Credentials of Opportunity
Better jobs, better employment & better outcomes for Indiana

Technical Assistance Guide
Purpose of the Report

The purpose of this report, funded by Lumina Foundation for Education, was to help develop national criteria to evaluate best practices concerning sub-baccalaureate credential programs, financial aid and state policies. We have evaluated the public credential programs in Indiana according to a rubric designed to rate the programs’ economic and career value. The rubric is composed of the following criteria:

**Wages:** The credential must lead to employment that pays self-sufficient wages. Usually we measure self-sufficiency according to our state’s Self-Sufficiency Standard. However, in this study, the “self-sufficient” wage has been set at Indiana’s median individual earnings calculated for 2011 by the U.S. Census Bureau’s American Community Survey. This annual wage is $27,618. We examined whether credential programs led to this wage either at the entry-level or at the median wage in career paths attached to the credential.

**Career Development:** The credential must lead directly to a postsecondary degree pathway (Associate’s or Bachelor’s) OR lead to professional licensing required for employment, OR an industry-recognized exam. This determination was made using primary data from the colleges and universities and from the State Professional Licensing Board.

**Job Opportunities:** The certificate must be linked to employment in a career field that is either stable or predicted to grow in size. Forecasts from the Indiana Department of Workforce Development (DWD) and from the US Department of Labor were used in conjunction with other research reports on workforce development. Specifically, we looked for links between credential programs and jobs on the DWD’s Hoosier Hot 50 Jobs statewide list, as well as, 11 regional ‘Hoosier Hot 50’ lists.

We wanted to know whether the credential programs in our state lead to good opportunities for low-income adults (along with their families) to become economically self-sufficient, and whether or not those programs were supported through our state’s financial aid system. To determine this we used these criteria to create an analytic rubric to evaluate each credential based on the factors described above.

Purpose of the Technical Assistance Guide

We think that taking this deep look at the credentials offered in your state is important, not only to better understand the landscape of credentials in your state, but also to begin discussions to provide further research-based evidence and policy recommendations meant to increase middle skill attainment.
Unfortunately not all of the information that we needed to perform our analysis was available in our state. As a result we had to make some adjustments along the way. What follows is a combination of narration and methodology of how we collected our data and arrived at our findings. The final results of these findings have led to a better understanding of the credentials our state offers, and what benefits those credentials offered to students, employers, and the state as a whole.

There were some twists and turns along the way, and all the solutions to potential pitfalls might not be included in this technical assistance manual. We may have been able to reach a solution that doesn't work in your state, and you may have to seek out another answer. Regardless of the amount of information available from your state, we hope you find what follows to be a useful guide in navigating state level data related to credential programs and the possible outcomes to which they lead. Additionally, what follows is by no means the best way to do this research or the only way to do this research, it is merely a collection of tips, tricks, steps, and sources to get you started.

The Path We Took

The very first step was determining what data was available in our state already and whether or not our state’s “longitudinal data system” would be able to provide us with the data we needed to do the evaluation that we wanted. In the case of Indiana, the longitudinal data system, while quite sophisticated, was not able to get to the heart of what we were trying to determine. This should still be your first step as there is no reason to recreate the wheel. The State Higher Education Executive Officer’s Association has put together a very helpful report that can get you started if you are not familiar with your state’s data system. You will want to verify information as this report was published in 2010. Here is some of the information that is available for each state:

Figure 1: A Snapshot of The State of State Postsecondary Data Systems


Appendix A and B contain web links and contact information for all of the State Higher Education Offices across the country. Contacting these offices should help you find information that you need to explore the possibilities provided by your state’s data system.
The Certificates

Getting a good, reliable list of credential programs from our state’s public colleges and universities was the next step. We wanted to make sure that our list was as comprehensive as possible. We did not want to leave any stone unturned, or make any incorrect assumptions about a program, so we decided that it was best to go directly to the source and enlist the institutions themselves in providing us with the most up to date list of programs. In most cases, the right place to start was the Provost for Academic Affairs, who became our primary point of contact at the university and who could help navigate the various university departments in order to get us the best information. In the case of our community college system we also reached out to their Department of Workforce Education, to ensure that we were capturing all non-credit and apprenticeship programs as well. We asked them to provide us with the following data points:

- Name of certificate/certification/apprenticeship program;
- Whether the program was credit bearing;
- Whether the program was eligible for financial aid;
- And whether the program could be “stacked” into a higher degree program.

An important piece of this part of the data collection was the Memorandum of Understanding (MOU) that we entered into with each university and college. We truly wanted them to be invested in the report and its outcomes. We wanted them to feel engaged and part of the process. In the MOU, they agreed to help us compile the data and in turn we would verify the data with them once we had filled in all the variables and grant them an opportunity to provide feedback on the report prior to its release. A sample of the MOU we came up with is found in Appendix C.

The Jobs

Connecting a credential to a possible job became a subjective process in the absence of primary-level data from a statewide data system. We gathered research from the universities about the job titles that alumni of various programs were reporting and used that to start the list. Some schools had jobs listed as part of promotional materials and program descriptions; others had actual data about the placement of alumni. Also, for many of the non-credit programs, information was available from the industry about what jobs nationally-recognized certifications could lead to. This information was the start of connecting jobs to credentials. No data existed for Indiana that could directly connect the credentials to the jobs. We started by recording all of the possible job information that we retrieved from the institutions and then went through a process of verifying the information with educational attainment data.
Determining Educational Attainment level

Sources:

The OOH is the nation’s premier source for career information, containing profiles on hundreds of occupations and describing ‘What They Do’, the ‘Work Environment’, ‘How to Become One’, ‘Pay’, and more. Each profile also includes BLS employment projections for the 2010–20 decade.

- O*Net Online: http://www.onetonline.org/
The Occupational Information Network (O*NET) is being developed under the sponsorship of the US Department of Labor/ Employment and Training Administration (USDOL/ETA) through a grant to the North Carolina Employment Security Commission. The O*NET database contains information on hundreds of standardized occupations and is continually updated by surveying a broad range of workers from each occupation. Information from this database forms the heart of O*NET OnLine, an interactive application for exploring and searching occupations.

- Career One-Stop/ America’s Career Infonet: http://www.careerinfonet.org/
Career OneStop/America’s Career Infonet, is a tool similar to the others in terms of occupation data. Its value is in its presentation of state-level data. The website is sponsored by the United States Department of Labor.

Any one of these sources would be sufficient to this decision-making process, but because this was arguably the most subjective piece of our research, and the most important to get right, we used all three. In a separate database we listed the UNIQUE jobs that we had attributed to each credential and collected educational attainment data from all three sources and then took the balance of that information into account when choosing whether or not to connect a credential to the specific job. Credential programs were not listed out by name, as they are all called something different, from state to state and from school to school, but what we could find was the educational attainment breakdown of workers in that job classification. O*Net gave us the national data regarding education requirements and the disbursement of education levels among workers in the field. As you can see in Figure 2, it also gave us leads into related jobs that may be connected to our certificates. Finally O*Net linked us to Career One Stop which is where we found the state level figures on educational attainment.

Figure 2: Sample of O*Net Online Search Results, “Dental.”

<table>
<thead>
<tr>
<th>Relevance Score</th>
<th>Code</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>31-9091.00</td>
<td>Dental Assistants</td>
</tr>
<tr>
<td>99</td>
<td>51-9081.00</td>
<td>Dental Laboratory Technicians</td>
</tr>
<tr>
<td>91</td>
<td>29-2021.00</td>
<td>Dental Hygienists</td>
</tr>
<tr>
<td>90</td>
<td>29-1021.00</td>
<td>Dentists, General</td>
</tr>
<tr>
<td>68</td>
<td>29-1023.00</td>
<td>Orthodontists</td>
</tr>
<tr>
<td>66</td>
<td>29-4024.00</td>
<td>Periodontists</td>
</tr>
</tbody>
</table>

Source: O*Net Online: http://www.onetonline.org/
For more examples of the data found on O*Net Online and Career One Stop see Appendix D.

The educational requirement information was also collected from the Occupational Outlook Handbook, examples of this data also appear in Appendix D. Collecting all three of these data points turned out to be crucial, as for some occupations data was missing from one of the sources, giving us the other two to draw conclusions from.

When listing jobs in the database we also listed each jobs Standard Occupational Classification code (SOC Code). This enabled us to be sure we were always identifying job classifications accurately across data sets. Once the jobs were connected to the credential we need to evaluate the value of the job. See Figure 2 above for some examples of SOC codes.

**Determining if a Job is “In-Demand”**

In Indiana, the Department of Workforce Development puts out a Hoosier Hot 50 Jobs list of high-wage, high-demand jobs. This list is prepared both statewide and for each of our 11 economic growth regions. We used these lists to fill in the “in-demand” variable in our database. Your state’s Department of Workforce Development (or equivalent) may publish similar data for your state, or be able to put a report together for you. That department would be the best starting point for good state level data on job demand.

**Figure 3: The Hoosier Hot 50 Jobs List**

Source: [https://netsolutions.dwd.in.gov/hh50/](https://netsolutions.dwd.in.gov/hh50/)
The Department of Labor has put together a document in both PDF and Word Format that lists the state and local employment projections. It can be accessed at this link: http://www.doleta.gov/business/projections/docs/internetlinks.pdf

If your state doesn’t collect or report such data there are other sources you can use. For example, Career InfoNet has a few great lists that can be retrieved by state:

- ‘Top 50 Fastest-Growing Occupations’ (shown in the link below for Indiana). http://www.careerinfonet.org/oview1.asp?next=oview1&Level=Overall&optstatus=&jobfam=&id=1&nodeid=3&soccode=&ShowAll=&stfips=18

- ‘Top 50 Occupations with the Most Job Openings’ (shown in the link below for Ohio). http://www.careerinfonet.org/oview2.asp?next=oview2&Level=Overall&optstatus=&jobfam=&id=1&nodeid=4&soccode=&ShowAll=&stfips=39

For more information on how to access these sources see Appendix E.

### Determining if a Job Requires a Professional License

To gather this information we reached out to our state’s professional licensing board and to the state Bureau of Motor Vehicles (BMV); the BMV should be able to tell you which jobs require a commercial driver’s license. Both organizations were able to give us a list of the professions that require state licensing or commercial driver’s licenses respectively.
Analyzing the Data

We used Microsoft Access to analyze the database. There are many other programs that can do the analysis as well, for example, SPSS, Stata, and even Excel is capable of doing most of the analysis that you are likely to need.

The program you use and the types of queries you build will depend on what you include in your database and what your research questions are, for that reason we are not going to show the queries that were used to analyze our data, for more detailed information on those please contact Jessica Fraser, Program Manager, at jfraser@incap.org. One word of caution, because certificates may have many lines of data due to having multiple jobs attributed to them, you will have to be cautious about duplication when analyzing the data. If the question you are trying to answer is “How many certificate programs are eligible for financial aid?” You will need to take steps to create an unduplicated list for the purposes of answering that question.

Here are some of the questions we tried to answer by analyzing our database:

• Number of credentials leading to Jobs that paid an adequate entry-level wage;
• Number of credentials leading to Jobs that paid an adequate median level wage;
• Total number of job opportunities that could be connected to our state’s credential program;
• Number of credentials that lead to jobs that pay good wages AND are “in-demand;”
• Number of credentials that lead to jobs that pay good wages and are NOT eligible for financial aid;
• Number of credentials that lead to jobs that are “in-demand” and are NOT eligible for financial aid.
• A “ranking” of credentials with checkmarks indicating the data in that field met our criteria, i.e. wage above $27,618, on the in-demand jobs list, lead to a post-secondary education career pathway, and so on.

These are just to name a sampling of the data we tried to derive from the database. The “Findings and Recommendations” section of the report I is located in Appendix F.

Appendix A: State Education Agencies

- **Alabama**
  State Education Department - Alabama State Department of Education
  State Higher Education Agency - Alabama Commission on Higher Education

- **Alaska**
  State Education Department - Alaska Department of Education
  State Higher Education Agency - University of Alaska Board of Regents

- **Arizona**
  State Education Department - Arizona Department of Education
  State Higher Education Agency - Arizona Commission for Postsecondary Education

- **Arkansas**
  State Education Department - Arkansas Department of Education
  State Higher Education Agency - Arkansas Department of Higher Education

- **California**
  State Education Department - California Department of Education
  State Higher Education Agency - California Postsecondary Education Commission

- **Colorado**
  State Education Department - Colorado Department of Education
  State Higher Education Agency - Colorado Commission on Higher Education

- **Connecticut**
  State Education Department - Connecticut State Education Department
  State Higher Education Agency - Board of Regents for Higher Education

- **Delaware**
  State Education Department - Delaware State Department of Education
  State Higher Education Agency - Delaware Higher Education Commission

- **Washington D.C.**
  State Education Department - D.C. Public School Systems

- **Florida**
  State Education Department - Florida Department of Education
  State Higher Education Agency - Florida Board of Governors

- **Georgia**
  State Education Department - Georgia Department of Education
  State Higher Education Agency - University System of Georgia
• Hawaii
State Education Department - Hawaii State Department of Education
State Higher Education Agency - Hawaii Board of Regents

• Idaho
State Education Department - Idaho State Department of Education
State Higher Education Agency - Idaho State Board of Education

• Illinois
State Education Department - Illinois State Board of Education
State Higher Education Agency - Illinois Board of Higher Education

• Indiana
State Education Department - Indiana Department of Education
State Higher Education Agency - Indiana Commission for Higher Education

• Iowa
State Education Department - Iowa Department of Education
State Higher Education Agency - Iowa College Student Aid Commission

• Kansas
State Education Department - Kansas State Department of Education
State Higher Education Agency - Kansas Board of Regents

• Kentucky
State Education Department - Kentucky Department of Education
State Higher Education Agency - Kentucky Council on Postsecondary Education

• Louisiana
State Education Department - Louisiana Department of Education
State Higher Education Agency - Louisiana Board of Regents

• Maine
State Education Department - Maine Department of Education
State Higher Education Agency - University of Maine System

• Maryland
State Education Department - Maryland State Department of Education
State Higher Education Agency - Maryland Higher Education Commission

• Massachusetts
State Education Department - Massachusetts State Department of Education
State Higher Education Agency - Massachusetts Board of Higher Education

• Michigan
State Education Department - Michigan Department of Education
• Minnesota
State Education Department - Minnesota Department of Education
State Higher Education Agency - Minnesota Higher Education Services Office
Minnesota State Colleges and Universities

• Mississippi
State Education Department - Mississippi State Department of Education
State Higher Education Agency - Mississippi Institutions of Higher Learning

• Missouri
State Education Department - Missouri Elementary and Secondary Education
State Higher Education Agency - Missouri Department of Higher Education

• Montana
State Education Department - Montana Office of Public Instruction
State Higher Education Agency - Montana Board of Regents

• Nebraska
State Education Department - Nebraska Department of Education
State Higher Education Agency - Nebraska Coordinating Commission for Postsecondary Education

• Nevada
State Education Department - Nevada Department of Education
State Higher Education Agency - University and College System of Nevada

• New Hampshire
State Education Department - New Hampshire Department of Education
State Higher Education Agency - University System of New Hampshire

• New Jersey
State Education Department - New Jersey Department of Education
State Higher Education Agency - New Jersey Commission on Higher Education

• New Mexico
State Education Department - New Mexico State Department of Education
State Higher Education Agency - New Mexico Commission on Higher Education

• New York
State Education Department - New York State Department of Education
State Higher Education Agency - NYSED Office of Higher Education

• North Carolina
State Education Department - North Carolina State Department of Education
State Higher Education Agency - College Foundation of North Carolina
• North Dakota  
State Education Department - North Dakota Department of Education  
State Higher Education Agency - North Dakota University System (NDUS)

• Ohio  
State Education Department - Ohio Department of Education  
State Higher Education Agency - Ohio Board of Regents

• Oklahoma  
State Education Department - Oklahoma State Department of Education  
State Higher Education Agency - Oklahoma State Regents for Higher Education

• Oregon  
State Education Department - Oregon Department of Education  
State Higher Education Agency - Oregon State System of Higher Education

• Pennsylvania  
State Education Department - Pennsylvania Department of Education  
State Higher Education Agency - Pennsylvania State System of Higher Education

• Rhode Island  
State Education Department - Rhode Island State Department of Education  
State Higher Education Agency - Rhode Island Board of Governors for Higher Education

• South Carolina  
State Education Department - South Carolina Department of Education  
State Higher Education Agency - South Carolina Commission on Higher Education

• South Dakota  
State Education Department - South Dakota Department of Education and Cultural Affairs  
State Higher Education Agency - South Dakota Board of Regents

• Tennessee  
State Education Department - Tennessee State Department of Education  
State Higher Education Agency - Tennessee Higher Education Commission

• Texas  
State Education Department - Texas Education Agency  
State Higher Education Agency - Texas Higher Education Coordinating Board

• Utah  
State Education Department - Utah Office of Education (K-12)  
State Higher Education Agency - Utah System of Higher Education

• Vermont  
State Education Department - Vermont State Department of Education  
State Higher Education Agency - Vermont State College System
• **Virginia**
  State Education Department - Virginia Department of Education
  State Higher Education Agency - State Council of Higher Education for Virginia
  Virginia Community College System (VCCS) - Virginia Community College System

• **Washington**
  State Education Department - Office of Superintendent of Public Instruction
  State Higher Education Agency - Washington State Higher Education Coordinating Board

• **West Virginia**
  State Education Department - West Virginia Department of Education
  State Higher Education Agency - West Virginia Higher Education Policy Commission

• **Wisconsin**
  State Education Department - Wisconsin Department of Public Instruction
  State Higher Education Agency - University of Wisconsin System Administration

• **Wyoming**
  State Education Department - Wisconsin State Department of Education
  State Higher Education Agency - University of Wyoming
Appendix B: State Higher Education Agency Contacts

**Alabama**
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Indiana Institute for Working Families

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www.highered.nysed.gov/

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wsac.wa.gov

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Fax: (304) 558-5719
chancellor@hepc.wvnet.edu
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Fax: (608) 262-3985
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www.wisconsin.edu/

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Fax: (307) 777-6567
jrose@commission.wcc.edu
www.communitycolleges.wy.edu

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**Thomas Buchanan,** President
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Laramie, Wyoming 82071
Telephone: (307) 766-4121
Fax: (307) 766-4126
tombuch@uwyo.edu
www.uwyo.edu/

Source: [http://www.sheeo.org/agencies.asp](http://www.sheeo.org/agencies.asp)

State Higher Education Officers Association

The State Higher Education Executive Officers (SHEEO) is a nonprofit, nationwide association of the chief executive officers serving statewide coordinating boards and governing boards of postsecondary education. SHEEO was created in 1954 by the executive officers of nine of the ten statewide higher education boards then in existence. SHEEO’s current members are the chief executive officers serving 28 statewide governing boards and 29 statewide coordinating boards of higher education.
Appendix C: MOU with University/College Partners

YOUR GROUP

And

UNIVERSITY OF XX

University Of XX (herein called the “University”) and YOUR GROUP (herein called the “GROUP”) enter the following Memorandum of Understanding (herein called the “MOU”) and for the terms of which WITNESS THE FOLLOWING:

WHEREAS YOUR GROUP has received funding from FOUNDATION XX to evaluate credential programs in YOUR STATE.

WHEREAS YOUR GROUP will publish a report looking at credentials, which credentials are eligible for financial aid, and examine whether credential programs serve as a gateway to higher education, higher wages, and or better economic opportunity; and

WHEREAS the University intends to fully cooperate and assist YOUR GROUP in this project.

NOW THEREFORE, the parties to this Memorandum of Understanding mutually agree as follows:

1. UNIVERSITY TO DELIVER PROGRAM LIST: The University agrees to provide to YOUR GROUP a listing of all certificate programs offered by the University. Of the listed certificate programs the University shall identify which programs qualify for state financial aid and which do not, which programs include or lead to an industry-recognized credentialing examination, and which can be applied to higher degree pathways.

2. REVIEW REPORT: Once YOUR GROUP has compiled the listing of the certificate programs of the University and other colleges and universities in Indiana, the University agrees to review a pre-published version of the report produced by YOUR GROUP to ensure accuracy.

3. STUDENT CONFIDENTIALITY & RECORDS: All rules regarding the records of students taking courses for University credit under this agreement shall comply with the University’s Academic Policies and Procedures Manual and Student Affairs Policies and Procedures Manual. In order to comply with the Family Educational Rights and Privacy Act (FERPA), all students enrolled in the program shall be required to complete a FERPA waiver form allowing parents/guardians to have access to their students’ records.
4. **INDEMNIFICATION OF PARTIES**: To the extent authorized by law, in consideration of the performance by both parties of this agreement, each party does hereby agree to indemnify and hold harmless all agents, servants, and employees of the other party from and against any and all claims, debts, from either (1) claimed or actual defects in premises owned or controlled by the other party and used in the performance of this agreement; or (2) any acts or omissions of the other party, its agents, servants, or employees, in the performance of this MOU controlled by the YOUR GROUP and used in the performance of this agreement; (2) any acts or omissions of YOUR GROUP, its agents, servants, or employees in the performance of this MOU.

5. **APPROVALS**:

**UNIVERSITY OF XX**

<table>
<thead>
<tr>
<th>NAME, TITLE</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**YOUR GROUP**

<table>
<thead>
<tr>
<th>NAME, TITLE</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D: Determining Educational Attainment

O*net OnLine: www.onetonline.org

In the search bar on the right type in part or all of an occupations title, then choose the occupation that you would like to learn more about.

Quick Search for:
Dental

Occupations matching "Dental"

The search results are listed in a rank order that is calculated on the relevance of the occupational title, alternate titles, description, tasks, and detailed work activities associated with the keyword you entered.

Select the Relevance Score to view the specific items matched by your search within the occupation.

<table>
<thead>
<tr>
<th>Relevance Score</th>
<th>Code</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>451</td>
<td>31-0091.00</td>
<td>Dental Assistants</td>
</tr>
<tr>
<td>92</td>
<td>51-0091.00</td>
<td>Dental Laboratory Technician</td>
</tr>
<tr>
<td>91</td>
<td>25-2021.00</td>
<td>Dental Hygienist</td>
</tr>
<tr>
<td>39</td>
<td>25-1021.00</td>
<td>Dentists, General</td>
</tr>
<tr>
<td>24</td>
<td>26-0231.00</td>
<td>Orthodontists</td>
</tr>
</tbody>
</table>

After you choose an occupation, a summary report will come up and you want to skip down to the Job Zone data.

Summary Report for:
31-0091.00 - Dental Assistants

Assist dentist, set up equipment, prepare patient for treatment, and keep records.

Sample of reported job titles: Dental Assistant, Registered Dental Assistant (RDA), Certified Dental Assistant (CDA), Expanded Duties Dental Assistant (EDDA), Orthodontic Assistant, Certified Registered Dental Assistant, Oral Surgery Assistant, Surgical Dental Assistant, Expanded Dental Assistant, Expanded Duty Dental Assistant.
In the Job Zone section you will see the jobs designated job zone of the occupation and what level of education that relates to generally. Just below this section, the Education section will show the distribution of educational attainment among the respondents of their nationwide survey.

<table>
<thead>
<tr>
<th>Job Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title</strong></td>
</tr>
<tr>
<td><strong>Education</strong></td>
</tr>
<tr>
<td><strong>Related Experience</strong></td>
</tr>
<tr>
<td><strong>Job Training</strong></td>
</tr>
<tr>
<td><strong>Job Zone Examples</strong></td>
</tr>
<tr>
<td><strong>SVP Range</strong></td>
</tr>
</tbody>
</table>

There is 1 recognized apprenticeable specialty associated with this occupation: Dental Assistant

To learn about specific apprenticeship opportunities, please consult the U.S. Department of Labor [State Apprenticeship Information](#) website. For general information about apprenticeships, training, and partnerships with business, visit the U.S. Department of Labor [Office of Apprenticeship](#) website.

<table>
<thead>
<tr>
<th>Education</th>
<th>Percentage of Respondents</th>
<th>Education Level Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>72%</td>
<td>Some college, no degree</td>
<td></td>
</tr>
<tr>
<td>14%</td>
<td>High school diploma or equivalent</td>
<td></td>
</tr>
<tr>
<td>7%</td>
<td>Associate's degree</td>
<td></td>
</tr>
</tbody>
</table>

State Level Educational Attainment Data from Career OneStop and America's Career Infonet:

### Wages & Employment Trends

**National**

- **Median wages (2011)** $15.42 hourly, $34,140 annual
- **Employment (2010)** 297,000 employees
- **Projected growth (2010-2020)** Much faster than average (29% or higher)
- **Projected job openings (2010-2020)** 154,000

**Top industries (2010)** [Health Care and Social Assistance](#)

### State & National

**Indiana**

- **State:** Indiana
- **National:**
  - Georgia
  - Hawaii
  - Idaho
  - Illinois

**Sources**

- Burea (2010-2020)
- [Back to top](#)
- [Go](#)

[Source: Bureau of Labor Statistics](#)

---

Credentials of Opportunity
On the Occupation profile select “Education & Training” and update:

Modify Occupation Profile Content:

- Wage Information
- Employment Trends
- Knowledge, Skills & Abilities
- Tasks & Activities
- Tools & Technology
- Education & Training
- Related Occupation Profiles
- Web Resources

Select or deselect profile options individually or use the Select All button below to change the report. To view the new results, select the Update button.

Select All  Update

Education and Training

Occupation: Dental Assistants
Typical education needed for entry: Postsecondary non-degree award
Typical work experience needed for a job in this occupation: None
Typical on-the-job training once you have a job in this occupation: None
Related Instructional Programs: Dental Assisting/Assistant

Distribution of Educational Attainment

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Percent of employees aged 25 to 44 in the occupation whose highest level of educational attainment is</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than high school diploma</td>
</tr>
<tr>
<td>Dental Assistants</td>
<td>3.5%</td>
</tr>
<tr>
<td>Other Healthcare Support Occupations</td>
<td>4.3%</td>
</tr>
<tr>
<td>Healthcare Support</td>
<td>5.9%</td>
</tr>
<tr>
<td>Total, All Occupations</td>
<td>10.4%</td>
</tr>
</tbody>
</table>

The results show the “typical” level of education and give a distribution of educational attainment for the workers in the occupation in our state. If at least 30 percent of workers in the field had less than an Associate’s Degree, then it could be feasible to get the job with only a credential.

Enter your search parameters and then click “How to Become One.” The results will show the Bureau of Labor Statistics analysis on the education requirements of the profession and will also, on occasion, discuss emerging education trends. This is particularly helpful if you are on the fence about whether or not a credential should be included.

### How to Become a Dental Assistant

There are several possible paths to becoming a dental assistant. Some states require assistants to graduate from an accredited program and possibly pass a state exam. In other states, there are no formal educational requirements. Dental assistants who do not have formal education in dental assisting may learn their duties through on-the-job training. The dentist or other dental assistants in the office teach the new assistant dental terminology, the names of the instruments, how to do daily tasks, how to interact with patients, and other activities necessary to help keep the dental office running smoothly. Most states regulate what dental assistants may do, but that varies by state.

#### Education

High school students interested in a career as a dental assistant should take courses in biology, chemistry, and anatomy. Some states require assistants to graduate from an accredited program and pass a state exam. Most programs take about 1 year to complete and lead to a certificate or diploma and are offered by community colleges. Two-year programs, also offered in community colleges, are less common and lead to an associate’s degree. The Commission on Dental Accreditation (CODA), part of the [American Dental Association](http://www.ada.org), approved more than 285 dental-assisting training programs in 2011.

Appendix E: Determining if a Job is “In-Demand”

Career InfoNet:
To get to the Top 50 Fastest Growing Occupations and the

1. Go to http://www.careerinfonet.org/
2. Click on “Occupation Information”
3. Scroll down and click on either the “Fastest Growing Occupations” or the “Occupations with the Most Openings.”
4. Your selection will come up for the country as a whole, simply choose the option to “Change State” and select your state from the list, see below, the example for Indiana.

<table>
<thead>
<tr>
<th>#</th>
<th>Occupation</th>
<th>Employment 2008</th>
<th>Employment 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Home Health Aides</td>
<td>12,900</td>
<td>19,730</td>
</tr>
<tr>
<td>2</td>
<td>Athletic Trainers</td>
<td>420</td>
<td>620</td>
</tr>
<tr>
<td>3</td>
<td>Financial Examiners</td>
<td>560</td>
<td>810</td>
</tr>
<tr>
<td>4</td>
<td>Personal Care Aides</td>
<td>12,780</td>
<td>18,440</td>
</tr>
<tr>
<td>5</td>
<td>Skincare Specialists</td>
<td>650</td>
<td>930</td>
</tr>
<tr>
<td>6</td>
<td>Occupational Therapy Aides</td>
<td>200</td>
<td>290</td>
</tr>
<tr>
<td>7</td>
<td>Physician Assistants</td>
<td>820</td>
<td>1,170</td>
</tr>
<tr>
<td>8</td>
<td>Physical Therapist Aides</td>
<td>780</td>
<td>1,080</td>
</tr>
<tr>
<td>9</td>
<td>Veterinary Technologists and Technicians</td>
<td>980</td>
<td>1,340</td>
</tr>
<tr>
<td>10</td>
<td>Massage Therapists</td>
<td>2,490</td>
<td>3,410</td>
</tr>
<tr>
<td>11</td>
<td>Dental Hygienists</td>
<td>4,000</td>
<td>5,450</td>
</tr>
<tr>
<td>12</td>
<td>Dental Assistants</td>
<td>5,840</td>
<td>7,950</td>
</tr>
<tr>
<td>13</td>
<td>Barbers</td>
<td>1,070</td>
<td>1,430</td>
</tr>
<tr>
<td>14</td>
<td>Medical Assistants</td>
<td>9,930</td>
<td>13,260</td>
</tr>
<tr>
<td>15</td>
<td>Geoscientists, Except Hydrologists and Geographers</td>
<td>330</td>
<td>440</td>
</tr>
<tr>
<td>16</td>
<td>Heating, Air Conditioning, and Refrigeration Mechanics and Installers</td>
<td>6,000</td>
<td>7,980</td>
</tr>
</tbody>
</table>
Appendix F: Findings and Recommendations

Our research found that Indiana currently has some laudable overlap between credentials and the skills that employers demand. However, in a significant portion of cases, credential programs that meet multiple criteria for career and economic development are currently not supported by state financial aid, even though they provide benefits such as immediate self-sufficiency through entry level wages, industry-recognized certification, or other pathways to sustainable careers.

A striking comparison in our data findings is the potential for credentials to provide students with adequate, self-sustainable wages. The most powerful credentials can help students get jobs that pay a self-sustaining wage at the entry level. Many more credentials give students an entry into careers that pay adequate median wages, meaning that they have a ladder to a self-sustaining wage.

The tables on the following page demonstrate credentials that are representative of the entry-level and median wage comparison:
## Credentials that lead to adequate median wages:

<table>
<thead>
<tr>
<th>School</th>
<th>Name of Certificate</th>
<th>Fin Aid Eligible</th>
<th>Hoosier Hot 50</th>
<th>Entry Level Wage</th>
<th>Median Wage</th>
<th>PSE Pathway</th>
<th>State License</th>
<th>I-R exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana State University</td>
<td>Piano Pedagogy Certificate</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indiana University</td>
<td>Sports Tourism Development CRT</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IUPUI</td>
<td>Paralegal Studies</td>
<td>Yes</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td>✔️</td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td>Ivy Tech</td>
<td>Alternative Fuels Certificate</td>
<td>Yes</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td>✔️</td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td>Purdue University</td>
<td>Organizational Leadership</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td>✔️</td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td>Purdue University North Central</td>
<td>Carpentry</td>
<td>Unknown</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vincennes University</td>
<td>Tractor-Trailer Driver Training Externship</td>
<td>Yes</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Credentials that lead to an adequate entry-level wage (and therefore an adequate median wage):

<table>
<thead>
<tr>
<th>School</th>
<th>Name of Certificate</th>
<th>Fin Aid Eligible</th>
<th>Hoosier Hot 50</th>
<th>Entry Level Wage</th>
<th>Median Wage</th>
<th>PSE Pathway</th>
<th>State License</th>
<th>I-R exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana State University</td>
<td>Medical Sales Certificate</td>
<td>No</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td>Indiana State University</td>
<td>American Humanics Certificate</td>
<td>No</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td>Indiana University</td>
<td>International Business PBS</td>
<td>Yes</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td>Ivy Tech</td>
<td>Apprenticeship Technology</td>
<td>Yes</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
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557 Indiana Credentials lead to 781 Job Titles.

Adequate ENTRY-LEVEL Wages

132  =  174
Credentials   Job Titles

132 credentials lead to 174 jobs with entry-level wages at or above the state median ($27,618).

Adequate MEDIAN Wages

412  =  582
Credentials   Job Titles

582 jobs obtained through a credential that pay an adequate median wage.

Adequate ENTRY-LEVEL Wages

22%

Other

74.5%

Adequate MEDIAN Wages

311  =  406
Credentials   Job Titles

311 credentials lead to 406 jobs that pay a low entry-level wage but lead to an adequate median wage.
Credentials are leading to jobs on the Indiana Hot 50 Job list.

Adequate ENTRY-LEVEL Wages

46 Credentials = 53 Hot Jobs

There are 53 career paths on the hot 50 (35 unique jobs on the hot 50) and that pay an adequate entry level wage. These 53 jobs can be obtained through 46 unique credentials.

Adequate MEDIAN Wages

181 Credentials = 220 Hot Jobs

There are 220 jobs on the hot 50 (74 unique entries) and that pay an adequate median wage. These 220 jobs can be obtained through 181 unique credentials.

CAREER PATHS

Job Counts: 450 credentials could be connected to ONE career path, of the remaining 109 credentials the average number of career paths was 3, the median was 2. 24% of credentials lead to more than one career path. There were 26 credentials that lead to more than 3 career paths each.

450 Credentials = One Career Path
450 credentials could be connected to ONE career path

24% Credentials > One Career Path
24% of credentials lead to more than one career path

109 Credentials = Three Career Paths
…of the remaining 109 credentials the average number of career paths was 3

26 Credentials > Three+ Career Paths
There were 26 credentials that lead to more than 3 career paths each
Credentials of Opportunity

Denied Financial Aid!

Indiana Hot 50 Jobs

62 Career Paths  0 Financial Aid

There are 62 career paths that are on the Hot 50 but the credential to obtain them is not currently eligible for Financial Aid.

Adequate Entry-level Wages

37 Career paths  0 Financial Aid

There are 37 career paths that pay an adequate entry level wage, but the credential to obtain them is not currently eligible for Financial Aid. These 37 jobs can be obtained through 22 unique credentials.

Leads to Post-Secondary Education/Self-Sustainability

98 Credentials  0 Financial Aid

98 credentials have a built-in pathway to further Post-Secondary education and lead to self-sustainability, but are currently not eligible for Financial Aid.

Leads to Career Development Test/Self-Sustainability

169 Credentials  0 Financial Aid

169 credentials lead to an Industry- Recognized Test for career development and lead to self-sustainability, but are currently not eligible for Financial Aid.
Recommendations

1. **Remove barriers to financial aid and provide support for credentials that lead to self-sufficiency**

   Perhaps the single most effective step that Indiana can take is to immediately remove barriers to students seeking to improve career prospects through credential and certification programs. Not only will this access lead students to economic self-sufficiency, it will help businesses fill the middle-skill jobs that make up the skills gap.

   We strongly encourage the state’s Commission for Higher Education to take our data findings to heart when considering which programs are worthy of dismissing the funding ban. A credential that earns even one ‘check’ means that that program has a demonstrated path to economic self-sufficiency and would thus be a strong candidate for state investment. However, the state and commission would be worthy of praise for prioritizing aid for credential programs that fulfill both student needs (such as adequate entry-level wages) and employer needs (such as jobs listed on the Hoosier Hot 50).

   Indiana would also be wise to consider how state investment can help community colleges provide programs that deliver the largest economic impact to students and employers. We agree with the Landscape study, which finds that “since community colleges may seek to offer noncredit workforce education to generate profit, states should support noncredit programs that are necessary but might not be offered to generate profit.”

   In addition, in order to become a leader in workforce development through credentials, Indiana will likely need to join the majority of states that use general funds to help support these programs. We recommend that Indiana adopt the model of general funds ‘bundled’ with college discretion that has been successful in other states.

2. **Provide comprehensive student services, from enrollment information, conducive scheduling and assistance with completion**

   Providing comprehensive student services, beginning with clear enrollment information through student support services and career counseling, would help alleviate the problem of non-completion. Two key strategies are to implement streamlined scheduling and institute student cohorts. Both will help older and non-traditional students adjust to educational culture, to accommodate their outside work and life responsibilities, and to encourage peer support.

   We also agree with the recommendations of the National Center for Higher Education Management Systems, who called for “improvements in retention, completion, and transfer rates for Ivy Tech students would serve to more effectively meet demand for college credentials of two-years and less, and educate many more students at a lower cost per degree. In addition, increasing the number of two-year and less credentials in STEM and health fields provide great value to the recipients of the awards and to the state with respect to filling jobs in high-demand fields and increased tax revenues.”

We reiterate several recommendations from our 2009 study on financial aid: in order to better serve adult students (which include many credential seekers), the state must “increase the availability of curriculum designs, supportive services, and program offerings” – including remedial course offerings; flexible, compressed formats; and offerings during evening and weekend sessions. “Additionally, offering supportive services, such as academic guidance counseling, academic supports (i.e., tutoring, time management, and study skills trainings) and career counseling, as part of a structured curriculum for adult students should help to increase persistence.”

3. Provide Pathways for Adult Learners to Re-Enter and Succeed in Higher Education

Make it easier for older adult learners to enroll, earn credit for previous learning and complete certificate programs that can lead to higher education completion goals. Strategies include “awarding credit for prior learning and improving the delivery of remedial/developmental education. Some of the more successful efforts to improve the delivery of remedial education to adults include the provision of remedial and college level work simultaneously so adults experience immediate progress toward a credential”.

4. Provide schools with incentives to make certificates more stackable & portable

Indiana colleges should be provided with incentives to make their certificate programs easier to carry over into degree-bearing programs. Make sure that all such programs count towards state attainment goals, including retroactively if students go on to complete further degrees and certifications.

Ivy Teach has provided a “crosswalk” from non-credit to credit programs since 1999, and provides a non-credit transcript upon request. Encouraging more institutions to provide crosswalks as a regular part of credential program offerings would help students know what further educational opportunities are available to them, potentially encouraging thousands of students to ‘stack’ their credentials into future degrees.

5. Provide consistent tracking information about credential programs and outcomes

Consistent tracking of credential programs and outcomes throughout the state will allow a better understanding about which programs are most successful. Currently, Ivy Tech tracks enrollments and completions, but cannot track certification outcomes.

Beyond helping students, colleges and state agencies better understand the effectiveness of credential programs, a robust tracking policy would help the state enact a Cross-Agency Credential Measurement (CACM) system. CACM would “collect aggregate credential attainment data from all state education and training programs, and… analyze if these investments are collectively producing the range of skilled workers needed to meet employer demand or to otherwise fill skills gaps documented by labor market or job openings data. CACM also allows a governor to establish a baseline of credential attainment, to set new goals for increased statewide postsecondary attainment, and to regularly measure and publicly report on the state’s progress toward those goals over time.”

In addition, we call for U.S. Census to differentiate credential attainment from their “some college, no degree” category.
Appendix A: Survey of State Policies Regarding Credentials and Financial Aid

In order to gauge the range of policies concerning credentials and financial aid, we sent the following five questions to representatives in all 50 states. We received responses from 25 states, with widely ranging answers. Here are several representative responses for each question:

Distinctions are made between short and longer-term certificates by way of the course requirements and other criteria.

1. How does your state define post-secondary certifications? Is a distinction made between short and longer-term certificates? How are your definitions and distinctions made?

“For program inventory purposes, post-secondary certificates are identified as: Certificate (curriculum of less than one year), Certificate (curriculum of one year but less than two years), Undergraduate Certificate (curriculum is at the undergraduate level), and Graduate Certificate (curriculum is at the Graduate level)”

“I’m not aware of a definition that defines post-secondary certifications.”

“I’ve reviewed this and it seems the focus of this query is policies governing the award of state-based financial aid. Since [our state] awards no need-based financial aid (and a relatively small amount of merit-based aid) it appears to me that your survey does not apply.”

“In response to the first question], please provide your operational definition of “postsecondary certificate programs”. Are these for-credit programs only, or do they include those offered as not-for-credit? Also, what is your definition of “Certificate” (versus “certification”) – does it align with CCA’s? Does your definition of “postsecondary” include non-degree granting programs offered by non-degree granting private vocational/career institutions?”

2. Are post-secondary certificates eligible for state-based financial aid in your state?

“Yes, as long as the student is enrolled full-time (minimum 12 hours) in a certificate program at an eligible institution.”

“Yes. The type of financial aid that can be used to pay for a certificate program depends on whether the program qualifies for federal Title IV aid or not.”

3. Is there a policy structure or rubric for granting financial aid for certificate programs in your state? Please explain the structure, rubric or alternate aid policy used.

“The [state] Grant and [state] programs make no distinction between certificate programs or degrees at our community and technical colleges. So there is no special policy structure geared towards certificate programs.”

“No.”
4. What are the criteria for student eligibility for certificate programs in your state (e.g. minimum credit hours, etc.)? Do these criteria differ from other post-secondary education financial aid eligibility?

“Students must meet eligibility criteria:

a. Complete the FAFSA
b. Demonstrate financial need
c. Be a [state] resident
d. US citizen or permanent resident
e. Not incarcerated
f. Not in default on a student loan
g. Registered for Selective Service
h. Enrolled in an approved certificate program

“Students pursuing a certificate program at an eligible postsecondary institution may be considered for state financial aid.”

“[Our state] has very little state-funded financial support for higher education.”

5. Are there any distinctive practices or policies regarding certificates in your state that might be useful in assembling national ‘best practices’ recommendations?

“[Our state] is heavily into local control. Our six community colleges each have their own governing board and there is no central coordinating body just for them (like a Board of Regents for a university).”

“I like the fact that we review eligible programs each year that best meet the needs of our state and that will contribute to our state economy to try and get the biggest bang out of our buck since the funding for this program is limited to about $5 million, which is split between both components of [state aid programs].”

As these responses suggest, there is very little standardization when it comes to state policies regarding credential programs and financial aid. A select few states gave well-defined, organized responses. But in the main, even the first question regarding local definitions frequently resulted in unknowns, ad-hoc descriptions and even confusion.

Responses from the states generally support the findings regarding from ‘Certificates Count’:

“Most certificate programs are eligible for most federal and state student financial aid programs. For overall Title IV eligibility, they must be accredited by an authority approved by the Department of Education and prepare students for gainful employment in a recognized occupation. For Pell Grant eligibility, programs must be at least 16 semester hours or their equivalency but programs of at least 8 semester hours are eligible for Title IV loans. Typically, state eligibility guidelines mirror the federal requirements, but this is not always the case and sometimes certificate programs are not eligible for state awards.”

1
Appendix B

All credential programs were matched to as many occupations as are applicable for the “connection to an occupation” variable using the following data:

a. Occupation ideas for each certificate came from course catalogs, certificate profiles, the Institution’s promotional materials, and keyword searches.

b. These potential occupations were assigned its appropriate SOC code and verified with the combined data provided by:

i. The Occupational Outlook Handbook, which lists educational requirements in its “How to Become One” section. The educational requirements listed in this section of the handbook were copied into a data-gathering spreadsheet, which was used to determine the appropriate score to attribute to each occupation. Some requirements are very clear, e.g., “A bachelor’s degree is required for this position.” Other scenarios were less clear, e.g., “for most workers a high school diploma is sufficient but employers are increasingly requiring some form of post-secondary education.”

ii. National data regarding the distribution at various levels of educational attainment was collected for each occupation from O*Net OnLine. “The O*NET program is the nation’s primary source of occupational information. Central to the project is the O*NET database, containing information on hundreds of standardized and occupation-specific descriptors. The database, which is available to the public at no cost, is continually updated by surveying a broad range of workers from each occupation. Information from this database forms the heart of O*NET OnLine, an interactive application for exploring and searching occupations. The database also provides the basis for our Career Exploration Tools, a set of valuable assessment instruments for workers and students looking to find or change careers.” This information provides a percentage of workers currently in the particular occupation at various levels of educational attainment. The percentage of workers falling in the Some College, No Degree (SCND) category was entered into our data-gathering spreadsheet.
1 Bosworth, Brian ‘Certificates Count: An Analysis of Sub-baccalaureate Certificates’ Commissioned by Complete College America, December 2010, Retrieved November 29, 2012
http://www.completecollege.org/path_forward/certificates_count_release/

2 Carnevale, Anthony P., Stephen J. Rose and Andrew R. Hanson ‘Certificates: Gateway to Gainful Employment and College Degrees’ Georgetown University Center on Education and the Workforce, June 2012, Retrieved November 29, 2012

3 Downing, Sarah, Jessica Fraser, Lisa Travis ‘Investing In Indiana’s Adult Workers: Increasing Financial Aid Opportunities’ Indiana Institute for Working Families, June 2009 , Retrieved November 29, 2012


http://ccrc.tc.columbia.edu/Publication.asp?UID=572

http://www.completecollege.org/docs/Time_Is_the_Enemy.pdf

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