential status. For fall 2013, spring 2014, and summer 2014, the tuition charge is \$65.5 per credit hour for in-state residents and \$329 per credit hour for out-of-state residents. In addition to tuition, course fees and additional fees may apply.⁴⁰

CAREER OPPORTUNITIES

According to PCC's website, graduates from the AAS Degree in Culinary Arts will likely become a cook, menu planner, caterer, dining room manager or work in other culinary positions.⁴¹ Meanwhile, the AA Degree in Hotel and Restaurant Management is suitable for students seeking entry-level employment in the field of hotel and restaurant management.⁴²

SCOTTSDALE COMMUNITY COLLEGE (SCOTTSDALE, ARIZONA)

Associate of Applied Science in Culinary Arts and Hospitality Related Fields

The Hospitality Tourism and Culinary Arts Department at Scottsdale Community College (SCC) offers degrees and certifications in the areas of culinary arts, hospitality and tourism, and alcohol education. In the field of culinary art, SCC currently offers three AAS Degree programs that have separate focuses on Culinary Fundamentals, Culinary Arts, and Advanced Professional Culinary Arts. SCC's culinary facility includes an advanced technology demonstration classroom and 10,000 square feet of teaching kitchens. The Artichoke Grill Lunch Restaurant and Desert Oasis Dining Room, two restaurants operated by the

⁴⁰ "Costs-Tuition and Fees." *Pima Community College*. <http://www.pima.edu/paying-for-school/costs/>

⁴¹ "Culinary Arts." *Pima Community College*. <http://www.pima.edu/programs-courses/credit-programs-degrees/arts-humanities/culinary-arts/culinary-arts-aas.html>

⁴² "Hotel and Restaurant Management." *Pima Community College*. <http://www.pima.edu/programs-courses/credit-programs-degrees/business-careers/hotel-restaurant/hotel-restaurant-aoa.html>

Department and open to the public, can provide real life experiences for SCC's students in relevant programs.⁴³

Meanwhile, the Department also provides five different course tracks for hospitality related degrees: Golf Management, Hotel Management, Restaurant Management, Spa and Wellness Center Management, and Tourism Development and Management. For the purpose of the report, we will detail course information of the Hotel and Restaurant Management programs, as they appear to be more popular among two-year colleges.

ADMISSIONS CRITERIA

SCC also has an open admission policy, and admission to its degree programs may be granted to any person who meets at least one of the following criteria:

- A graduate of a high school accredited by a regional accrediting association as defined by the United States Office of Education or approved by a State Department of Education or other appropriate state educational agency;
- Has a high school certificate or equivalent;
- At least 18 years of age and demonstrates evidence of potential success in the community college; and
- A transfer student in good standing from another college or university.

Individuals less than 18 years of age may also be admitted if they complete course prerequisites and meet different score requirements for PAST, SAT, ACT, and AIMS.⁴⁴

GRADUATION REQUIREMENTS FOR DIFFERENT DEGREE PROGRAMS

To graduate, students are required to complete 60 semester credit units in courses numbered 100 or above for all AAS degrees and earn a minimum of 12 semester credit units toward the degree. The 12 hours in the AAS degree curricula may be in the Required Courses area and/or Restricted Electives courses. Moreover, students need to have a minimum cumulative grade point average of 2.0 in all courses used to fulfill degree requirements.⁴⁵

SCC's AAS Degree in **Culinary Fundamentals** equips students with basic skills in culinary arts. The program provides instruction in culinary concepts and terminology, kitchen safety and sanitation, equipment usage, basic nutritional guidelines, standard and metric measurements, food costing, and theory and practice in the production of culinary products. Courses emphasize fundamental cooking techniques and preparation methods for

⁴³ "Culinary Arts." *Scottsdale Community College*.

<http://www.scottsdalecc.edu/academics/departments/htca/culinary-arts>

⁴⁴ "2012-2013 General Catalog and Student Handbook." *Scottsdale Community College*. p. 16
[phttp://www.scottsdalecc.edu/about-scottsdale/college-catalog](http://www.scottsdalecc.edu/about-scottsdale/college-catalog)

⁴⁵ "2012-2013 General Catalog and Student Handbook." Op.cit. p. 47

hot foods, breakfast items, salads, sandwiches, dressings, breads, and pastries. The total credits required for this program is 60 and students must earn a grade of “C” or better in all courses.⁴⁶ Figure 3.10 below displays the details of the program’s course work requirements.

Figure 3.10: Curriculum Requirements for AAS in Culinary Fundamentals

AREA	COURSEWORK AND CREDIT HOURS	
General Education Requirements	<ul style="list-style-type: none"> ▪ First-Year Composition 101 OR First-Year Composition for ESL 107 (3) ▪ First-Year Composition 102 OR First-Year Composition for ESL 108 (3) ▪ Any approved general education course in the Oral Communication area (3) ▪ College Critical Reading OR Equivalent as indicated (3) 	<ul style="list-style-type: none"> ▪ Any approved general education course in the Mathematics area (3-5) ▪ Any approved general education course in the Humanities and Fine Arts area (3) ▪ Any approved general education course in the Social and Behavioral Sciences area (3) ▪ Any approved general education course in the Natural Sciences area (4)
Required Core Courses	<ul style="list-style-type: none"> ▪ Culinary Fundamentals: Culinary Basics (4) ▪ Culinary Fundamentals: Hot Foods (4) 	<ul style="list-style-type: none"> ▪ Culinary Fundamentals: Breakfast and Garde Manger (4) ▪ Culinary Fundamentals: Bakery and Pastry (4)
Restricted Electives (17-19 Credits)	<ul style="list-style-type: none"> ▪ Any ACC Accounting courses (1-3) ▪ Any CUL prefixed course(s) except courses used to satisfy Required Courses (1-4) ▪ Any FRE French courses (1-4) ▪ Any HRM Hospitality and Tourism Management courses (1-4) ▪ Any IBS International Business courses (1-3) 	<ul style="list-style-type: none"> ▪ Any ITA Italian courses (1-4) ▪ Any MGT Business Management courses (1-3) ▪ Any MKT Marketing courses (1-3) ▪ Any SBS Small Business Management courses (1-3) ▪ Any SPA Spanish courses (1-4)

Source: 2012-2013 General Catalog and Student Handbook

SCC’s AAS Degree in **Culinary Arts** trains students who wish to become professional chefs. The program requires 35 hours per week in direct class participation. Students must enroll concurrently in all courses in a block regardless of previously completed coursework. Students rotate through all areas of food preparation at lunch and dinner. A casual lunch dining room is operated in the first semester and a formal dining room is operated during the evening in the second semester, providing practical work experience to enhance the lab experience.⁴⁷ To be admitted to the program, students are required to enroll in 100-level English, reading and math classes on the ASSET test or complete equivalent course work. The program requires 65 to 67 credit units and students must earn a grade of “C” or better in all courses, listed in Figure 3.11.

⁴⁶ “Culinary Fundamentals Degree.” *Scottsdale Community College*.
<http://www.scottsdalecc.edu/academics/departments/hospitality-tourism-culinary-arts/culinary-arts/degrees/culinary-fundamentals>

⁴⁷ “Culinary Arts Degree.” *Scottsdale Community College*.
<http://www.scottsdalecc.edu/academics/departments/hospitality-tourism-culinary-arts/culinary-arts/degrees/culinary-arts>

Figure 3.11: Curriculum Requirements for AAS in Culinary Arts

AREA	COURSEWORK AND CREDIT HOURS	
<p>General Education Requirements</p>	<ul style="list-style-type: none"> ▪ First-Year Composition 101 OR First-Year Composition for ESL 107 (3) ▪ First-Year Composition 102 OR First-Year Composition for ESL 108 (3) ▪ Any approved general education course in the Oral Communication area (3) ▪ College Critical Reading OR Equivalent as indicated (3) 	<ul style="list-style-type: none"> ▪ Any approved general education course in the Mathematics area (3-5) ▪ Any approved general education course in the Humanities and Fine Arts area (3) ▪ Any approved general education course in the Social and Behavioral Sciences area (3) ▪ Any approved general education course in the Natural Sciences area (4)
<p>Required Core Courses</p>	<ul style="list-style-type: none"> ▪ Food Service Sanitation, Safety and Stewarding (2) ▪ Food Costing, Purchasing and Inventory Control (2) ▪ Hot Foods I (3) ▪ Culinary Principles and Kitchen Management I (3) ▪ Garde Manger I (2) ▪ Bakery and Pastry Production I (3) 	<ul style="list-style-type: none"> ▪ Dining Room Operations I (2) ▪ Menu Planning and Facilities Design (2) ▪ Food Service Nutrition (2) ▪ Hot Foods II (3) ▪ Culinary Principles and Kitchen Management II (3) ▪ Garde Manger II (2) ▪ Bakery and Pastry Production II (2) ▪ Dining Room Operations II (3)
<p>Restricted Electives (17-19 Credits)</p>	<ul style="list-style-type: none"> ▪ Food in History (3) ▪ Catering Operations I (3) ▪ Advanced Culinary Techniques I – Meats (2) ▪ Advanced Culinary Techniques II – Seafood (2) ▪ Advanced Culinary Techniques III - Game and Poultry (2) ▪ Professional Kitchen Management Techniques (2) ▪ Advanced Garde Manger I - Salads and Sandwiches (2) ▪ Advanced Garde Manger II - Appetizers and Hors d'Oeuvres (2) 	<ul style="list-style-type: none"> ▪ Professional Baking Techniques I - Base Products and Sauces (2) ▪ Professional Baking Techniques II - Breads and Rolls (2) ▪ Professional Baking Techniques IV - Decorative and Design Work (2) ▪ Cooperative Education (any module) (1-4) ▪ Special Projects (any module) (1-3) ▪ Any FRE French courses (1-4) ▪ Any HRM Hospitality and Tourism Management courses (1-3) ▪ Any ITA Italian courses (1-4) ▪ Any SPA Spanish courses (1-4)

Source: 2012-2013 General Catalog and Student Handbook

SCC’s AAS Degree in **Advanced Professional Culinary Arts** provides a comprehensive, hands-on course of study. It provides skills to advance the careers of current employees in the culinary industry. Instruction emphasizes specialized techniques in preparation and use of meats, seafood, poultry, and game, including production of stocks, sauces and butchering. Professional baking and pastry courses cover preparation of base products, sauces, breads and rolls, pastries, pies, cakes and decorative and design work with chocolate and sugar. Advanced garde manger instruction is provided in creating complex salads, sandwiches, appetizers and hors d’oeuvres. Professional kitchen management instruction provides essential principles to build proficiency in leadership and organizational skills.⁴⁸

⁴⁸ “Advanced Professional Culinary Arts Degree” *Scottsdale Community College*.
<http://www.scottsdalecc.edu/academics/departments/hospitality-tourism-culinary-arts/culinary-arts/degrees/advanced-professional->

The prerequisite for this program is high school diploma or GED with a score of 37 or higher on the math portion of the ASSE Placement Test. In addition, students are also required to Two years of work experience in a professional kitchen position or permission from Program Director.⁴⁹ The program requires 60 credit units and students must earn a grade of “C” or better in all courses. Figure 3.12 below displays the detailed course requirements for this advanced degree program.

Figure 3.12: Curriculum Requirements for AAS in Advanced Professional Culinary Arts

AREA	COURSEWORK AND CREDIT HOURS	
General Education Requirements	<ul style="list-style-type: none"> ▪ First-Year Composition 101 OR First-Year Composition for ESL 107 (3) ▪ First-Year Composition 102 OR First-Year Composition for ESL 108 (3) ▪ Any approved general education course in the Oral Communication area (3) ▪ College Critical Reading OR Equivalent as indicated (3) 	<ul style="list-style-type: none"> ▪ Any approved general education course in the Mathematics area (3-5) ▪ Any approved general education course in the Humanities and Fine Arts area (3) ▪ Any approved general education course in the Social and Behavioral Sciences area (3) ▪ Any approved general education course in the Natural Sciences area (4)
Required Core Courses	<ul style="list-style-type: none"> ▪ Advanced Culinary Techniques I – Meats (2) ▪ Advanced Culinary Techniques II – Seafood (2) ▪ Advanced Culinary Techniques III - Game and Poultry (2) ▪ Professional Kitchen Management Techniques (2) ▪ Advanced Garde Manger I - Salads and Sandwiches (2) 	<ul style="list-style-type: none"> ▪ Advanced Garde Manger II - Appetizers and Hors d'Oeuvres (2) ▪ Professional Baking I - Base Products and Sauces (2) ▪ Professional Baking II - Breads and Rolls (2) ▪ Professional Baking III - Pastries, Pies and Cakes (2) ▪ Professional Baking IV - Decorative and Design Work (2)
Restricted Electives (15 Credits)	<ul style="list-style-type: none"> ▪ Culinary Principles and Kitchen Management I (3) ▪ Food in History (3) ▪ Catering Operations I (3) ▪ Menu Planning and Facilities Design (2) ▪ Food Service Nutrition (2) ▪ Culinary Principles and Kitchen Management II (3) 	<ul style="list-style-type: none"> ▪ Cooperative Education (any module) (1-4) ▪ Special Projects (3) ▪ Any French courses (1-4) ▪ Any Hospitality and Tourism Management courses (1-3) ▪ Any Italian courses (1-4) ▪ Any Spanish courses (1-4)

Source: 2012-2013 General Catalog and Student Handbook

SCC’s AAS Degree in **Hospitality and Tourism/Hotel Management** prepares graduates for management careers in the hotel and resort industry. The program stresses written and oral communication, mathematical reasoning, business applications, and computer science with a mix of humanities, natural sciences, as well as social and behavioral sciences. The curriculum provides a program that has a mix of business and life skills that are in high demand with employers.⁵⁰ The program requires 61 to 66 credits and students must earn a

⁴⁹ “2012-2013 General Catalog and Student Handbook.” Op.cit. p. 112

⁵⁰ “Hospitality and Tourism/Hotel Management Degree.” *Scottsdale Community College*.

<http://www.scottsdalecc.edu/academics/departments/hospitality-tourism-culinary-arts/hospitality-tourism/degrees/hotel-management>

grade of “C” or better in all courses within the program. Figure 3.13 below displays the detailed course requirements for the Hotel Management program.

Figure 3.13: Curriculum Requirements for AAS in Hospitality and Tourism/Hotel Management

AREA	COURSEWORK AND CREDIT HOURS	
<p>General Education Requirements</p>	<ul style="list-style-type: none"> ▪ First-Year Composition 101 OR First-Year Composition for ESL 107 (3) ▪ First-Year Composition 102 OR First-Year Composition for ESL 108 (3) ▪ Any approved general education course in the Oral Communication area (3) ▪ College Critical Reading OR Equivalent by assessment (0-3) ▪ Any approved general education course in the Mathematics area (3-5) 	<ul style="list-style-type: none"> ▪ Any approved general education course in the Humanities and Fine Arts area (3) ▪ Macroeconomic Principles OR Microeconomic Principles OR Introduction to Psychology OR Leisure and Quality of Life (3) ▪ Any approved general education course in the Natural Sciences area (4)
<p>Required Core Courses (33 Credits)</p>	<ul style="list-style-type: none"> ▪ Accounting Principles I OR Financial Accounting (3) ▪ Financing Hospitality and Tourism Development (3) ▪ Introduction to Hospitality and Tourism Management (3) ▪ Hotel Facility Management (3) ▪ Guest Service Management (3) ▪ Food Production Concepts (3) 	<ul style="list-style-type: none"> ▪ Hospitality and Tourism Information Systems I (3) ▪ Hospitality Managerial Accounting (3) ▪ Hospitality and Tourism Information Systems II (3) ▪ Hospitality Human Resource Management (3) ▪ Hospitality Marketing (3) ▪ Hospitality and Tourism Law (3)
<p>Restricted Electives (6 Credits)</p>	<ul style="list-style-type: none"> ▪ Wine: From Vine to Table (3) ▪ Events Management (3) ▪ Beverage Management (3) ▪ Club Management (3) ▪ Commercial Food Production (3) ▪ Restaurant Management (2) 	<ul style="list-style-type: none"> ▪ Gaming Management (3) ▪ Ecotourism (3) ▪ Directed Field Study – International (3) ▪ Directed Field Study (3) ▪ Cooperative Education (2) ▪ Cooperative Education (3) ▪ Leisure Delivery Systems (3)

Source: 2012-2013 General Catalog and Student Handbook

At last, the AAS Degree in **Hospitality and Tourism/Restaurant Management** prepares graduates for management careers in restaurants and commercial food service management. The program stresses written and oral communication, mathematical reasoning, business applications, and computer science with a mix of humanities, natural sciences, as well as social and behavioral sciences.⁵¹ The program also requires 61 to 66 credits and students must earn a grade of “C” or better in all courses within the program. Figure 3.14 below displays the detailed course requirements for the Restaurant Management program.

⁵¹ “Hospitality and Tourism/Restaurant Management.” *Scottsdale Community College*. <http://www.scottsdalecc.edu/academics/departments/hospitality-tourism-culinary-arts/hospitality-tourism/degrees/restaurant-manag>

Figure 3.14: Curriculum Requirements for AAS in Hospitality and Tourism/Restaurant Management

AREA	COURSEWORK AND CREDIT HOURS	
General Education Requirements	<ul style="list-style-type: none"> ▪ First-Year Composition 101 OR First-Year Composition for ESL 107 (3) ▪ First-Year Composition 102 OR First-Year Composition for ESL 108 (3) ▪ Any approved general education course in the Oral Communication area (3) ▪ College Critical Reading OR Equivalent by assessment (0-3) ▪ Any approved general education course in the Mathematics area (3-5) 	<ul style="list-style-type: none"> ▪ Any approved general education course in the Humanities and Fine Arts area (3) ▪ Macroeconomic Principles OR Microeconomic Principles OR Introduction to Psychology OR Leisure and Quality of Life (3) ▪ Any approved general education course in the Natural Sciences area (4)
Required Core Courses (33 Credits)	<ul style="list-style-type: none"> ▪ Accounting Principles I OR Financial Accounting (3) ▪ Financing Hospitality and Tourism Development (3) ▪ Introduction to Hospitality and Tourism Management (3) ▪ Food Production Concepts (3) ▪ Hospitality and Tourism Information Systems I (3) 	<ul style="list-style-type: none"> ▪ Hospitality Managerial Accounting (3) ▪ Beverage Management (3) ▪ Hospitality and Tourism Information Systems II (3) ▪ Hospitality Human Resource Management (3) ▪ Hospitality Marketing (3) ▪ Restaurant Management (3) ▪ Hospitality and Tourism Law (3)
Restricted Electives (6 Credits)	<ul style="list-style-type: none"> ▪ Food in History (3) ▪ Catering Operations I (3) ▪ Wine: From Vine to Table (3) ▪ Events Management (3) ▪ Club Management (3) ▪ Commercial Food Production (3) 	<ul style="list-style-type: none"> ▪ Gaming Management (3) ▪ Directed Field Study – International (3) ▪ Directed Field Study (3) ▪ Cooperative Education (2) ▪ Cooperative Education (3)

Source: 2012-2013 General Catalog and Student Handbook

TUITION RATES

Tuition rates for credit courses at SCC are established based on students’ residential status. Effective from July 1, 2013, the tuition charge will be \$81 per credit unit for all in-state residents except for students from Apache and Greenlee Counties, who will be charged at \$334 per credit unit due the lack of reciprocal arrangements with Maricopa County. For out-of-state residents, tuition charge will be \$322 per credit unit.⁵² A one-time, per semester \$15 registration fee is due by the official start of the term (semester) or by the specified due date or at time of registration.⁵³

CAREER OPPORTUNITIES

According to SCC, local restaurants, hotels, and resorts contact the Hospitality Tourism and Culinary Arts Department to hire students and graduates from culinary arts. These alumni hold positions such as chefs, sous-chefs, or own their own establishments. The

⁵² “Tuition & Fees.” *Scottsdale Community College*. <http://www.scottsdalecc.edu/admissions/tuition-fees>

⁵³ “2012-2013 General Catalog and Student Handbook.” *Op.cit.* p.32

Department's latest alumni survey shows more than 80 percent of students have reported successful careers in various areas in the culinary industry.⁵⁴ Meanwhile, graduates of the Hotel and Restaurant Management program are mostly employed as managers in restaurants, hotels, and resorts, many with multinational chains.⁵⁵

CENTRAL ARIZONA COLLEGE (COOLIDGE, ARIZONA)

Associate in Applied Science in Culinary Arts

Associate in Applied Science in Hotel and Restaurant Management

The Central Arizona College (CAC) offers two separate AAS Degrees in Culinary Arts as well as Hotel and Restaurant Management face-to-face and online. The Culinary Arts program provides training in basic and advanced culinary skills and includes a practicum experience within a commercial kitchen, with concentrations including Culinary Arts, Nutrition and Dietetics, and Business/Hospitality specialties. Students are prepared for positions as professional chefs, Degree cooks, and entry-level management or for advancement in the food service industry.⁵⁶ In addition, the Hotel and Restaurant Management program has a strong business focus and includes hospitality industry certified courses, university-level business courses, and AGECA.⁵⁷

ADMISSIONS CRITERIA

CAC requires that all students complete the Student Information Form and placement exam process to receive proper advisement and course selection prior to registration and orientation. Admission to CAC is granted to any person who meets one of the following criteria:⁵⁸

- Graduate of a high school that is accredited by a regionally accrediting association as defined by the United States Office of Education or any other appropriate state educational agency;
- High School Certificate of Equivalency (GED); and
- Transfer student in good standing from another college or university.

Regular standing students are required to submit the Student Information Form and the official transcripts from other institutions, colleges, and/or universities. Students admitted under these criteria are not guaranteed admission to a specific degree program or to all

⁵⁴ "Culinary Arts Advisement Guide & Worksheets." *Scottsdale Community College*.

http://www.scottsdalecc.edu/sites/default/files/pdf/culinary_arts-packet2.pdf

⁵⁵ "2012-2013 General Catalog and Student Handbook." Op.cit. p. 126

⁵⁶ "AAS Culinary Arts Degree." *Central Arizona College*.

http://www.centralaz.edu/Home/Academics/Divisions_and_Programs/Culinary_Arts/CUL_Degree_and_Certificates/AAS_Culinary_Arts_degree.htm

⁵⁷ "College Catalog 2013-2014." *Central Arizona College*.

<http://www.centralaz.edu/Documents/catalogs/CollegeCatalog2013-14.pdf>

⁵⁸ "Admission Procedures." *Central Arizona College*.

http://www.centralaz.edu/Home/Admissions/Admission_Procedures.htm

courses offered at the college. Students under the age of 18 are required to meet the following requirements for admission:⁵⁹

- Scholastic Aptitude Test (SAT) composite (verbal and math) score of 930 or above; and
- American College Test (ACT) composite score of 22 or above.

Most classes at CAC have a reading prerequisite, which may be satisfied by transferring at least nine ACADEMIC credits earned (English, Math, Philosophy, etc.) from accredited colleges or universities or taking a Reading Placement Test at a local community college or university. Students must be admitted to CAC before sending the Reading Placement test score.⁶⁰

GRADUATION REQUIREMENTS

To earn an AAS degree at CAC, students must earn 65 credits total and a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale. In addition, students must earn a minimum of 20 credits from CAC. The curriculum table below (Figure 3.15) lists course requirements for the AAS Degree in Culinary Arts. Students in this program may choose 15 credits of electives from all four of the categories listed below. Many of the electives are part of the Baking and Pastry Certificate, the Culinary Arts Certificate, and the Hotel and Restaurant Management Certificate.⁶¹

Figure 3.14: Curriculum Requirements for AAS in Culinary Arts

AREA	COURSEWORK AND CREDIT HOURS	
General Education Requirements (19-23)	<ul style="list-style-type: none"> ▪ English Composition III (3) ▪ Applied Technical Writing (3) ▪ Oral Communication (3) ▪ Art and Humanities (3) ▪ Social and Behavioral Science (3) 	<ul style="list-style-type: none"> ▪ Physical and Biological Science (4) ▪ Mathematics (3-4) ▪ Physical Education Activity (1) ▪ Computer Competency (3)
Core Requirements (27 Credits)	<ul style="list-style-type: none"> ▪ Sustainable Food Practices (1) ▪ Culinary Principles and Applications I (3) ▪ Baking and Pastry I (3) ▪ Dining and Beverage Operations (2) ▪ Catering Operations (2) ▪ Culinary Principles and Applications II (3) ▪ Baking and Pastry II (3) ▪ Commercial Cooking Practicum (2) 	<ul style="list-style-type: none"> ▪ Food Safety Foundations OR ServSafe Certification (1) ▪ Nutrition plus Personal Wellness Lab OR Nutrition plus CUL elective OR Nutrition and Special Needs Baking plus CUL elective OR Nutrition and Wellness (4) ▪ Food Service Management OR Managing Food Service Operations (3)
Culinary Arts Electives	<ul style="list-style-type: none"> ▪ Asian Cuisine (1) ▪ Italian Cuisine (1) ▪ Mexican and Latin American Cuisine (1) ▪ Culinary Concepts (1) 	<ul style="list-style-type: none"> ▪ HACCP Principles (1) ▪ Study Abroad: Italian Cuisine and Culture (4) ▪ Applied Food Science (3)

⁵⁹ Ibid.

⁶⁰ "Admissions." *Central Arizona College*.
http://www.centralaz.edu/home/academics/divisions_and_programs/dietetic_education/how_to_get_started.htm#Admissions

⁶¹ "2012-2013 General Catalog and Student Handbook." Op.cit. p. 120

AREA	COURSEWORK AND CREDIT HOURS	
Baking and Pastry Electives	<ul style="list-style-type: none"> ▪ Cake Decorating (1) ▪ Cake, Fillings and Frostings (1) ▪ Advanced Cake Decorating (1) ▪ Wedding Cakes (1) ▪ Everything Chocolate (1) 	<ul style="list-style-type: none"> ▪ Confectionary Show Pieces (1) ▪ Artisan Specialty Breads (1) ▪ Advanced Pastry (1) ▪ Nutrition and Special Needs Baking (3)
Nutrition and Dietetics Electives	<ul style="list-style-type: none"> ▪ Healthy Weight for Adults (1) ▪ Nutrition Counseling Skill Development (3) 	<ul style="list-style-type: none"> ▪ Food and Culture (1) ▪ Clinical Nutrition (3)
Business/Hospitality Electives	<ul style="list-style-type: none"> ▪ Fundamentals of Accounting (3) ▪ Introduction to Business (3) ▪ Small Business Management (3) ▪ Business Relations (3) ▪ Introduction to Marketing (3) ▪ Legal Environment of Business (3) 	<ul style="list-style-type: none"> ▪ Business Entrepreneurship (3) ▪ Introduction to Hospitality (3) ▪ Facilities Management (3) ▪ Management of Guest Services (3) ▪ Supervision in the Hospitality Industry (3) ▪ Hospitality Law (3)

Source: Central Arizona College Catalog 2013-2014

CAC’s AAS Degree in Hotel and Restaurant Management is a popular transfer program to Arizona State University, University of Arizona, or Northern Arizona University for advanced studies in similar fields. To graduate from this program, students are required to earn 66 credits and a cumulative grade point average of at least a 2.0 on a 4.0 scale. This AAS Degree also requires AGEC-A, and students must have a grade of “C” or better in each course within the Curriculum. Figure 3.15 below outlines the curriculum requirements for this hospitality degree.

Figure 3.15: Curriculum Requirements for AAS in Hotel and Restaurant Management

AREA	COURSEWORK AND CREDIT HOURS	
General Education Requirements (35-36)	<ul style="list-style-type: none"> ▪ English Composition III (3) ▪ English Composition IV (3) ▪ Intercultural Communication (3) ▪ College Mathematics, Standard (4) or higher (3-4) <p><u>Humanities (3)</u></p> <ul style="list-style-type: none"> ▪ American Literature I (3) ▪ American Literature II (3) ▪ English Literature I (3) ▪ English Literature II (3) ▪ American Ethnic Literature (3) ▪ Literature and Film (3) ▪ Introduction to Ethics (3) <p><u>Special Awareness Requirements (0-9)</u></p> <ul style="list-style-type: none"> ▪ Intensive Writing and Critical Inquiry (3) ▪ Cultural Awareness (Ethnic/Race/Gender) (3) ▪ Global/International Awareness or Historical Awareness (3) 	<p><u>Arts & Humanities (6-9)</u></p> <ul style="list-style-type: none"> ▪ Art History II (3) ▪ Music Appreciation (3) ▪ Theater Appreciation (3) <p><u>Social and Behavioral Sciences (6-9)</u></p> <ul style="list-style-type: none"> ▪ Principles of Macroeconomics 201 (3) ▪ Principles of Microeconomics 202 (3) ▪ Introduction to Cultural and Historical Geography OR Introduction to Psychology OR Introduction to Sociology (3) <p><u>Physical and Biological Sciences (8)</u></p> <ul style="list-style-type: none"> ▪ Biology Concepts (4) ▪ Fundamental Chemistry (4) ▪ Environmental Science (4) ▪ Nutrition and Wellness (4) ▪ Physical Universe (4)
Core Requirements (30 Credits)	<ul style="list-style-type: none"> ▪ Survey of Computer Information Systems (3) ▪ Dining and Beverage Operations (2) ▪ Facilities Management (3) ▪ Management of Guest Services (3) 	<ul style="list-style-type: none"> ▪ Fundamentals of Accounting OR Financial Accounting (3) ▪ Culinary Principles & Applications I OR Baking and Pastry I (3)

AREA	COURSEWORK AND CREDIT HOURS	
	<ul style="list-style-type: none"> ▪ Managing Food Service Operations(3) ▪ Supervision in the Hospitality Industry (3) ▪ Hospitality Law (3) 	<ul style="list-style-type: none"> ▪ Introduction to Hospitality OR Recreation, Leisure and Quality of Life (3) ▪ Food Safety Foundations OR ServSafe Certification OR HACCP Principles (1)
Other Requirements	<ul style="list-style-type: none"> ▪ Reading Competency: RDG094 College Reading (1) 	<ul style="list-style-type: none"> ▪ Survey of Computer Information Systems (3)

Source: Central Arizona College Catalog 2013-2014

TUITION RATES

The Tuition per credit at CAC is \$77 for Arizona residents and \$154 for out of state residents. Some credit courses have a lab or special fee that is required. Fees for non-credit special interest courses are determined on a course-by-course individual basis.⁶²

CAREER OPPORTUNITIES

Program graduates from the Culinary Arts program may work in hotels, resorts, restaurants, commercial food service systems, extended care facilities, hospitals, school food service, cruises ships, spas, and day care facilities. The program prepares students for positions such as professional chefs, cooks, and entry-level management or for advancement in the food service industry.⁶³ Meanwhile, the Hotel and Restaurant Management program prepares students for employment opportunities such as Restaurant Manager, Kitchen Director, Hotel Manager, and Catering or Event Director. Potential employers include hotels, resorts, restaurants, entertainment, travel, and tourism establishments. Skills in hospitality education are also highly transferable to other service and management positions.⁶⁴

CABRILLO COLLEGE (APTOS, CALIFORNIA)

Associate of Science (AS) Degree in Culinary Arts and Hospitality Management

As previously demonstrated, it is quite common for two-year colleges to offer degree programs for culinary arts or hospitality management separately as they have different training focuses. However, several colleges nationwide, including Cabrillo College in California, offer combined degrees in culinary and hospitality studies.

⁶² "Tuition and Fees 2013-2014." *Central Arizona College*.

http://www.centralaz.edu/Home/Admissions/Paying_for_College/Tuition_and_Fees_13-14.htm

⁶³ "Culinary Arts Degree and Certificates." *Central Arizona College*.

http://www.centralaz.edu/Home/Academics/Divisions_and_Programs/Culinary_Arts/CUL_Degree_and_Certificates.htm

⁶⁴ "Hotel and Restaurant Management Program." *Central Arizona College*.

http://www.centralaz.edu/Home/Academics/Divisions_and_Programs/Business_Division/Hotel_Restaurant_Management.htm

Cabrillo College's AS Degree in Culinary Arts and Hospitality Management provides students with knowledge of fundamental cooking theory, food sanitation, menu design, management supervision, and food costing. The program aims to equip students with skills to produce consistent quality restaurant lunch and dinner dishes, banquet meals, and bakery products in a timely fashion.⁶⁵ Besides classroom learning, students are also exposed to hands-on labs, student-operated restaurant, and catering facilities in the College's Sesnon House.⁶⁶

ADMISSIONS CRITERIA

Cabrillo College is open to anyone 18 years of age or older, or anyone with a high school diploma or proficiency certificate. A person 18 years of age or older who is not a high school graduate will be admitted to the College to pursue general education or to enroll in a specialized vocational program. A student may prepare for transfer to a four-year college or university without the high school diploma. All non-high school graduates should request special counseling from the Counseling Division. High school students also may attend classes at Cabrillo on a limited basis with the permission of their high school principals. Students under 18 years of age may also attend if they have graduated from high School or have a GED or are enrolled in one of our High School coordination programs.⁶⁷

GRADUATION REQUIREMENTS

Graduation of Cabrilloe College requires successful completion of a major, electives, and general education requirements in the fields of communication, critical thinking and information competency, global awareness, and personal responsibility and professional development. Students working toward an AS degree are required to earn 60 degree applicable unites and have grades of A, B, C, or P (pass). Courses that count toward the Math and English competencies must be completed with a "C" or better. All degree requirements, including general education, must be completed with an overall grade point average of 2.0 or better. At least 12 of the required 60 semester units must be completed in residence at Cabrillo College.⁶⁸

Figure 3.16 below displays all the course requirements for the completion of this combined degree in culinary arts and hospitality management. To graduate, students are required to complete 21 units of AS General Education, 31 units of Core Courses, and eight units of Approved Electives.

⁶⁵ "Culinary Arts and Hospitality Management." *Cabrilloe College Catalog 2012-2013*.
<http://www.cabrillo.edu/publications/catalog/current/departments/cahm.pdf>

⁶⁶ "Culinary Arts and Hospitality Management Brochure." *Cabrilloe College*.
<http://www.cabrillo.edu/publications/brochures/cul.pdf>

⁶⁷ "Admission and Registration." *Cabrilloe College Catalog 2012-2013*.
<http://www.cabrillo.edu/publications/catalog/current/wrap/admissions.pdf>

⁶⁸ "Degree, Graduation, & Transfer Information." *Cabrilloe College Catalog 2012-2013*.
<http://www.cabrillo.edu/publications/catalog/current/wrap/programinfo.pdf>

Figure 3.16: Curriculum Requirements for AS in Culinary Arts & Hospitality Management

AREA	COURSEWORK AND CREDIT HOURS	
General Education Requirement Areas	<ul style="list-style-type: none"> ▪ English Language, Communication and Critical Thinking ▪ Scientific Inquiry 	<ul style="list-style-type: none"> ▪ Arts and Humanities ▪ Social Sciences ▪ Lifelong Learning and Self-Development
Core Course	<ul style="list-style-type: none"> ▪ Introduction to Hospitality Management (3) ▪ Introduction to Culinary Arts Basics (1) ▪ Introduction to Entree Preparation and Service (1) ▪ Introduction to Appetizers and Baking Preparation(1) ▪ Introduction to Culinary Arts Lab (2) 	<ul style="list-style-type: none"> ▪ Catering and Beverage Operations (2) ▪ CAHM 64 Sanitation and Hygiene(2) ▪ Advanced Culinary Arts (9) ▪ Basic Baking and Pastry (3) ▪ Catering and Beverage Operation Lab (3) ▪ Purchasing and Food Cost (2) ▪ Food Service Management (2)
Approved Electives	<ul style="list-style-type: none"> ▪ Nutrition (3) ▪ Cake Decorating (1) ▪ Garde Manger (2) ▪ Chocolate (1) ▪ Meat Cutting and Sausage Making (3) ▪ Bread Making (1–2) ▪ Cultural and Ethnic Foods (2) ▪ Advanced Baking and Pastry (3) ▪ Commercial Baking II (6) ▪ The Art of Creating Wedding Cakes (1) ▪ Wine and Wine Service (2) ▪ Sensory Evaluation of Wine Varietals (1) 	<ul style="list-style-type: none"> ▪ World Wines (1–2) ▪ History and Practice of Sauces (1–2) ▪ Basic Winemaking (2) ▪ Basic Wine Grape (2) ▪ Wine Marketing and (1) ▪ Wines of California (3) ▪ Career Work Experience Education(1–4) ▪ Introduction to Accounting: Bookkeeping Concepts (4) ▪ Business Mathematics (3) OR Elementary Algebra (5)

Source: Cabrilloe College Catalog 2012-2013

TUITION RATES

The tuition charges at Cabrilloe College are based on credit hours completed and students’ residential status. For spring2013, the tuition charge per unit is \$77 for Californian residents and \$277 for out of state residents. Additional fees may apply.⁶⁹

CAREER OPPORTUNITIES

Many graduates of the AS Degree in Culinary Arts and Hospitality Management work in restaurants and hotels as cooks, servers, chefs, and managers. Career options generally include chef, resort or hotel manager, restaurant owner, caterer, personal chef, food scientists, food photographer, food stylist, travel writer, and restaurant critic.⁷⁰

⁶⁹ “Fees.” *Cabrilloe College*. <http://www.cabrillo.edu/services/ar/fees-fallspring.html>

⁷⁰ “Culinary Arts and Hospitality Management Brochure.” Op.cit. p1

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