INDIANA career guide 2007

skill pathways for your future

WorkOne

Letter From The Governor

Dear Friend:

In today's global economy, the skills and knowledge of Indiana's workers are critical to the state's economic success. For Indiana to compete on a global scale and achieve its full economic potential, we must increase the average wage of Hoosiers to at least the national average by 2020. And in order to earn more, Hoosiers must learn more.

As a result, we are redoubling our efforts to ensure that all Hoosiers better understand the skill levels and educational requirements necessary to succeed in the workforce of the 21st Century.

This new guide focuses attention on what we are calling "Skill Pathways", which illustrate how increased skill development and continued education can bring increased wages and greater job opportunities. This career guide highlights 10 basic skills employers seek in all candidates, for all types of occupations, and at all levels of employment. It will help you make informed choices as you contemplate your skills and career development.

Planning for one's future career requires a marathon effort, not a sprint, and we are hoping to provide a roadmap that will help guide you along the way. By choosing your own career pathway you will help build a better economic future for all Hoosiers.

Sincerely,

Mitch Daniels
Governor

CAREERS ARE **DEVELOPED, *NOT* CHOSEN**

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INDIANA career guide 2007

Welcome to Indiana's new Skill Pathways Career Guide. This Guide will provide information about job opportunities, employment prospects, and educational requirements. This Guide is based on skills important to obtaining a job in a high wage, high demand occupation.

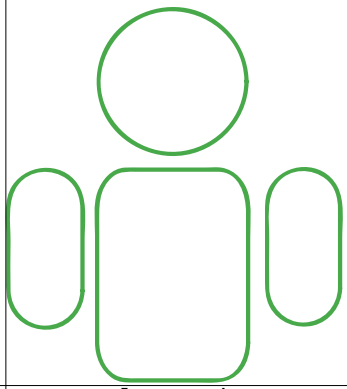
Career exploration is often tied to assessments of our interests and knowledge areas. Recent research has highlighted the increasing importance of skills, basic and otherwise. In fact, regardless of your previous education or work background, you may have developed skills in a variety of areas that will help you further your career, or find a new job in a different field.

This guide will illustrate how increased skill development and continued education brings increased wages and a greater number of job opportunities.

This guide will illustrate how increased skill development and continued education brings increased wages and a greater number of job opportunities. Finding the job that's right for you is a matter of realizing your current skill levels. This guide will point you in the right direction if you are ready to work, or looking for continued education and training. The information presented here will assist individuals investing in career preparation, planning for a career change, or offering guidance in career development. There also will be additional information and referral assistance at the end of the guide.

skill pathways

for your future



peoplepathway

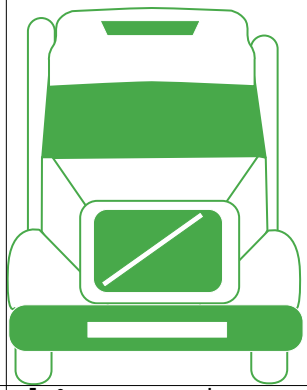
The People pathway deals with interaction, and values people skills:

- Coordination
- Instructing
- Monitoring
- Learning Strategies
- Negotiation
- Social Perceptiveness
- Persuasion
- Service Orientation
- Time Management

Many of the occupations in this pathway fall into the Health/Education, and Service industries. Yet there are some occupations from all industries which fall into this pathway and place a high value on these skills.

Some examples of People occupations include:

- Occupational Therapists
- Teachers
- Construction Inspectors
- Fire Fighters
- Registered Nurses



thingspathway

The Things pathway values the skills of:

- Equipment Maintenance
- Repairing
- Operation Monitoring
- Installation
- Troubleshooting
- Equipment Selection
- Operation and Control
- Quality Control Analysis

Many of these occupations may fall into the Manufacturing, Construction, or Health Care industries, but again, there are some occupations from other industries which value similar skills.

Some examples of Things occupations include:

- Laboratory Technologists
- Roofers
- Structural Iron and Steel Workers

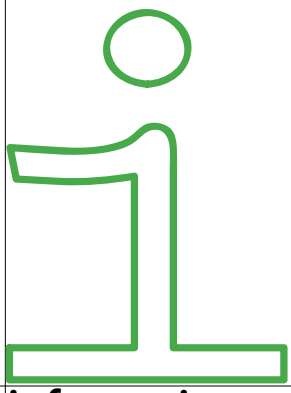
systemspathway

These skills are vital to a successful career in the Systems pathway

- Systems Evaluation
- Systems Analysis
- Management of Financial Resources
- Management of Personnel Resources
- Judgment and Decision Making

Systems Occupations can be found in all industries, yet a majority of them can be thought of as business, management, or finance occupations. Some examples of Systems occupations include:

- Cost Estimators
- Marketing Managers
- Database Administrators
- Construction Managers



informationpathway

To succeed along the information pathway, the following skills are necessary:

- Programming
- Technology Design
- Operations Analysis
- Complex Problem Solving

These are predominantly occupations within Information and Technology, yet to a smaller degree you will find occupations from other industries, such as Health Care, Engineering, and the Arts. Some examples of Information occupations include:

- Computer Software Engineers
- Network and Computer Systems Administrators
- Surgical Technologists
- Fine Artists

basic skills

There are 10 basic skills, which have proven to be important to your success at virtually any job you may seek. These are the skills employers are seeking in any candidate, for all types of occupations, and at all levels of employment.

Basic Skills: Developed capacities that facilitate learning or the more rapid acquisition of knowledge.

Active Learning - Understanding the implications of new information for both current and future problem-solving and decision-making.

Active Listening - Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Critical Thinking - Using logic and reasoning to identify the strengths and weakesses of alternative solutions, conclusions or approaches to problems.

Learning Strategies - Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.

Mathematics - Using mathematics to solve problems.

There are ten basic skills, which have proven to be important to your success at virtually any job you may seek.

Monitoring - Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Reading Comprehension - Understanding written sentences and paragraphs in work related documents.

Science - Using scientific rules and methods to solve problems.

Speaking - Talking to others to convey information effectively.

Writing - Communicating effectively in writing as appropriate for the needs of the audience.

computer skills

In the 21st Century world of work, computers are no longer specialized tools used only by scientists or engineers. Computer systems are everywhere, in every industry and in use by all types of workers. In a Career Guide which focuses on the value of skills, it is important to mention the significant role of computers, and other forms of technology.

Computer skills are becoming a basic fact of life for most workers. More and more jobs are demanding that workers become increasingly familiar with and comfortable using a wide range of computer applications. Increasing your level of computer literacy, and improving your technology skills can bring you increased employability and greater earnings potential. Regardless of your career choice, you will benefit from knowledge of computer hardware and software. There are some basic computer skills that are becoming increasingly important for all workers to know:

In the 21st Century world of work, computers are no longer specialized tools used only by scientists or engineers. Computer systems are everywhere, in every industry and in use by all types of workers.

1. Electronic Mail
2. Using the Internet
3. Word Processing Functions
4. Spreadsheet Functions
5. Presentation Software Functions

For more information on the types of computer skills you may need to succeed, check out: http://www.learn-source.com.

Training courses are available at a number of schools, community colleges, and continuing education programs. These courses help to familiarize new workers with basic computer skills they will use in any job. For a complete listing of Indiana schools: http://triptocollege.org/index.cfm.

high wage high demand Skills

The Skill Pathways in this guide were developed to highlight the importance of skills, and in particular, the additional 25 "differentiating" skills that are necessary to succeed in Indiana's high wage and high demand occupations. The following are skill sets used often in high wage, high demand occupations. **Complex Problem Solving, Resource Management, Social, Systems, and Technical skills**:

Complex Problem Solving Skill Set: Developed capacities used to solve novel, ill-defined problems in complex, real-world settings.

• ***Complex Problem Solving*** - Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Resource Management Skill Set: Developed capacities used to allocate resources efficiently.

• ***Management of Financial Resources*** - Determining how money will be spent to get the work done, and accounting for these expenditures.

• ***Management of Material Resources*** - Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.

• ***Management of Personnel Resources*** - Motivating, developing, and directing people as they work, identifying the best people for the job.

The Skill Pathways in this guide were developed to highlight the importance of skills, and in particular, the additional 25 "differentiating" skills that are necessary to succeed in Indiana's high wage and high demand occupations.

• ***Time Management*** - Managing one's own time and the time of others.

Social Skill Set: Developed capacities used to work with people to achieve goals.

• ***Coordination*** - Adjusting actions in relation to others' actions.

• ***Instructing*** - Teaching others how to do something.

• ***Negotiation*** - Bringing others together and trying to reconcile differences.

• ***Persuasion*** - Persuading others to change their minds or behavior.

• ***Service Orientation*** - Actively looking for ways to help people.

• ***Social Perceptiveness*** - Being aware of others' reactions and understanding why they react as they do.

Systems Skill Set: Developed capacities used to understand, monitor, and improve socio-technical systems.

• ***Judgment and Decision Making*** - Considering the relative costs and benefits of potential actions to choose the most appropriate one.

• ***Systems Analysis*** - Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.

• ***Systems Evaluation*** - Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.

Technical Skill Set: Developed capacities used to design, set-up, operate, and correct malfunctions involving application of machines or technological systems.

• ***Equipment Maintenance*** - Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.

• ***Equipment Selection*** - Determining the kind of tools and equipment needed to do a job.

• ***Installation*** - Installing equipment, machines, wiring, or programs to meet specifications.

• ***Operation and Control*** - Controlling operations of equipment or systems.

• ***Operation Monitoring*** - Watching gauges, dials, or other indicators to make sure a machine is working properly.

• ***Operations Analysis*** - Analyzing needs and product requirements to create a design.

• ***Programming*** - Writing computer programs for various purposes.

• ***Quality Control Analysis*** - Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

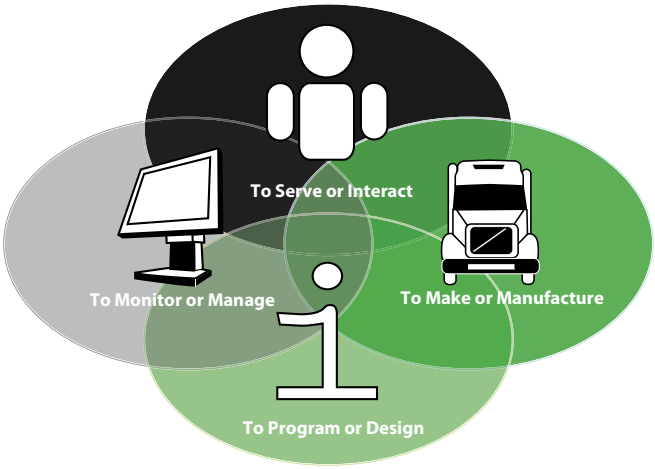
• ***Repairing*** - Repairing machines or systems using the needed tools.

• ***Technology Design*** - Generating or adapting equipment and technology to serve user needs.

• ***Troubleshooting*** - Determining causes of operating errors and deciding what to do about it.

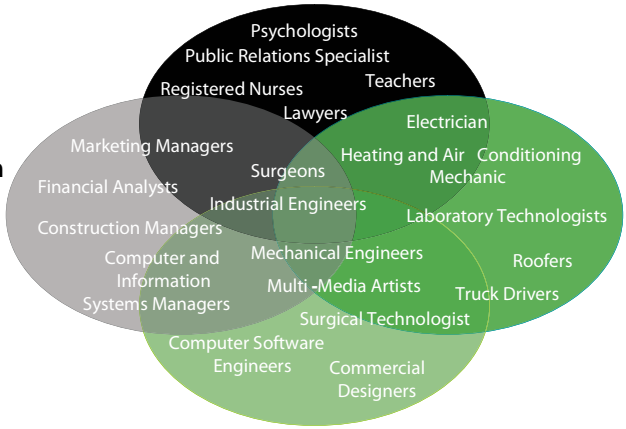
These 25 "high wage, high demand" skills are the basis for Indiana's new Skill Pathways. This work is tied to Indiana's Strategic Skills Initiative which is designed to create new jobs and raise Hoosier income through innovation and investing in human capital. Designed to emphasize skills that are transferable within the career pathways and across seemingly unrelated occupations and industries, the 25 "high wage, high demand" skills listed above have been grouped into four pathway areas. Each skill pathway is identified by the set of common skills that distinguish it from the others. The pathways contain occupations that are related by skills vital to job performance, regardless of the industry, field, educational requirements, or work experience that is typically tied to these occupations.

In today's diverse economic environment the four different skill pathways will often intersect.



Working with People
To Serve or Interact

Working with Systems
To Monitor or Manage



Working with Things
To Make or Manufacture

Working with Information and Concepts
To Program or Design

HOOSIER HOT 50 JOBS

This guide is focused on the skills necessary to compete in an ever changing workforce. Many of the occupations require four year degrees. There are, however, quite a few jobs that only require an associate's degree or less. Here's a listing of the Hoosier Hot Jobs that meet this criteria. If you would like more information on Hoosier Hot 50 Jobs go to, http://www.in.gov/dwd/hoosierhotjobs

HOOSIER HOT 50 JOBS that require an associate's degree or less.

Skill Pathway	Job Title	Wage
People	Registered Nurses	$49,067
People	Dental Hygienists	$59,055
People	Radiological Technologists and Technicians	$43,197
People	Paralegals and Legal Assistants	$35,160
People	Computer Support Specialists	$34,267
People	Physical Therapist Assistants	$42,452
People	Laboratory Technicians	$31,311
People	Respiratory Therapists	$42,850
Things	Heating/Air Conditioning Mechanics	$35,547
People	Fire Fighters	$37,175
People	Cement Masons and Concrete Finishers	$33,088
Things	Structural Iron and Steel Workers	$48,434
Information	Surgical Technologists	$35,483
Things	Bus and Truck Mechanics	$35,523
People	Legal Secretaries	$29,941
Systems	First -Line Supervisors/Managers of Construction	$51,047
Systems	First-Line Supervisors/Managers of Landscaping	$34,556

skill pathways people

The following is designed to help you carve your path to a career of your choice. If you feel the skills outlined below are some of your strongest you may be right for a career along the people pathway.

- Learning Strategies
- Instructing
- Social Perceptiveness
- Time Management
- Service Orientation
- Persuasion
- Monitoring
- Negotiation
- Coordination

Many of the occupations highlighted throughout this guide require some form of postsecondary education. Yet within each skill pathway, there are some jobs that may only require on-the-job training, or previous work experience. Many of these jobs may be entry level positions, and the wages may be lower. These jobs can be the building blocks to your professional development. Each job you hold will help you to develop new skills, and increase your employability. These jobs will help you gain the skills and experience that you need to achieve a higher paying occupation. These jobs may also help you earn money as you continue your education or seek additional training.

These are examples of entry level jobs within the People Pathway:

Receptionist
Waiters and Waitresses
Physical Therapist Aids
Child Care Worker
Food Server
Dental Assistants

Tamra Parrish

Learned more, now she earns more...

Tamra's Career Path

education level **Associate's Degree**

Registered Respiratory Therapist
People Skills

Ending Wage
$42,850*

education level **On-the-job Training**

Retail Sales Assistant Manager
People Skills

Retail Sales Associate
People & System Skills

Fast Food Worker, Floor Supervisor
People Skills

Starting Wage
$12,318*

* These wages are based on average hourly wages for similar occupations - the profiled person may have been paid hourly, and may have been working part-time.

skill pathways people

Tamra Parrish

When she was a student in high school, current Respiratory Therapist Tamra Parrish held jobs at McDonald's and Fazoli's.

"(Early jobs in the fast food industry)… really helped me prepare for my job in the medical field," she said. "You learn how to talk to people. You have to speak in terms that everyone can understand."

Customer service was heavily emphasized in the fast food industry. Parrish says that really benefited her later in life. She said it helped her become a better communicator to her patients.

"You learn to deal with people when they're angry and you have to keep your composure…" Reflecting on the skills she developed early on, "I think the customer service I learned in fast food really helped me. "You're always busy when you work in a fast food restaurant and that helps me now with time management. It got me ready for being busy."

Parrish also discovered working in fast food wasn't something she wanted to do for the rest of her life. "I wanted to get into something more stable. I went into the respiratory program at Ivy Tech. Employers know that good therapists come out of there."

"(Early jobs in the fast food industry) really helped me prepare for my job in the medical field," she said. "You learn how to talk to people. You have to speak in terms that everyone can understand."

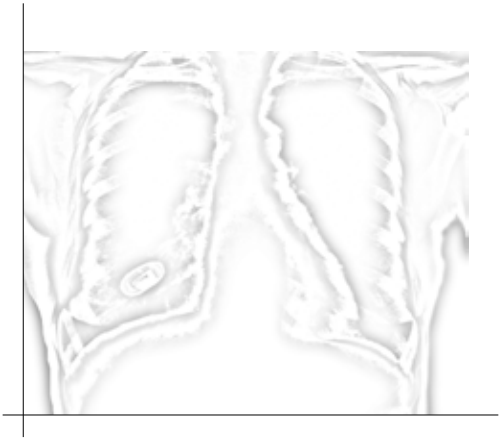
The respiratory field is one of the fastest growing occupations. "At our hospital we normally have two or three therapists working at a time. Their ages range from 20 years old to 60 years old. That's how it was when I was in school. Nobody is ever too old to go back to school. There were people in my class in their forties and their fifties."

"I think people are realizing that the respiratory therapy field is really booming. They decide that they don't want to do the factory work for the rest of their lives or that they want a career that is a little more challenging."

Respiratory therapy is a great second career choice for many Hoosiers.
"I see a lot of people come into this field as a second career choice," Parrish states. "There are a lot of people out there who think they are too old to go back to school or they aren't going to catch on. I have seen plenty of people that were much older than me get into this field and do a wonderful job with it."

A day in the life…
"You start off the day checking all of your orders and you have from eight to 20 patients. You check their oxygen level, give breathing treatments, give ventilator management and provide life support and everything that goes along with that. We go to cardiac and respiratory arrests and cover the emergency room. Everyone that comes through the door with a respiratory problem we see."

"There are a lot of people out there who think they are too old to go back to school or they aren't going to catch on. I have seen plenty of people that were much older than me get into this field and do a wonderful job with it."



skill pathways people

education level — Associate's Degree

Registered Nurses	Radiological Technologists	Dental Hygienists
$49,067	**$43,197**	**$59,055**
Respiratory Therapists		Physical Therapist Assistants
$42,850		**$42,452**

education level — Postsecondary Certificate

Real Estate Sales Agents	Mechanical Drafters	Gaming Supervisors
$29,338	**$40,977**	**$41,975**
Legal Secretaries		Skin Care Specialists
$29,941		**$34,283**

education level — On-the-job Training

Customer Service Representatives	Fire Fighters	Dental Assistants
$27,939	**$37,175**	**$29,354**
Pharmacy Technicians		Medical Assistants
$23,210		**$24,826**

basic skills &

The basic skills you need for most jobs:

- Active Learning
- Active Listening
- Critical Thinking
- Learning Strategies
- Mathematics
- Monitoring
- Science
- Speaking
- Reading Comprehension
- Writing

As you progress along your skill pathway you develop skills. When you learn more, naturally your value increases to employers thus you earn more.

education level **First Professional Degree**

Pharmacists	Lawyers	Dentists
$86,360	***$64,571***	***$135,686***
Surgeons		Veterinarians
$191,580		***$71,348***

education level **Master's Degree**

Instructional Coordinators	Mental Health Counselors	Clergy
$44,420	***$31,843***	***$37,117***
Speech-Language Pathologists		Physical Therapists
$52,839		***$61,339***

education level **Bachelor's Degree**

Physician Assistants	Industrial Engineers	Chemists
$66,111	***$61,530***	***$73,048***
Occupational Therapists		Civil Engineers
$56,080		***$57,152***

people skills

When you add the people skills to the basic skills you are able to advance your career along the people pathway.

These are the skills you will acquire as you learn more along the people pathway:

- Time Management
- Negotiation
- Service
- Social Perceptiveness,
- Instructing
- Persuasion
- Orientation
- Coordination

skill pathways things

The following is designed to help you carve your path to a career of your choice. If you feel the skills outlined below are some of your strongest you may be right for a career along the things pathway.

- Equipment Maintenance
- Repairing
- Operation Monitoring
- Troubleshooting
- Equipment Selection
- Operation & Control
- Installation and Quality Control Analysis

Often employees feel their entry level job is not gaining them experiences that their next job requires. The following set of jobs will help you to develop new skills, and increase your employability. These jobs will help you gain the skills and experience that you need to achieve a higher paying occupation. These jobs may also help you earn money as you continue your education or seek additional training.

These are examples of entry level jobs within the Things Pathway:

Landscaping workers
Janitors
Carpenter's Helper
Data Entry Keyers
Painters, Construction and Maintenance
Helpers--Production Workers
Industrial Truck and Tractor Operators

Dustin Allen

Learned more, now he earns more...

Dustin's Career Path

education level **Bachelor's Degree**

Owner/Manager
Systems and Things Skills
Ending Wage
$77,402*

Heating and Air Conditioning Specialist**
1st Line Supervisor
Things Skills

education level **On-the-job Training**

Sales Representative
People Skills

Bartender
People Skills

Heating and Air Conditioning Mechanic/Installer
Things Skills

Construction Laborer
Things Skills
Starting Wage
$21,620*

* These wages are based on average hourly wages for similar occupations - the profiled person may have been paid hourly, and may have been working part-time.
** Postsecondary Education not always required for this occupation.

skill pathways things

DustinAllen

Dustin Allen, the owner of a heating and air company keeps very busy. Allen's business installs duct work, furnaces, water heaters, air conditioners, heat pumps, geothermal systems and boilers.

"I love the freedom of this job and owning my own business," Allen said. "This is an industry that everybody needs regardless of the economy. If your heat or air goes out, you need to have it repaired."

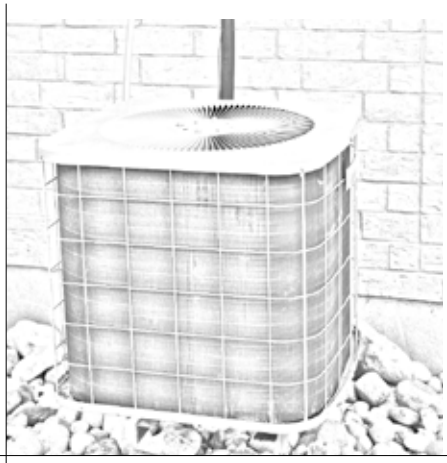
When he was in high school he worked part time in construction. Knowing more about how buildings are built really benefits him when he is installing a system. He also states that in this business, you have to be able to work well with people. Allen also developed his skills in a previous job in a supply house. That got him acquainted with the equipment that he works with everyday.

Allen mentioned that a person can be employed in this field with only a high school education.

However that wasn't good enough for him. He has a four-year degree in Architectural Engineering and Computer Drafting. "The education I received absolutely helped me to attain my future goals and gives me an advantage in this field," he says. "Being able to read the blueprints on a house

> "The education I received absolutely helped me to attain my future goals and gives me an advantage in this field"

that I am working on gives me an advantage. Someone who doesn't know how to do that could install a system in the wrong place. The skills I received in college makes me better qualified."



He adds that as every field is becoming more reliant on computers, some newer systems in homes and businesses are now centrally controlled by a computer. He says to stay competitive in this field you have to continually educate yourself in new technologies.

"If you don't continue to educate yourself then the person who does is going to be a step ahead of you."

"You have to deal with people on a daily basis. You can have a customer that might be aggravated because their system isn't working. You have to deal with them on the basis of doing the job right for them to make them happy. You have to be able to communicate well. This is an industry where you have to provide good service. If you don't get the return customers your business will struggle to survive. "

At the end of the day, Allen gets personal satisfaction in that he knows he has done a good job. "When I put a good, affordable system in a home or business, it is very satisfying to me. This is a good field for people to get into. It allows me to make enough money that I am very comfortable. In the past, I have helped out people that couldn't afford a system. I am glad that I make enough money in this business that I can occasionally help out the less fortunate."

"If you don't continue to educate yourself then the person who does is going to be a step ahead of you. "

skill pathways things

education level — Postsecondary Certificate

Automotive Mechanics **$27,939**	Aircraft Mechanics **$51,569**	Bus and Truck Mechanics **$35,523**
Mobile Heavy Equipment Mechanics **$36,934**	Office Machine Repairers **$35,301**	Medical Transcriptionists **$27,026**
Radio Mechanics **$37,828**		Sound Engineering Technicians **$35,315**

education level — On-the-job Training

Painters, Transportation Equipment **$30,588**	Telecommunications Line Repairers **$39,128**	Maintenance and Repair Workers **$31,894**
Medical Equipment Repairers **$37,330**	Data Entry Keyers **$25,213**	Electricians **$50,810**
Construction Laborers **$33,003**	Welders **$31,700**	Machinists **$36,222**

basic skills

The basic skills you need for most jobs:

- Active Learning
- Active Listening
- Critical Thinking
- Learning Strategies
- Mathematics
- Monitoring
- Science
- Speaking
- Reading Comprehension
- Writing

&

As you progress along your skill pathway you develop skills. When you learn more, naturally your value increases to employers thus you earn more.

education level First Professional Degree

Microbiologists

$65,399

education level Bachelor's Degree

Medical and Clinical Laboratory Technologists

$45,449

education level Associate's Degree

Agricultural Technicians

$34,167

Diagnostic Medical Sonographers

$51,073

Electrical Engineering Technicians

$47,942

Electro-Mechanical Technicians

$48,070

Forensic Science Technicians

$38,804

Environmental Engineering Technicians

$38,583

Semiconductor Processors

$29,936

things skills

When you add the things skills to the basic skills you are able to advance your career along the things pathway.

These are the skills you will acquire as you learn more along the things pathway:

- Equipment Maintenance
- Repairing
- Operation Monitoring
- Troubleshooting
- Equipment Selection
- Operation & Control
- Installation and Quality Control Analysis

skill pathways systems

The following is designed to help you carve your path to a career of your choice. If you feel the skills outlined below are some of your strongest you may be right for a career along the systems pathway.

- Systems Evaluation
- Systems Analysis
- Management of Financial Resources
- Management of Personnel Resources
- Judgment & Decision Making

Often employees feel their entry level job is not gaining them experiences that their next job requires. The following set of jobs will help you to develop new skills, and increase your employability.

These jobs will help you gain the skills and experience that you need to achieve a higher paying occupation. These jobs may also help you earn money as you continue your education or seek additional training.

These are examples of entry level jobs within the Systems Pathway:

Procurement Clerk
Retail Salespersons
Brokerage Clerks
Food Cooking Machine Operators

Darrell Grissen

Learned more, now he earns more...

Darrell's Career Path

education level **Bachelor's Degree**

Systems Analyst
Systems Skills

Manager of Information Systems
Systems Skills and Information Skills

Product Manager
Systems and Information Skills
Ending Wage
$73,068*

education level **On-the-job Training**

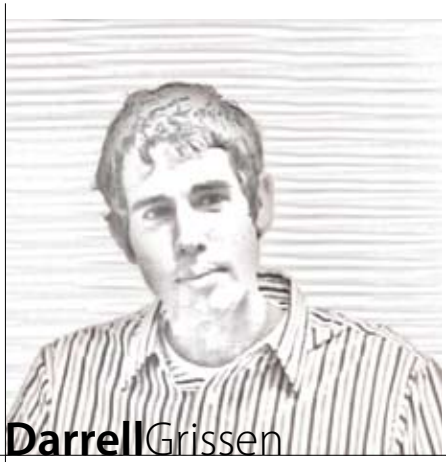
Landscaping Worker
Things Skills
Starting Wage
$21,620*

Food Service Worker
People Skills

Financing Intern
People Skills
Some College

* These wages are based on average hourly wages for similar occupations - the profiled person may have been paid hourly, and may have been working part-time.

skill pathways systems



Darrell Grissen

Darrell Grissen, a systems analyst at an on-demand software company, says there is no typical day on the job for a systems analyst. Grissen says you need to be very analytical. He adds that you also have to be a good "people" person. Grissen's experiences reinforce the importance of basic skills.

"My job is a bridge between the business side of things and the technical side of things. It can certainly be challenging at times, especially when you have to explain technology to non-technical people. But it's an interesting position because it allows you to bridge the gap between both worlds."

"For instance, if we have an initiative to automate a certain task or build a new computer system, I am responsible for taking the business requirements and translating them to technical requirements."

"You have to be able to understand what exactly it is that your customer wants. They don't necessarily know what they want until it's built."

He adds that good writing skills are also a necessity. "It's important that you are able to articulate on paper, very clearly, what exactly needs to be done. If you don't then the development staff that does the creating of the product you have outlined for them will be unclear on what exactly to do."

Generally, you need a bachelor's degree to become a systems analyst. Typically the degree needs to be in a subject like computer science, computer systems, math or engineering. You don't need a specific degree to be a systems analyst, but it certainly helps.

"My job responsibilities are basically insuring that projects are cared for and completed successfully," Grissen says. "Starting at the onset, I have to identify the requirements needed and talk to the end user. I ask questions like 'What do you want it to do? What do you want it to look like? How are you going to use it?' And then through the design stage where we actually outline the specific requirements, I work with the development staff to ensure that the project is coded to specifications. And then finally, the implementation can be one of the more challenging aspects of the job. That involves going back to the end user with the final product, of course it's never

the final product since you are always making modifications, but you work with them to implement the new system or program into their daily work.

Before Grissen got his systems analyst position, he worked on several internships that weren't in the information technology field. "They certainly gave me an appreciation for what a bad computer system is and what you should not do," he states. "In the jobs I held in the past, they had a very antiquated, cumbersome, manual-intensive computer system. But when I moved into the systems analyst position, I was able to take those experiences with me and tangibly quantify what NOT to do when working on a project."

A systems analyst position can be very challenging and fulfilling. Management and evaluation skills contribute to success in positions similar to this. "I think what is most challenging about my position is working with executives who don't know exactly what they want," Grissen says. "They have a vague notion of what it is that they want and you try your best to build it. But you find out that it's not exactly what they wanted so you have to continually modify it. Implementation can be very tricky. Getting people to change can be difficult, even if it is a better way of doing things. Any change is tough for some people and managing that change effectively is challenging."

"I love the smile on the face of the people or person that I create a tool for that helps them in their day-to-day job and saves them a lot of time in the process. That's what motivates me..."

> "It's important that you are able to articulate on paper, very clearly, what exactly needs to be done. If you don't then the development staff that does the creating of the product you have outlined for them will be unclear on what exactly to do."

skill pathways systems

education level — Associate's Degree

Chemical Technicians	Forest and Conservation Technicians	Funeral Directors
$35,950	***$33,494***	***$63,943***

education level — Postsecondary Certificate

Chefs and Head Cooks	Commercial Pilots	Electrical Repairers
$30,709	***$59,266***	***$37,250***

education level — On-the-job Training

Brickmasons and Blockmasons	Procurement Clerks	Dispatchers, Except Police, Fire, and Ambulance
$45,297	***$29,674***	***$33,224***
Brokerage Clerks	Plasterers and Stucco Masons	Plumbers, Pipefitters, and Steamfitters
$35,705	***$47,662***	***$50,556***
Title Examiners, Abstractors, and Searchers		Stonemasons
$32,237		***$31,135***

basic skills

The basic skills you need for most jobs:

- Active Learning
- Critical Thinking
- Mathematics
- Science
- Reading Comprehension
- Active Listening
- Learning Strategies
- Monitoring
- Speaking
- Writing

&

As you progress along your skill pathway you develop skills. When you learn more, naturally your value increases to employers thus you earn more.

education level	First Professional Degree
Physicists	***$116,582***

education level	Bachelor's Degree	
Accountants and Auditors ***$53,235***	Biomedical Engineers ***$68,987***	Construction Managers ***$76,059***
Database Administrators ***$52,595***	Electrical Engineers ***$66,561***	Financial Managers ***$86,824***
Marketing Managers ***$79,051***	Education Administrators, Postsecondary ***$64,454***	Financial Analysts ***$57,019***
Meeting and Convention Planners ***$39,845***		Art Directors ***$50,109***

systems skills

When you add the systems skills to the basic skills you are able to advance your career along the systems pathway.

These are the skills you will acquire as you learn more along the systems pathway:

- Systems Evaluation
- Systems Analysis
- Management of Financial Resources
- Management of Personnel Resources
- Judgment & Decision Making

skill pathways information

The following is designed to help you carve your path to a career of your choice. If you feel the skills outlined below are some of your strongest you may be right for a career along the information pathway.

- Programming
- Technology Design
- Operations Analysis
- Complex Problem Solving

Often employees feel their entry level job is not gaining them experiences that their next job requires. The following set of jobs will help you to develop new skills, and increase your employability. These jobs will help you gain the skills and experience that you need to achieve a higher paying occupation. These jobs may also help you earn money as you continue your education or seek additional training.

These are examples of entry level jobs within the Systems Pathway:

Fabric Patternmaker
Computer Operator
Correspondence Clerks
Medical Appliance Technicians

Robert Kery

Learned more, now he earns more...

Robert's Career Path

education level **Bachelor's Degree**

Computer Development Contractor (Software Engineer)
Information Skills
Ending Wage
$64,356*

Computer Programmer
Information Skills

Software Developer
Information Skills

education level **On-the-job Training**

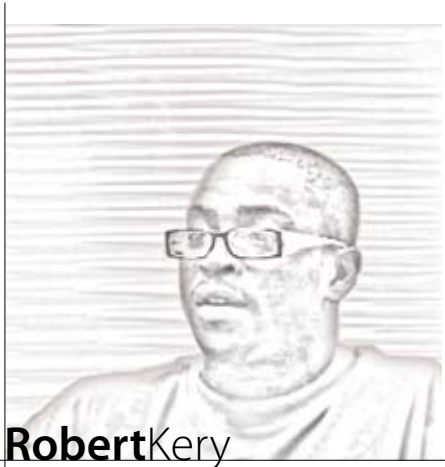
Construction/ Carpenter's Helper
Things Skills

Assembly Line Worker
Things Skills

Fast Food Cook
People Skills
Starting Wage
$12,318*

* These wages are based on average hourly wages for similar occupations - the profiled person may have been paid hourly, and may have been working part-time.

skill pathways information



Robert Kery

Computer programmer Robert Kery reports to work, checks his email and looks at his agenda for the day.

"Once I do that I usually start working on a project," Kery said. "Projects consist of programming. I write codes or I create reports for different managers in our office."

Kery said one of the benefits of being a programmer is that it provides financial stability, one that he is comfortable with. He also likes his co-workers and the company he works for.

"I enjoy working for this company. It is a family-oriented business and I feel as though I am part of one big family. I love working with my colleagues. I work with a great group of people and we all get along great."

Kery states that there are certain skill sets one needs to succeed in this position. He says a person must have strong analytical and problem-solving skills, and be a critical thinker.

To be qualified for this position an individual usually needs to obtain a bachelor's degree in information technology.

Kery was able to build the system he works on every day from scratch.

"I enjoy working for this company. It is a family-oriented business and I feel as though I am part of one big family. I love working with my colleagues. I work with a great group of people and we all get along great..."

"I maintain the internal reporting system," Kery says when explaining his job duties. "I created this system from the ground up. I add functionality to the system when needed. If a manager needs to record some specific information I create a special report."

Prior to working in this position Kery worked for a company that administered online assessments.

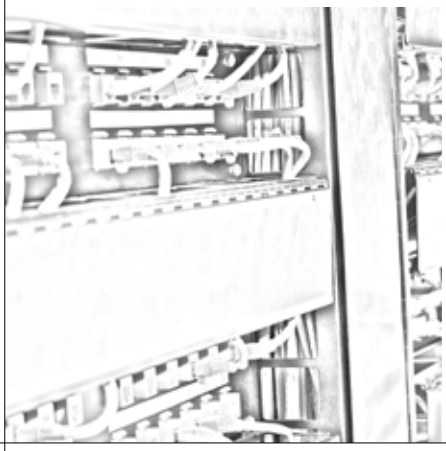
"In my previous position, I created the reports that were generated from these assessments," Kery says. "I was familiar with much of the technology necessary to create reports. The transition from my previous position to my current position was smooth, as I had already been exposed to the technologies that I needed."

Kery added that if a person is interested in being a programmer, they must be able to think on their feet.

"I have to always be able and ready to do something," he said. "I get requests from different types of managers in our company. When a manager makes a request for a report I need to be able to go to the database and retrieve the data. Once it is extracted I manipulate it in a way that the information can be displayed in a report for the person making the request. Sometimes that can be difficult. You have many different requests from many different people and the people making the requests do not have a technical background.

"Sometimes the people making the requests wish for the impossible," he adds. "My job is to make the impossible possible."

"Kery states that there are certain skill sets one needs to succeed in this position. He said a person must have strong analytical, problem-solving and critical thinking skills."



skill pathways information

education level — Associate's Degree

Aerospace Engineering Technicians	Civil Engineering Technicians	Mechanical Engineering Technicians
$41,046	**$35,457**	**$48,947**

education level — Postsecondary Certificate

Surgical Technologists
$36,679

education level — On-the-job Training

Fine Artists	Numerical Tool Programmers	Drilling and Boring Machine Tool Setters
$36,101	**$39,354**	**$34,296**
Fabric and Apparel Patternmakers		Medical Appliance Technicians
$28,819		**$34,220**

basic skills

The basic skills you need for most jobs:

- Active Learning
- Active Listening
- Critical Thinking
- Learning Strategies
- Mathematics
- Monitoring
- Science
- Speaking
- Reading Comprehension
- Writing

&

As you progress along your skill pathway you develop skills. When you learn more, naturally your value increases to employers thus you earn more.

education level First Professional Degree

Biochemists and Biophysicists	Engineering Teachers, Postsecondary	Physics Teachers, Postsecondary
$104,875	***$81,466***	***$69,818***

education level Bachelor's Degree

Agricultural Engineers	Chemical Engineers	Commercial and Industrial Designers
$54,682	***$85,229***	***$48,879***
Computer Hardware Engineers	Materials Scientists	Mechanical Engineers
$59,593	***$62,519***	***$65,257***
Multi-Media Artists	Network Administrators	Network Communications Analysts
$49,460	***$51,637***	***$59,999***
Orthotists and Prosthetists		Actuaries
$99,310		***$77,019***

information skills

When you add the information skills to the basic skills you are able to advance your career along the information pathway.

These are the skills you will acquire as you learn more along the systems pathway:

- Programming
- Technology Design
- Operations Analysis
- Complex Problem Solving

This guide is based on the increasing importance of the skills which are necessary to succeed in high wage, high demand occupations. The occupations listed in this appendix were determined to have both high wages and high projected growth over the next decade. The list is based on Indiana's Long-Term Occupational Projections, with base year of 2004 to the projected year of 2014. To be designated as a high-wage and high-demand occupation, the estimated growth in new jobs needed to be at least 100 employees. In addition, the occupation had to have average wages greater than the state median of $27,742. We have chosen to focus on these occupations, because these are estimated to be some of the best jobs in Indiana's future. They will have high numbers of job openings, there will be greater demand for these jobs than other occupations, and since they pay above average wages, they will provide a stable financial future for the employee.

1) 2005 Annual Wage is the state median wage for the occupation from the Occupational Employment Statistics program.

2) Occupations are classified into 1 of 11 categories by the Bureau of Labor Statistics based on analyses of the occupation's usual education and training requirements.

education & training

The 11 classifications are as follows:

First professional degree. (***PD***) Completion of the academic program usually requires at least six years of full-time equivalent academic study, including college study prior to entering the professional degree program.

Doctoral degree. (**D**) Completion of the degree program usually requires at least three years of full-time equivalent academic work beyond the bachelor's degree.

Master's degree. (**M**) Completion of the degree program usually requires one or two years of full-time equivalent study beyond the bachelor's degree.

Work experience, plus a bachelor's or higher degree. (**WE**) Most occupations in this category are managerial occupations that require experience in a related nonmanagerial position.

Bachelor's degree. (**B**) Completion of the degree program generally requires at least four years but not more than 5 years of full-time equivalent academic work.

Associate's degree. (**A**) Completion of the degree program usually requires at least two years of full-time equivalent academic study.

Postsecondary Certificate. (**PC**) Some programs last only a few weeks while others may last more than a year. In some occupations, a license is needed that requires passing an examination after completion of the training.

Work experience. (**WE**)in a related occupation. Some occupations requiring work experience are supervisory or managerial occupations.

Long-term on-the-job training. (**LOJT**) This category includes occupations that generally require more than 12 months of on-the-job training or combined work experience and formal classroom instruction. This category includes formal and informal apprenticeships.

Moderate-term on-the-job training. (**MOJT**) This category includes occupations in which workers can develop the skills needed for average job performance after one to 12 months of combined on-the-job experience and informal training.

Short-term on-the-job training. (**SOJT**) This category covers occupations in which workers can develop the skills needed for average job performance after a short demonstration or up to one month of on-the-job experience or instruction.

* *The most prevalent education requirement within each occupational group was assigned to the respective summary group.*

16 federal career clusters

The United States Department of Education has identified 16 career clusters. These clusters were designed as a way for schools to organize instruction and student experiences around broad categories that encompass virtually all occupations from entry through professional levels. There are resources concerning knowledge, skills, and abilities for each of the 16 clusters at: http://www.careerclusters.org/16clusters.htm

Although this guide has organized occupations by Indiana's Skill Pathways, it will be important to understand where these occupations fall within the federal/ industry framework. You will be able to find the occupations listed by federal career cluster in the guide appendix.

The 16 clusters are:

Agriculture, Food, & Natural Resources
The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

Architecture & Construction
Careers in designing, planning, managing, building and maintaining the built environment.

Arts, A/V Technology & Communications
Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

Business, Management & Administration
Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy.

Education & Training
Planning, managing and providing education and training services, and related learning support services.

Finance
Planning, services for financial and investment planning, banking, insurance, and business financial management.

Government & Public Administration
Executing governmental functions to include governance; national security; foreign service; planning; revenue and taxation; regulation; and management and administration at the local, state, and federal levels.

Health Science
Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

Hospitality & Tourism
Hospitality & Tourism encompasses the management, marketing and operations of restaurants and other food services, lodging, attractions, recreation events and travel related services.

Human Services
Preparing individuals for employment in career pathways that relate to families and human needs.

Information Technology
Building linkages in IT occupations framework: for entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services.

Law, Public Safety & Security
Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.

Manufacturing
Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/ process engineering.

Marketing, Sales & Service
Planning, managing, and performing marketing activities to reach organizational objectives.

Science, Technology, Engineering & Mathematics
Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.

Transportation, Distribution & Logistics
Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

WorkKeys®

– Skills Assessments

The occupations profiled here, will also include information about the education or course work that may be required, in addition to WorkKeys skill ratings. WorkKeys is a job skills assessment system measuring real-world skills. The WorkKeys System connects work skills, training, and testing for education and employers. WorkKeys, a program of ACT, is the basis for the National Career Readiness Certificate. If you choose to seek additional training, the KeyTrain and WIN programs offered at **WorkOne** centers will help you to bridge any skill gap that has been identified. As you complete training, a Career Readiness Certificate (CRC) is awarded. CRC's are recognized across Indiana and the nation.

Although there are many useful skill assessment tools, the ACT WorkKeys system closely ties to the new Skill Pathways. A WorkKeys skills assessments will test your current skill levels. **WorkOne** Centers and the WorkKeys system offer many online and booklet assessment programs and tools, including practice tests and score reports.

There are 9 WorkKeys Skills:

- **Applied Mathematics (AM)**
- **Applied Technology**
- **Business Writing**
- **Listening**
- **Locating Information (LI)**
- **Observation**
- **Reading for Information (RFI)**
- **Teamwork**
- **Writing**.

The WorkKeys Scores (skill levels) will be attached to the high wage and high demand occupations that are profiled in the guides. At your local **WorkOne** Center, or through an online tool you can assess your current skills, compare them to the Work Keys scores included here, and therefore make more informed decisions concerning your future. (Online link http://www.act.org/workkeys)

[Occupation]	[Annual Wage]	[Education]	[Pathway]	[Work Keys] [AM]	[LI]	[RFI]
Agriculture, Food & Natural Resources						
Farm, Ranch, and Other Agricultural Managers	$43,468	BW	SYSTEMS	5	4	5
Environmental Engineers	$61,431	B	PEOPLE	5	5	5
First-Line Supervisors/Managers of Landscaping	$34,556	WE	SYSTEMS	3	4	4
Pesticide Handlers, Sprayers, and Applicators, Vegetation	$28,263	MOJT	THINGS	3	3	4
Water and Liquid Waste Treatment Plant and System Operators	$32,407	LOJT	THINGS	4	4	4
Architecture & Construction						
Construction Managers	$68,532	B	SYSTEMS	6	5	5
Cost Estimators	$50,799	B	SYSTEMS	6	6	5
Architects, Except Landscape and Naval	$52,760	B	PEOPLE	7	6	5
Surveyors	$38,847	B	PEOPLE	6	5	5
Architectural and Civil Drafters	$38,040	PC	PEOPLE	5	5	5
Mechanical Drafters	$40,977	PC	PEOPLE	5	5	5
First-Line Supervisors/Managers of Construction Trades and Extraction Workers	$51,047	WE	SYSTEMS	5	5	5
Brickmasons and Blockmasons	$48,122	LOJT	SYSTEMS	4	4	4
Stonemasons	$31,394	LOJT	SYSTEMS	5	4	5

Carpenter

$34,550 thingspath

Long-term on-the-job training

EDUCATION KEY

First professional degree	PD
Doctoral degree	D
Master's degree	M
Work experience, plus a bachelor's or higher degree	BW
Bachelor's degree	B
Associate's degree	A
Postsecondary certificate	PC
Work experience	WE
Long-term on-the-job training	LOJT
Moderate term on-the-job training	MOJT
Short term on-the-job training	SOJT

[Occupation]	[Annual Wage]	[Education]	[Pathway]	[Work Keys] [AM]	[LI]	[RFI]
Carpenters	$34,550	LOJT	THINGS	4	5	4
Floor Layers	$32,309	MOJT	PEOPLE	4	4	4
Cement Masons	$33,088	LOJT	PEOPLE	3	4	4
Construction Laborers	$32,400	MOJT	THINGS	3	3	4
Paving, Surfacing, and Tamping Equipment Operators	$31,102	MOJT	THINGS	4	4	4
Construction Equipment Operators	$40,363	MOJT	THINGS	4	4	4
Electricians	$50,810	LOJT	THINGS	5	5	5
Glaziers	$34,360	LOJT	THINGS	4	3	3
Painters	$30,245	MOJT	THINGS	3	3	3
Plumbers	$50,947	LOJT	SYSTEMS	4	4	4
Roofers	$29,766	MOJT	THINGS	4	4	4
Sheet Metal Workers	$40,354	MOJT	PEOPLE	4	4	4
Structural Iron and Steel Workers	$48,434	LOJT	THINGS	4	4	4
Construction and Building Inspectors	$35,140	WE	PEOPLE	4	4	4
Septic Tank Servicemen and Sewer Pipe Cleaners	$28,257	MOJT	THINGS	4	4	4
Heating, Air Conditioning, and Refrigeration Mechanics	$35,547	LOJT	THINGS	5	5	4
Electrical Power-Line Repairers	$49,871	LOJT	THINGS	4	4	4
Excavating and Loading Machine and Dragline Operators	$34,833	MOJT	THINGS	4	4	4
Arts, A/V Technology & Communication						
Art Directors	$48,903	BW	SYSTEMS	5	5	5
Multi-Media Artists and Animators	$49,645	B	INFORMATION	3	3	4
Commercial and Industrial Designers	$47,248	B	INFORMATION	5	4	4
Graphic Designers	$33,340	B	PEOPLE	5	4	5
Producers and Directors	$42,343	BW	SYSTEMS	4	4	5
Musicians and Singers	NA	LOJT	PEOPLE	-	4	4

Work Keys

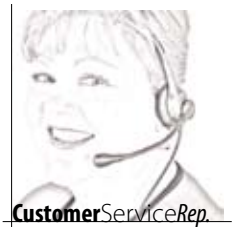
Applied Mathematics AM
Locating Information LI
Reading for Information RFI

[Occupation]	[Annual Wage]	[Education]	[Pathway]	[Work Keys] [AM]	[LI]	[RFI]
Public Relations Specialists	$37,116	B	PEOPLE	-	5	5
Editors	$41,469	B	PEOPLE	-	4	4
Technical Writers	$51,510	B	INFORMATION	5	5	5
Audio and Video Equipment Technicians	$32,823	LOJT	THINGS	4	4	4
Photographers	$29,648	LOJT	SYSTEMS	-	4	5
Telecommunications Line Repairers	$39,128	LOJT	THINGS	4	4	4
Business, Management & Administration						
Chief Executives	$133,233	BW	SYSTEMS	6	5	6
General and Operations Managers	$77,402	BW	SYSTEMS	5	5	6
Public Relations Managers	$58,727	BW	PEOPLE	5	5	5
Administrative Services Managers	$55,494	BW	PEOPLE	4	4	4
Human Resources Managers	$59,344	BW	PEOPLE	5	5	6
Industrial Production Managers	$67,588	B	PEOPLE	4	4	5
Agents and Business Managers	$33,742	BW	PEOPLE	4	5	5
Employment, Recruitment, and Placement Specialists	$35,994	B	PEOPLE	4	4	5
Compensation, Benefits, and Job Analysis Specialists	$46,485	B	PEOPLE	4	4	5
Training and Development Specialists	$37,961	B	PEOPLE	5	5	5
Accountants and Auditors	$48,109	B	SYSTEMS	6	5	5
First-Line Supervisors/Managers of Office Workers	$40,098	WE	SYSTEMS	4	5	5
Customer Service Representatives	$27,939	MOJT	PEOPLE	4	4	4
Human Resources Assistants	$30,843	SOJT	PEOPLE	5	4	4
Administrative Assistants	$31,629	MOJT	PEOPLE	4	4	5
Legal Secretaries	$29,941	PC	PEOPLE	3	4	5
Education & Training						
Education Administrators, Preschool and Child Care Center/Program	$31,898	BW	PEOPLE	5	5	5
Education Administrators, Elementary and Secondary School	$73,666	BW	PEOPLE	5	5	5
Educational, Vocational, and School Counselors	$42,025	M	PEOPLE	4	4	5
Health Educators	$34,595	M	SYSTEMS	4	5	5
Business Teachers, Postsecondary	$51,421	D	PEOPLE	5	5	5
Computer Science Teachers, Postsecondary	$45,917	D	INFORMATION	5	5	5
Mathematical Science Teachers, Postsecondary	$50,443	D	PEOPLE	5	5	5

Editor

$41,469 **people**path

Bachelor's degree



CustomerService*Rep.*

$27,939 **people**path

Moderate-term on-the-job training

[Occupation]	[Annual Wage]	[Education]	[Pathway]	[Work Keys] [AM]	[LI]	[RFI]
Education Administrators, Postsecondary	$54,884	BW	SYSTEMS	5	5	5
Engineering Teachers, Postsecondary	$94,378	D	INFORMATION	5	5	5
Biological Science Teachers, Postsecondary	$54,798	D	PEOPLE	5	5	5
Chemistry Teachers, Postsecondary	$57,340	D	PEOPLE	5	5	5
Psychology Teachers, Postsecondary	$52,664	D	PEOPLE	5	5	5
Sociology Teachers, Postsecondary	$52,179	D	PEOPLE	5	5	5
Health Specialties Teachers, Postsecondary	$61,569	D	PEOPLE	5	5	5
Nursing Instructors and Teachers, Postsecondary	$48,413	M	PEOPLE	5	5	5
Education Teachers, Postsecondary	$44,886	D	PEOPLE	5	5	5
Art, Drama, and Music Teachers, Postsecondary	$44,947	D	PEOPLE	5	5	5
Communications Teachers, Postsecondary	$51,089	D	PEOPLE	5	5	5
English Language and Literature Teachers, Postsecondary	$48,447	D	PEOPLE	5	5	5
Foreign Language and Literature Teachers, Postsecondary	$45,893	D	PEOPLE	5	5	5
History Teachers, Postsecondary	$55,231	D	PEOPLE	5	5	5
Philosophy and Religion Teachers, Postsecondary	$51,432	D	PEOPLE	5	5	5
Recreation and Fitness Studies Teachers, Postsecondary	$33,396	M	PEOPLE	5	5	5
Vocational Education Teachers, Postsecondary	$35,717	WE	PEOPLE	4	4	5
Kindergarten Teachers, Except Special Education	$43,935	B	PEOPLE	4	4	4
Elementary School Teachers, Except Special Education	$44,914	B	PEOPLE	3	4	4
Middle School Teachers, Except Special and Vocational Education	$45,438	B	PEOPLE	4	5	5
Secondary School Teachers, Except Special and Vocational Education	$45,705	B	PEOPLE	4	5	5
Vocational Education Teachers, Secondary School	$50,182	B	PEOPLE	5	5	5
Special Education Teachers, Preschool, Kindergarten, and Elementary School	$41,636	B	PEOPLE	4	5	5
Special Education Teachers, Middle School	$44,683	B	PEOPLE	4	5	5

EducationAdmin

$54,884 **systems**path

Bachelor's degree plus work experience

KindergartenTeacher

$43,935 **people**path

Bachelor's degree

[Occupation]	[Annual Wage]	[Education]	[Pathway]	[Work Keys] [AM]	[LI]	[RFI]
Special Education Teachers, Secondary School	$45,291	B	PEOPLE	4	5	5
Adult Literacy, Remedial Education, and GED Teachers and Instructors	$34,274	B	PEOPLE	4	5	5
Self-Enrichment Education Teachers	$28,210	WE	PEOPLE	4	5	5
Instructional Coordinators	$44,460	M	PEOPLE	4	4	4
Finance						
Financial Managers	$78,226	BW	SYSTEMS	6	5	6
Claims Adjusters	$44,634	LOJT	PEOPLE	3	4	4
Insurance Appraisers, Auto Damage	$44,488	LOJT	PEOPLE	5	4	5
Financial Analysts	$51,713	B	SYSTEMS	6	5	6
Personal Financial Advisors	$55,707	B	SYSTEMS	5	5	5
Loan Officers	$43,473	B	PEOPLE	5	4	5
Actuaries	$73,475	BW	INFORMATION	6	5	6
Market Research Analysts	$44,463	B	PEOPLE	6	5	5
Title Examiners, Abstractors, and Searchers	$30,378	MOJT	SYSTEMS	4	4	5
Insurance Sales Agents	$43,225	B	PEOPLE	4	5	5
Securities, Commodities, and Financial Services Sales Agents	$52,657	B	PEOPLE	5	4	5
Payroll and Timekeeping Clerks	$29,998	SOJT	PEOPLE	4	4	4
Government & Public Administration						
Social and Community Service Managers	$40,944	B	PEOPLE	5	5	6
Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation	$40,569	LOJT	SYSTEMS	5	5	5
Health Science						
Laboratory Technologists	$45,355	B	THINGS	5	5	5
Medical and Health Services Managers	$62,163	BW	SYSTEMS	5	5	5
Chiropractors	$67,179	PD	PEOPLE	5	5	6
Dietitians and Nutritionists	$41,536	B	PEOPLE	5	5	5
Optometrists	$76,453	PD	PEOPLE	5	5	5
Pharmacists	$86,360	PD	PEOPLE	6	5	6
Family and General Practitioners	$140,881	PD	PEOPLE	5	5	7
Internists, General	$150,770	PD	PEOPLE	5	5	6
Obstetricians and Gynecologists	$171,800	PD	PEOPLE	5	5	7
Pediatricians, General	$112,511	PD	PEOPLE	5	5	6
Surgeons	$191,580	PD	PEOPLE	5	5	6

LoanOfficer

$43,473 **people**path

Bachelor's degree

Pharmacist

$86,360 **people**path

First professional degree

[Occupation]	[Annual Wage]	[Education]	[Pathway]	[Work Keys] [AM]	[LI]	[RFI]
Physician Assistants	$66,111	B	PEOPLE	4	4	6
Registered Nurses	$49,067	A	PEOPLE	5	4	5
Occupational Therapists	$56,080	B	PEOPLE	4	4	6
Physical Therapists	$61,339	M	PEOPLE	4	5	6
Respiratory Therapists	$42,850	A	PEOPLE	5	5	5
Speech-Language Pathologists	$52,839	M	PEOPLE	5	5	5
Veterinarians	$71,348	PD	PEOPLE	5	5	6
Laboratory Technicians	$31,311	A	PEOPLE	5	5	5
Dental Hygienists	$59,055	A	PEOPLE	3	4	5
Cardiovascular Technologists and Technicians	$33,958	A	PEOPLE	3	4	4
Diagnostic Medical Sonographers	$51,073	A	THINGS	4	5	5
Radiological Technologists and Technicians	$43,197	A	PEOPLE	4	4	4
Surgical Technologists	$35,483	PC	INFORMATION	3	4	5
Practical and Vocational Nurses	$33,913	PC	PEOPLE	4	4	4
Athletic Trainers	$33,352	B	PEOPLE	3	4	5
Occupational Therapist Assistants	$40,294	A	PEOPLE	4	4	4
Physical Therapist Assistants	$42,452	A	PEOPLE	3	4	4
Dental Assistants	$29,354	MOJT	PEOPLE	4	4	4
Hospitality & Tourism						
Food Service Managers	$36,041	WE	SYSTEMS	5	4	5
Lodging Managers	$37,311	WE	SYSTEMS	5	4	5
Chefs and Head Cooks	$27,758	PC	SYSTEMS	4	3	4
Managers of Housekeeping and Janitorial Workers	$29,321	WE	SYSTEMS	3	3	4
Gaming Supervisors	$41,975	PC	PEOPLE	3	3	4
Managers of Personal Service Workers	$27,893	WE	SYSTEMS	3	5	5
Human Services						
Clinical, Counseling, and School Psychologists	$52,634	M	PEOPLE	5	5	6
Substance Abuse and Behavioral Disorder Counselors	$32,435	M	PEOPLE	-	4	5
Marriage and Family Therapists	$35,131	M	SYSTEMS	-	-	-
Mental Health Counselors	$31,843	M	PEOPLE	-	5	5
Child, Family, and School Social Workers	$30,711	B	PEOPLE	4	4	5
Medical and Public Health Social Workers	$38,396	B	PEOPLE	4	4	5

Veterinarian

$43,473 **people**path

First professional degree

AthleticTrainer

$33,352 **people**path

Bachelor's degree

[Occupation]	[Annual Wage]	[Education]	[Pathway]	[Work Keys] [AM]	[LI]	[RFI]
Mental Health and Substance Abuse Social Workers	$33,143	M	PEOPLE	4	4	5
Probation Officers and Correctional Treatment Specialists	$30,049	B	PEOPLE	4	4	5
Clergy	$37,117	M	PEOPLE	4	4	5
Information Technology						
Information Systems Managers	$73,068	BW	SYSTEMS	6	5	5
Computer Software Engineers, Applications	$65,549	B	INFORMATION	7	5	6
Computer Software Engineers, Systems Software	$64,356	B	INFORMATION	7	5	5
Computer Support Specialists	$34,267	A	PEOPLE	5	4	5
Computer Systems Analysts	$59,976	B	INFORMATION	4	4	4
Database Administrators	$50,345	B	SYSTEMS	5	4	6
Network Administrators	$50,170	B	INFORMATION	5	5	5
Network Systems Analysts	$56,212	B	INFORMATION	6	5	5
Office Machine Repairers	$35,635	PC	THINGS	3	3	4
Law, Public Safety & Security						
Lawyers	$64,571	PD	PEOPLE	4	5	7
Paralegals and Legal Assistants	$35,160	A	PEOPLE	4	4	6
Managers of Police and Detectives	$52,597	WE	PEOPLE	5	5	5
Managers of Fire Fighting	$53,351	WE	PEOPLE	4	5	4
Fire Fighters	$37,175	LOJT	PEOPLE	4	4	4
Detectives	$41,836	WE	PEOPLE	4	5	5
Police and Sheriff's Patrol Officers	$40,917	LOJT	PEOPLE	4	4	5
Private Detectives and Investigators	$28,321	WE	SYSTEMS	3	4	5
Manufacturing						
Purchasing Agents	$43,030	B	SYSTEMS	5	4	5
Civil Engineering Technicians	$33,043	A	INFORMATION	5	5	6
Electrical Engineering Technicians	$47,942	A	THINGS	6	5	5
Industrial Engineering Technicians	$42,777	A	PEOPLE	4	4	4
Mechanical Engineering Technicians	$48,019	A	INFORMATION	6	5	5
Carpet Installers	$33,206	MOJT	THINGS	3	4	4
Managers of Mechanics, Installers, and Repairers	$49,763	WE	THINGS	4	4	4
Electrical Repairers, Commercial and Industrial Equipment	$35,058	PC	SYSTEMS	4	5	5
Maintenance and Repair Workers, General	$31,894	LOJT	THINGS	3	4	4

Clergy

$37,115 **people**path

Master's degree

FireFighter

$37,175 **people**path

Long-term on-the-jobtraining

[Occupation]	[Annual Wage]	[Education]	[Pathway]	[Work Keys] [AM]	[LI]	[RFI]
Maintenance Workers, Machinery	$40,021	LOJT	THINGS	3	4	3
Millwrights	$54,180	LOJT	THINGS	4	4	4
Medical Equipment Repairers	$37,330	MOJT	THINGS	4	5	4
Managers of Production and Operating Workers	$44,417	WE	THINGS	4	4	4
Engine and Other Machine Assemblers	$45,679	SOJT	THINGS	4	4	3
Structural Metal Fabricators and Fitters	$30,450	MOJT	THINGS	4	4	4
Computer-Controlled Machine Tool Operators, Metal and Plastic	$31,523	LOJT	THINGS	4	4	4
Machinists	$34,899	LOJT	THINGS	4	4	4
Chemical Equipment Operators and Tenders	$32,355	MOJT	SYSTEMS	4	4	4
Dental Laboratory Technicians	$28,400	LOJT	THINGS	4	4	4
Painters, Transportation Equipment	$30,588	MOJT	THINGS	3	4	3
Marketing, Sales & Service						
Advertising Managers	$55,665	BW	PEOPLE	5	5	5
Marketing Managers	$69,111	BW	SYSTEMS	5	5	5
Sales Managers	$81,856	BW	PEOPLE	5	5	6
Property Managers	$43,786	B	SYSTEMS	5	4	5
Interior Designers	$32,281	B	PEOPLE	6	5	4
Skin Care Specialists	$34,283	PC	PEOPLE	3	3	4
Advertising Sales Agents	$40,156	MOJT	PEOPLE	4	4	5
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	$59,710	MOJT	PEOPLE	4	5	5
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	$46,884	MOJT	PEOPLE	4	5	5
Real Estate Sales Agents	$29,338	PC	PEOPLE	5	4	5
Science, Technology Engineering & Mathematics						
Engineering Managers	$83,710	BW	PEOPLE	7	5	6
Biomedical Engineers	$67,605	B	SYSTEMS	-	-	-
Civil Engineers	$57,152	B	PEOPLE	7	5	6
Electrical Engineers	$63,678	B	SYSTEMS	7	5	6
Electronics Engineers, Except Computer	$72,954	B	SYSTEMS	7	5	6
Industrial Engineers	$61,530	B	PEOPLE	5	5	4
Mechanical Engineers	$63,443	B	INFORMATION	7	6	6
Surveying and Mapping Technicians	$31,797	MOJT	PEOPLE	5	4	4

Welder

$30,450 thingspath
Moderate-term on-the-job training

RealEstate*Agent*

$29,338 peoplepath
Postsecondary certificate

[Occupation]	[Annual Wage]	[Education]	[Pathway]	[Work Keys] [AM]	[LI]	[RFI]
Microbiologists	$45,318	D	THINGS	5	5	5
Medical Scientists, Except Epidemiologists	$64,366	D	PEOPLE	6	5	6
Chemists	$73,048	B	PEOPLE	6	5	6
Environmental Scientists and Specialists, Including Health	$38,720	B	PEOPLE	5	5	5
Biological Technicians	$37,060	A	THINGS	5	4	5
Environmental Science and Protection Technicians, Including Health	$33,382	A	PEOPLE	5	4	4
Transportation, Distribution, & Logistics						
Transportation, Storage, and Distribution Managers	$67,494	WE	PEOPLE	5	4	4
Management Analysts	$56,394	BW	SYSTEMS	5	5	5
Production, Planning, and Expediting Clerks	$37,020	SOJT	PEOPLE	4	4	4
Aircraft Mechanics and Service Technicians	$51,569	PC	THINGS	4	4	5
Automotive Body and Related Repairers	$33,386	LOJT	THINGS	4	5	4
Automotive Service Technicians and Mechanics	$32,526	PC	THINGS	4	4	4
Bus and Truck Mechanics and Diesel Engine Specialists	$35,523	PC	THINGS	4	4	5
Mobile Heavy Equipment Mechanics, Except Engines	$36,934	PC	THINGS	4	4	4
Recreational Vehicle Service Technicians	$31,601	LOJT	THINGS	3	4	4
First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	$40,297	WE	PEOPLE	4	5	5
First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators	$46,014	WE	SYSTEMS	4	4	5
Airline Pilots, Copilots, and Flight Engineers	$76,491	B	SYSTEMS	6	6	6
Commercial Pilots	$50,522	PC	SYSTEMS	6	6	6
Air Traffic Controllers	$114,258	LOJT	THINGS	4	5	5
Truck Drivers, Heavy and Tractor-Trailer	$36,406	MOJT	THINGS	3	3	3
Industrial Truck and Tractor Operators	$28,254	SOJT	THINGS	3	4	3

Chemist

$73,048 **people**path

Bachelor's degree

AircraftMechanic

$51,569 **things**path

Postsecondary Certificate

WorkOne

Your local **WorkOne** Centers are designed as the new one–stop-shops, able to help you with all aspects of career exploration as you pursue your goals. In addition to the online job matching tool that will allow you to create you own personal job applicant profile, WorkOne centers can provide:

- Training opportunities
- Assessment tools to help you evaluate your current skills
- Tips for your job search
- Resume building programs
- Unemployment information
- Information and Referral

With 26 local offices around the state, WorkOne's can also connect you with other family and work-related organizations that may be available in your area. For more information call 1-888-WORK-ONE, or look up your local office online at http://www.in.gov/dwd/job_seekers/workone_centers.html.

Step 1 Self assessment
Step 2 Identify the jobs your skills fit
Step 3 Resume and cover letters
Step 4 Approach potential employers
Step 5 Interview process
Step 6 Following through for success
Step 7 Continue to build skills

Online Resources:

Assessment Tools and Information:

WorkOne for Job Seekers: to assist you with a wide range of employment and training services.
http://www.in.gov/dwd/job_seekers/job_seeker_index.html

America's Career Resource Network (ACRN)
http://www.acrnetwork.org

ACRN's online career exploration tool
http://www.acrnetwork.org/decision.htm

ACT's World Of Work Map
http://www.act.org/wwm/about.html

ACT's WorkKeys Systems
http://www.act.org/workkeys

Additional Information on Career Exploration:

Learn More Resource Center
http://www.learnmoreindiana.com

The 16 Federal Career Clusters
http://www.careerclusters.org/16clusters.htm

Career Guide to Industries, from the Bureau of Labor Statistics
http://www.bls.gov/oco/cg/home.htm

Hoosiers by the Numbers
http://www.hoosierdata.in.gov

Occupational Information Network, O*NET
The Occupational Information Network or, O*NET, is a comprehensive database of worker attributes and job characteristics. O*NET categorizes knowledge, skills, and abilities as worker requirements that represent the characteristics of an individual that may be attributed to occupational performance.
http://online.onetcenter.org

WorkOne is your local resource for finding jobs, advancing your career & connecting to important community resources you need for success. Our experienced and professional staff in each location is eager to assist you. Contact your nearest full-service WorkOne today!

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Anderson, IN 46016
765-642-4981

2. Auburn WorkOne
936 W. 15th
Auburn, IN 46706
260-925-0124

3. Bedford WorkOne
918 16th St Ste 200
Bedford, IN 47421
812-279-4400

4. Bloomington WorkOne
450 Landmark Ave
Bloomington, IN 47402
812-331-6000

5. Columbus WorkOne
Columbus Learning Center
4555 Central Ave. Ste
1300Columbus, IN 47202
812-376-3351

6. Elkhart WorkOne
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Elkhart, IN 46516
574-295-0105

7. Evansville WorkOne
700 E. Walnut
Evansville, IN 47713
812-424-4473

8. Fort Wayne WorkOne
Rudisill Plaza
201 E. Rudisill Blvd Ste 202
Fort Wayne, IN 46806
260-745-3555

9. Gary WorkOne
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Gary, IN 46409
219-981-1520

10. Hammond WorkOne
Columbia Plaza Ctr
6431 Columbia Ave
Hammond, IN 46320
219-933-8332

11. Indianapolis East WorkOne
2525 N. Shadeland C-3
Indianapolis, IN 46219
317-358-4505

12. Indianapolis West WorkOne
805 Beachway Dr Ste 110
Indianapolis, IN 46224
317-246-5401

13. Kokomo WorkOne
709 S. Reed Road
Kokomo, IN 47903
765-459-0571

14 Lafayette WorkOne
2301 Concord Rd
Lafayette, IN 47903
765-474-5411

15. LaPorte WorkOne
Sagamore Ctr
300 Legacy Plaza W.
LaPorte, IN 46350
219-362-2175

16. Lawrenceburg WorkOne
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Lawrenceburg, IN 47025
812-537-1117

17. Linton WorkOne
1600 N. E. 'A' St
Linton, IN 47441
812-847-4479

18. Madison WorkOne
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Madison, IN 47250
812-265-3734

19. Marion WorkOne
850 N. Miller Ave
Marion, IN 46952
765-668-8911

20. Muncie WorkOne
201 E. Charles Ste 100
Muncie, IN 47308
765-289-1861

21. New Albany WorkOne
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New Albany, IN 47151
812-948-6102

22. Richmond WorkOne
3771 S. 'A' St
Richmond, IN 47374
765-962-8591

23. Shelbyville WorkOne
2325 Intelliplex Dr.
Ste 204
Shelbyville, IN 46176
317-392-3251

24. South Bend WorkOne
851 S. Marietta St
South Bend, IN 46618
574-237-9675

25. Terre Haute WorkOne
30 N. 8th St
Terre Haute, IN 47807
812-234-6602

26. Vincennes WorkOne
310 N. 2nd St
Vincennes, IN 47591
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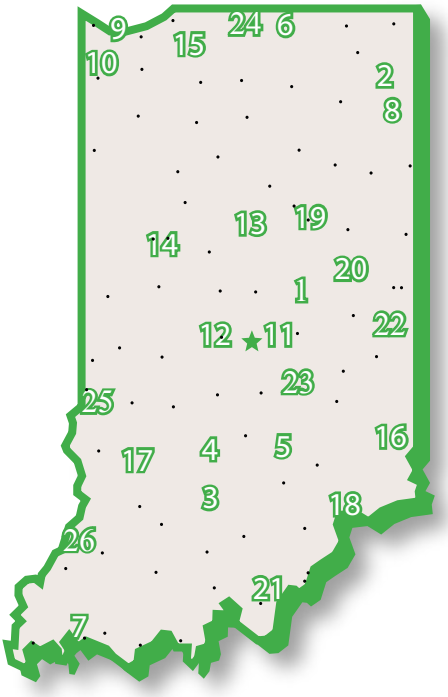

*For more information call 1-888-WORK-ONE

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Commissioner Andrew J. Penca

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