

The University of Toledo

Career Services Operational Plan | 2015



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INTRODUCTION

The University of Toledo is committed to supporting regional economic development and prosperity as well as the importance of providing UT graduates with success in job placement and career development. Even though UT has robust programs to support career services both centrally and at specific colleges, UT is taking steps to continually assess our programs and to make improvements to both support our students and the state economy. This document provides information on UT's Career Services central support, specific programs within colleges that are tailored to specialized professional needs, as well as centers and institutes that provide support for both students and industry. It also outlines steps to be taken to utilize OhioMeansJobs.com; how to bring information on in-demand jobs; approaches for student mentoring; student requirements for career pathways; how career services relate to institutional plans, and ways to measure and evaluate career services available to students.

MISSION

The Career Services mission at The University of Toledo is to connect students with meaningful learning experiences and opportunities, both on campus and in the community, that provide students with a competitive edge in the job search process and in career performance. Students gain self-awareness from participating in self-reflection, major and career exploration, and building their job readiness skills. This mission is also connected to the University's economic development mission to provide a high quality workforce for the region and state.

HISTORY

Career Services at The University of Toledo are decentralized, with our professional colleges featuring college specific career services offices that serve targeted populations of students and alumni.

To help address the challenges of a decentralized model, UT has a central Center for Experiential Learning and Career Services (CELCS), under the Office of the Provost, which focuses primarily on job development, student resume referrals, and job fair sponsorship for students matriculating from colleges that do not offer discipline specific career services.

The University of Toledo has been noted for its targeted, comprehensive, college specific career services program which feature student career experience (internships/co-ops), employer job fairs, skills building workshops (resume writing, understanding the job search process, interviewing skills, etc.), and career mentoring.

Moving forward, CELCS will create a Career Services Steering Committee, with a representative from each college, for the purpose of enhancing university-wide collaboration, in ensuring that all UT students have appropriate access to required career series and relevant experiential opportunities.

GOALS

1. Implement orientation programs on the utilization of OhioMeansJobs.com

- 1.1 Develop training materials to use at new faculty orientation and for professional development of academic administrators (PDAA).
- 1.2 Provide training for college career and academic advisors on OhioMeansJobs.com.
- 1.3 Develop an instructional module to be presented in the freshman orientation course on the utilization of OhioMeansJobs.com.
- 1.4 Partner with colleges to ensure students create an OhioMeansJobs profile.

2. Disseminate information about in-demand jobs to students

- 2.1 Develop inventory of UT's Programs and match to Ohio's most in demand jobs.
- 2.2 Enhance the Center for Experiential Learning and Career Services (CELCS) website which features a direct link to the OhioMeansJobs site.
- 2.3 Increase number of one on one advising sessions with students.
- 2.4 Utilize social media to communicate with students about in demand jobs.
- 2.5 Utilizing the University Teaching Center staff and Career Service staff, offer professional development and curriculum integration for faculty.
- 2.6 Partnering with faculty, embed career connection strategies into the courses focused on the skills and knowledge needed in specific careers.
- 2.7 Foster strong community relationships to strengthen career development opportunities for students.
- 2.8 Promote and provide resources to alumni.

3. Mentor students

- 3.1 Communicate quarterly with faculty and student about in demand jobs data.
- 3.2 Provide networking opportunities.
- 3.3 Develop and implement the “Will You Launch a Rocket” Mentoring program.
- 3.3 Invite program alumni back to campus to network with students.
- 3.4 Arrange job shadowing opportunities for students in areas of interest.
- 3.5 Enhance students’ resume writing and interviewing skills.
- 3.6 Review and enhance each college’s offering of Professional Development course(s).

4. Provide timely career services to students

- 4.1 Implement enhanced process for UT students to secure a face to face interaction with a career advisor within 2-3 days.
- 4.2 Require two documented career service interactions either with a career service professional or faculty advisor on career options during the undergraduate experience.

5. Require career exploration and selection activities for undergraduate students

- 5.1 Assist student in identifying what they can do with their major utilizing the website <http://whatcanidowiththismajor.com/major/>.
- 5.2 Identify college liaisons to work with CELCS to develop an outreach and marketing plan that will enable CELCS staff to attend orientation courses in each college and provide career services presentations to students in their first year.
- 5.3 Partner with UT colleges to decrease the number of second year undecided majors.

6. Gather and evaluate performance evaluation metrics

6.1 Make available links to program/service evaluation online forms for all participants to provide feedback about their visit and level of satisfaction with the CELCS services they received.

6.2 Gather, review and evaluate placement and graduate follow-up information and implement changes for program and college improvement.

6.3 Query employers regarding graduate's career readiness skills of critical thinking, problem solving, written and verbal communication.

CONNECTING STUDENTS WITH EMPLOYERS

The University of Toledo has a wide range of programs at the undergraduate and graduate level that prepare our students for a place in the economic, civic and cultural future in the State of Ohio. The University helps prepare students for their future by providing services that help them select their course of study, identify experiential learning opportunities that will advance their future and assist them in placement post-graduation.

- **Center for Experiential Learning & Career Services (CELCS)**

The Center for Experiential Learning and Career Services helps to connect students to meaningful learning experiences and encourage personal responsibility to explore and achieve their professional career goals. Students are empowered to engage in major and career exploration, job preparation and self-reflection focused on preparing them to develop a professional career development competitive advantage. CELCS provides service learning and community engagement opportunities in addition to facilitating student – employer connections.

- **The Women in STEM Excelling (WISE) Mentor Program**

WISE is a mentor program for women interested in pursuing undergraduate degrees in any of the Science, Technology, Engineering, Math or Medicine (STEMM) areas of study. WISE will link women science students with mentors, academic support, and a peer community during their first year of study. The goal is to ensure that all women students interested in a STEMM degree receive the necessary support and encouragement to have a successful career at UT and beyond.

- **Business Career Programs Office**

The Business Career Programs Office in the College of Business and Innovation (COBI) administers and coordinates internships and permanent placement for the COBI students. The program offers undergraduate and graduate students the opportunity to work in jobs directly related to their career fields while they are pursuing their degrees. Upon nearing graduation, the program aids the student in seeking a permanent position. The program's facilities are available for on-campus interviews and coordinates campus recruiting visits and a candidate referral system to help fill employer vacancies. Career advisers assist students with their career research, resume preparation and interview strategies.

Approximately 85 percent of the COBI students will have participated in at least one internship prior to graduation. The College consistently has an 80-85 percent placement rate upon graduation.

- **College of Engineering Career Development Center**

The College of Engineering adopted a mandatory co-op strategy for all incoming engineering cohorts starting in fall 1997, and over the past 15 years has had more than 15,771 student co-op placements with over 2,200 employers at 2,800+ employer sites. Geographically, the placements have spanned 39 countries and 42 states, with over 70 percent of these placements in Ohio, including 70 of the 88 counties. One component of the mandatory engineering co-op program is a requirement that all students complete a semester long Professional Development course. This course assists in preparing students for the co-op experience. This comprehensive course includes topics on social protocol and ethics in industry. Resume writing and interview skills are also developed. The Engineering College has a well-organized Career Development Center, sophisticated software, and relationships with over 2,200 employers. The engineering career staff assist students with their career research, resume preparation, interview strategies and salary negotiation. The program's facilities are available for on campus interviews and campus recruiting visits. Two Engineering Career Fairs are held each year. The fall 2014 career event hosted 144 companies and 701 engineering students and alumni seeking both co-op positions and full time positions. The Engineering Career Development Center also assists engineering graduates and alumni seeking full time employment.

- **College of Law**

The Office of Professional Development in the College of Law is dedicated to helping students and graduates achieve their career objectives. It focuses on the professional development of law students from their very first year of study. An attorney-student mentorship program, career building workshops, interview preparation, a student and alumni jobs database, and individual career counseling are just a few of the services offered by this office.

- **College of Medicine and Life Sciences**

The Office of Student Affairs services the College of Medicine and Life Sciences by providing career and residency advising throughout the four years of medical school. It provides a systemic approach to career advising and residency counseling that spans all four years of medical school.

- **College of Pharmacy and Pharmaceutical Sciences**

The college provides internship and career opportunities to students in the five undergraduate Bachelor of Science in Pharmaceutical Science majors in the Doctor of Pharmacy program. Office staff provide individual and group career and graduate school exploration workshops for undergraduates, along with focused internship resources and assistance. Students complete the required undergraduate internship in a variety of Ohio-based research laboratories and healthcare settings as well as in positions in industry and academic settings located throughout the country and internationally.

In the PharmD program, students complete a variety of required activities starting in their first professional year and extending through their fourth professional year to graduation. Components include career exploration through the American Pharmacists Association Career Pathways© Program, career speakers from practicing professionals in various areas, curriculum vitae and resume counseling, interview skills, and discussions regarding post-graduate training options. Students complete required curricular internships that span the entire four professional years called introductory and advanced pharmacy practice experiences.

Students in the Bachelor of Science in Pharmaceutical Science Program participate in the Professional Development Institute. Throughout the junior (P1) and senior (P2) years, the institute offers:

- Seminars in communication and professional/technical presentation skills
- Job search assistance and networking experience
- Interview practice and resume development
- Graduate and professional program application forums and advice

The Internship office maintains resources that are specialized for pharmaceutical science majors. Beginning in November of each year, internship resources are identified and published for students to review and begin the application process. Competitive internships are available throughout the county and internationally. Professional staff counsel students and encourage them to consider their personal career as they apply and are offered positions.

- **College of Adult and Lifelong Learning (CALL)**
CALL provides access, career and life coaching, degree completion and academic support to new, continuing and reentering adult learners in a respectful and nurturing environment. Help is given to adult students as they transition to college life and establish a foundation for educational attainment, career success and lifelong learning.
- **You College**
YOU College provides the QUEST program for new undecided students, giving them a chance to explore their options. Exploring students will receive organized help in assessing their personal strengths and limitations as they relate to major and occupational choice. Exploring students will receive help in researching information about a variety of academic majors and career areas.

Benefits of the QUEST Program:

Academic advisers – QUEST academic advisers help students explore their options, while still keeping up with University core course requirements. They meet one-on-one with their personal academic adviser.

QUEST Orientation classes – Assists the student in learning about college life and resources on campus.

Academic and career information – The QUEST program coordinates with other student services at UT, including Career Services, University Counseling Center, Learning Enhancement Center (tutoring and workshops), college advising offices and faculty to help students identify a major and career path.

Career Development – Employers are looking for college-educated employees with transferable job skills. QUEST helps students gain these skills, which include critical thinking, decision-making and adaptation to change.

Career and Self Evaluation Class – As students begin in earnest to explore academic options and how they relate to careers; they take assessment tests to identify what major fits their strengths and interests and begin to develop a plan for deciding on a major.

- **Military Service Center**

The University of Toledo Military Service Center recognizes the sacrifices of our service members and their families and is dedicated to helping them achieve continued success in life. This is accomplished by providing accessible educational and degree completion opportunities and a wide range of customized support services including: educational benefit processing, mentoring, advocacy and networking, while partnering with veteran service organizations who assist with the transition from military service to the classroom and beyond. The Military Service staff work with many employers seeking veterans for positions in their companies. The professional staff work with veterans preparing them for these opportunities.

WORKFORCE DEVELOPMENT PRIORITIES

The University of Toledo's Strategic Plan, *Directions 2011*, addresses the University's strategic plan for outreach and global engagement strategy in goal six; stating "We will be distinguished for our community outreach and global engagement. We will be a key driver in the revitalization of the region's economy and quality of life."

In the 2010 publication, *The Relevant University: Making Community and Economic Engagement Matter* by then UT President Lloyd Jacobs and Eva Klein, a national higher education consultant, outlined a framework for outreach and engagement designed to carry the institution into the future. The document identifies the university's engagement mission to a diverse set of constituents in four areas—human capital, innovation system, health care and wellness, and quality of place.

Demonstrating our commitment to our community and beyond, The University of Toledo was recently recognized for its focus on community engagement. UT is among 240 U.S. colleges and universities to receive the Carnegie Foundation for the Advancement of Teaching's 2015 Community Engagement Classification.

Building upon the University's role in outreach and engagement, UT's undergraduate and graduate academic colleges are heavily invested in experiential learning. The curriculum supports both regional and state economic development through research, scholarship, service and workplace development. Students spend a significant amount of time in clinical, internship, externships, co-op and directed practice. Students at the undergraduate and graduate level have opportunities to participate in research in laboratories, and to intern in the community and local business and industry. All these programs provide students with opportunities to reflect, to take the initiative, to make decisions, to solve real-world problems, to learn to manage time, to think critically, to act professionally and ethically, to become more culturally competent and to learn citizenship and communication skills. The graduates of the University are poised to enter the workplace meeting the needs of the nine **JobsOhio** key industries and garner positions that are on the list of **Buckeye Top Fifty** high wage occupations in Ohio.

Given the breadth of The University of Toledo's academic offerings, it is no surprise that the University supports the development of a high-quality workforce for all of the state's nine key industries. Examples are summarized below:

- **Advanced Manufacturing**

UT supports this industry with majors in many areas but perhaps most closely aligned are UT's engineering and business programs that support world class manufacturing and through the college of engineering's co-op program that places students in manufacturing settings across Ohio.

- **Aerospace & Aviation**

UT's College of Engineering has been a leading source of talent for the aerospace industry for decades and has had a strong relationship with NASA Glenn in providing advanced education for NASA scientists and engineers in aerospace technology. UT's focus is on fluid dynamics and structures and has a Small Turbine Institute that provides students with hands on training with equipment that provides them with experience needed for the aerospace industry.

- **Agribusiness & Food Processing**

UT supports the agriculture and food industry with programs in biological sciences, environmental sciences, business, and engineering. UT is heavily engaged in the Northwest Ohio greenhouse industry and is working with growers and community gardens on the introduction of new technology into the industry.

- **Automotive**

UT's College of Business and Innovation and its College of Engineering have a long history of providing talent to the automotive industry and its value chain. UT trains students on quality control methods, robotics, information technology, and materials that are needed for industry.

Recently, a group of UT chemical engineering students placed third in an internationally recognized American Institute of Chemical Engineers Chem-E-Car competition that challenges them to use precise chemical reactions to propel a small car a long distance with a tiny margin of error.

In addition, UT Formula SAE is a student led competition sanctioned by SAE International. UT students are challenged to design, build, and race an open wheel formula style race car. They compete in three to four competitions each year.

- **Biohealth**

UT has strong programs in health and biology across its two campuses and has four colleges dedicated to preparing health professions across a range of occupations needed for the industry. Occupations include new physicians trained at the College of Medicine, pharmacists trained at the College of Pharmacy and Pharmaceutical Sciences, nurses trained from the College of Nursing, and a wide range of health professionals including physical therapists, occupational therapists and respiratory care professionals trained at the College of Health Sciences.

- **Energy**

One of UT's strengths is its program in the energy industry. UT is particularly strong in solar and renewable energy with programs in the College of Natural Sciences and Mathematics and the College of Engineering. UT has developed a professional science Master's in Photovoltaics (PSM-PV) which will prepare students for successful careers in the burgeoning photovoltaics industry. The two year program builds a strong scientific knowledge base and develops laboratory skills and business management practices to prepare the next generation of PV professionals. Students are exposed to a wide range of cutting edge research activities in laboratories of world-class faculty, and participate in a 24 week corporate sponsored internship that provides real world experience. In addition, UT engineering graduates often pursue career opportunities in the electric power and oil and gas industries.

- **Financial Services**

UT's College of Business and Innovation supports the financial services industry across all of its academic programs, particularly those in finance and accounting. In addition, the College supports related industries such as insurance. The Department of Mathematics produces students trained in quantitative methods needed for both the financial services and insurance industries.

- **Information Services**

UT supports this key industry with programs in the College of Business and Innovation, the College of Engineering and other specialized programs such as GIS training from the Department of Geography and Planning. A particularly innovative program is the Bachelor of Science in Information Technology (BSIT), a unique program offered jointly by the College of Engineering and the College of Business and Innovation. The program features a hands-on education leading to careers in the management of the technology infrastructure in organizations of all types and sizes. The curriculum covers the operational support and administration of diverse computing systems and the integration of existing technologies, components and products.

- **Polymers & Chemicals**

UT supports this industry by training students in chemistry and chemical engineering. UT chemistry graduates learn how to synthesize and characterize materials and chemical engineering graduates are broadly trained to support the polymer and chemical industry. UT's School of Green Chemistry and Engineering works to improve the human condition through research, education, and outreach activities that promote safe and sustainable use, production, and recycle of chemical materials.

CENTERS AND INSTITUTES

The University of Toledo is actively involved in the Northwest Ohio region's economic development efforts. Many centers and institutes have joined the economic development endeavors to help strengthen and grow the communities in and around Toledo. Undergraduate and graduate students, with faculty, participate in these centers and institutes.

- **The University of Toledo's Urban Affairs Center**

The Urban Affairs Center is an applied research unit of The University of Toledo within the Office of Research and a member of the Ohio Urban University Program. Its mission is to enhance the economic vitality and quality of life of Toledo and its metropolitan region. The University of Toledo's Urban Affairs Center, working collaboratively with Bowling Green State University's Center for Policy Analysis and Public Service, identified a number of technology clusters for Northwest Ohio that are the focus of a coordinated economic development program involving the Regional Growth Partnership, the Toledo-Lucas County Port Authority, the City of Toledo, and Lucas County.

- **The Center for Family Business**

The Center for Family Business recognizes excellence in locally owned family businesses and encourages greater understanding, provides resources and support, and keeps family businesses informed. Programs are offered annually to provide information on family business topics of interest to members by employing nationally known speakers, case studies, family business owners and other experts to discuss business issues and challenges from their personal perspective or professional experience.

- **Intermodal Transportation Institute (ITI)**

The Intermodal Transportation Institute works cooperatively with public and private sector partners in transportation, logistics, and supply chain management to increase economic opportunity and improve the quality of life.

- **The Global Business Development Institute (GBDI)**

The Global Business Development Institute (GBDI) is dedicated to strengthening the global competitiveness of firms in the Great Lakes region through educational programs, contract research, training services, management consulting, and timely publications. The GBDI is committed to advancing international programs at UT through faculty development, international business co-ops/internships, study-abroad programs, and a world-class curriculum.

- **Technology Transfer Office**

The Technology Transfer office facilitates industry collaboration by clarifying intellectual property concerns and commercial inventions.

- **UT Polymer Institute**

The UT Polymer Institute is an educational and industrial training center for polymer science and engineering that is designed to provide industrial support through contract research and development activities.

- **Small Turbine Institute**

The Small Turbine Institute private-public sector partnership focuses on the advancement of small turbine power systems for civil aviation, military, and space propulsion systems. Research and development on fuel utilization is evaluated in order to secure the most effective performance.

- **The Center for Geographic Information Sciences and Applied Geographics (GISAG)**

The Center for Geographic Information Sciences and Applied Geographics (GISAG) at the University of Toledo serves as a focal point for GIS contract research on campus and in the local and regional community. As clearinghouse for GIS research opportunities, it provides sources of expertise to enhance student learning at all levels and across a wide range of academic disciplines. The GISAG Center will offer GIS graduate certification programs, provide geospatial databases to campus users, and administer system-wide GIS software licenses. In addition, the center seeks to solve complex problems related to regional and community issues, environmental protection, land use planning, economic development, site characterization, resource mapping and GIS/GPS support.

WORLD CLASS MANUFACTURING

The University of Toledo organized and led a workforce-training consortium to support Chrysler's workforce development plans through its World Class Manufacturing initiative. World Class Manufacturing (WCM) is a process based on employee development and involvement that unites key cross-functional actions, such as product development, material acquisition, lean manufacturing, and quality management, to meet specified customer requirements. The Consortium was organized in the spring of 2012 and developed the process for training operators and team leaders to support the launch of the Cherokee and the continued success of the Wrangler. In addition to The University of Toledo, the Consortium includes Owens Community College, Terra State, Northwest State, Lourdes University, and Davis College. The Consortium trained more than 1,800 operators and 120 team leaders. The Consortium is putting together a plan to expand the training to suppliers of Chrysler to provide the highest quality workforce needed to meet demands of the new manufacturing workplace.

The Division of Off-Campus and Extended Programs brings quality "on campus" education and academic services to Jeep. Meeting employees educational needs in the workplace. The University of Toledo comes to the student by delivering courses and degree programs on-site at a place of employment or other location. The Division of Off-Campus and Extended Programs serves the educational needs of students who otherwise would be excluded from higher education due to the distance from UT's campus or because work schedules prohibit the student from taking courses on campus.

NORTHWEST OHIO GREENHOUSE CLUSTER

Beginning in 2001, The University of Toledo has been working to modernize and expand the Northwest Ohio Greenhouse Cluster. The cluster has approximately 66 greenhouses, is responsible for over 750 jobs, and has a local economic impact of nearly \$100 million. The greenhouses in the cluster comprise a mix of retailers and wholesalers, with the former selling directly to the final customer and the latter to big box stores such as Home Depot and Wal-Mart. In addition to the greenhouses, there are a small number of suppliers in the region (greenhouse buildings, chemicals, containers, etc.) as well as two major grower associations. The industry is dominated by the floriculture segment of the market, with an increasing amount of food grown under glass. Approximately 80% of the industry's output is sold in Ohio. UT, with support from the USDA's Agricultural Research Service and NIFA, formed an organization, Maumee Valley Growers, to promote the industry and facilitate the exchange of information among growers. In addition, the University brought new technology for use by the growers following the best practices of the Flanders greenhouse cluster in Belgium. This has resulted in growers investing in new greenhouse structures, using new lighting technology, such as LED's and strobe lights, and using bio controls. Some growers are now operating 12 months a year and selling a higher quality, branded product.

UT also works with community economic development resources that include:

- Regional Growth Partnership
- Lucas County Economic Development
- Toledo Regional Chamber of Commerce
- Toledo-Lucas County Port Authority
- Northwest Ohio Regional Economic Development
- Ohio Department of Development
- Toledo Metropolitan Area Council of Governments
- Lucas County Workforce Development Agency



Buckeye Top Fifty: 2008-2018
Ohio's High-Wage Occupations in Demand

Cluster	2008 Employment	Total Annual Openings	Projected Employment Change 2008-2018	Projected Percent Change	Average Annual Earnings	Education	Knowledge
Business Cluster							
Customer Service Representatives	83,800	3,644	10,060	12.0%	\$32,365	Moderate-Term On-The-Job Training	Customer & Personal Service; Clerical; English Language; Economics & Accounting; English Language; Mathematics
Accountants and Auditors	45,900	1,509	7,330	16.0%	\$62,837	Bachelor's Degree	English Language; Customer & Personal Service; Administration & Management
Market Research Analysts	8,780	436	2,000	22.8%	\$62,937	Bachelor's Degree	Mathematics; Engineering & Technology; English Language
Cost Estimators	10,170	411	1,850	18.2%	\$61,152	Bachelor's Degree	Education & Training; English Language; Customer & Personal Service
Training and Development Specialists	9,180	411	1,710	18.6%	\$53,177	Bachelor's Degree	English Language; Customer & Personal Service; Administration & Management
Employment, Recruitment & Placement Specialists	7,450	370	1,760	23.6%	\$51,480	Bachelor's Degree	Communications & Media; English Language; Sales & Marketing
Public Relations Specialists	6,900	276	1,130	16.4%	\$52,658	Bachelor's Degree	English Language; Law & Government; Customer & Personal Service
Compliance Officers, except Agri., Construction, Health, etc.	8,060	269	1,830	22.6%	\$53,602	Long-Term On-The-Job Training	Economics & Accounting; English Language; Mathematics
Financial Analysts	7,310	230	970	13.3%	\$73,195	Bachelor's Degree	English Language; Law & Government; Clerical
Paralegals and Legal Assistants	6,570	192	1,170	17.8%	\$44,200	Associate Degree	English Language; Law & Government; Administration & Management
Compensation, Benefits & Job Analysis Specialists	4,330	194	710	16.4%	\$54,080	Bachelor's Degree	Personal & Human Resources; English Language; Administration & Management
Real Estate Sales Agents	5,620	176	840	14.9%	\$49,213	Postsecondary Vocational Award	Sales & Marketing; Customer & Personal Service; English Language
Personal Financial Advisors	4,910	159	1,060	21.6%	\$68,691	Bachelor's Degree	Customer & Personal Service; Sales & Marketing; Economics & Accounting
Construction & Transportation							
Truck Drivers, Heavy and Tractor-Trailer	75,880	2,271	9,130	12.0%	\$39,187	Short-Term On-The-Job Training	Transportation; Public Safety & Security; English Language
Construction Laborers	28,050	552	3,640	13.0%	\$38,480	Moderate-Term On-The-Job Training	Building & Construction; Design; Mathematics
Heating, AC, & Refrigeration Mechanics/Installers	11,430	458	2,740	24.0%	\$46,280	Postsecondary Vocational Award	Mechanics; Customer & Personal Service; Mathematics
Corp and Freight Agents	2,160	101	510	23.6%	\$36,070	Moderate-Term On-The-Job Training	Transportation; Customer & Personal Service; English Language
Community & Social Service							
Medical and Public Health Social Workers	6,400	288	1,270	19.8%	\$45,510	Bachelor's Degree	Psychology; Therapy & Counseling; Sociology & Anthropology
Mental Health & Substance Abuse Social Workers	4,990	212	870	17.4%	\$37,128	Master's Degree	Therapy & Counseling; Psychology; Customer & Personal Service
Mental Health Counselors	4,110	190	970	23.6%	\$43,659	Master's Degree	Psychology; Therapy & Counseling; Customer & Personal Service
Education							
Self-Enrichment Education Teachers	7,280	303	1,910	26.2%	\$42,453	Work Experience in a Related Occupation	Education & Training; Customer & Personal Service; English Language
Instructional Coordinators	6,380	244	1,940	30.3%	\$51,638	Master's Degree	Education & Training; English Language; Psychology
Health Care							
Registered Nurses	118,880	4,175	21,020	17.7%	\$59,738	Associate Degree	Medicine & Dentistry; Customer & Personal Service; Psychology
Licensed Practical & Licensed Vocational Nurses	41,570	2,022	7,220	17.4%	\$39,915	Postsecondary Vocational Award	Medicine & Dentistry; Customer & Personal Service; Psychology
Physicians & Surgeons	27,990	974	4,000	14.3%	\$165,491	First Professional Degree	Medicine & Dentistry; Biology; English Language
Dental Assistants	9,970	438	2,510	25.2%	\$32,323	Moderate-Term On-The-Job Training	Medicine & Dentistry; Customer & Personal Service; English Language
Pharmacists	11,720	419	1,980	16.6%	\$102,357	First Professional Degree	Chemistry; Medicine & Dentistry; English Language
Medical and Health Services Managers	12,610	406	1,650	13.2%	\$83,117	Bachelors or Higher, plus Work Experience	Administration & Management; Customer & Personal Service; English Language
Dental Hygienists	7,100	323	1,780	25.1%	\$62,026	Associate Degree	Medicine & Dentistry; Customer & Personal Service; English Language
Physical Therapists	7,650	271	1,750	22.4%	\$75,338	Master's Degree	Medicine & Dentistry; Therapy & Counseling; Customer & Personal Service
Physical Therapist Assistants	4,800	220	1,510	31.5%	\$51,189	Associate Degree	Customer & Personal Service; Therapy & Counseling; Medicine & Dentistry
Respiratory Therapists	5,310	192	850	16.0%	\$50,003	Associate Degree	Customer & Personal Service; Medicine & Dentistry; Education & Training
Speech-Language Pathologists	5,080	170	770	15.1%	\$77,630	Master's Degree	English Language; Therapy & Counseling; Education & Training
Occupational Therapists	4,270	164	660	20.1%	\$74,559	Master's Degree	Therapy & Counseling; Psychology; Education & Training
Surgical Technologists	3,440	158	710	20.6%	\$38,667	Postsecondary Vocational Award	Medicine & Dentistry; Customer & Personal Service; English Language
Occupational Therapist Assistants	2,430	108	730	30.0%	\$51,293	Associate Degree	Psychology; Education & Training; English Language
Physician Assistants	1,910	99	640	33.5%	\$63,988	Master's Degree	Medicine & Dentistry; Biology; Psychology
Veterinarians	2,070	92	560	27.1%	\$60,384	First Professional Degree	Biology; Customer & Personal Service; Medicine & Dentistry
Athletic Trainers	870	60	310	35.6%	\$42,960	Bachelor's Degree	Medicine & Dentistry; Therapy & Counseling; Customer & Personal Service
Information Technology, Engineering & Science							
Computer Support Specialists	22,090	869	2,870	13.0%	\$41,746	Associate Degree	Computers & Electronics; Customer & Personal Service; English Language
Computer Software Engineers, Applications	21,470	848	6,670	31.1%	\$81,174	Bachelor's Degree	Computers & Electronics; Mathematics; English Language
Network Systems & Data Communication Analysts	11,790	721	5,090	43.2%	\$71,510	Bachelor's Degree	Computers & Electronics; Telecommunications; English Language
Computer Systems Analysts	19,140	676	2,530	13.7%	\$72,634	Bachelor's Degree	Computers & Electronics; English Language; Customer & Personal Service
Network and Computer Systems Administrators	15,910	499	2,940	18.5%	\$62,317	Bachelor's Degree	Computers & Electronics; English Language; Mathematics
Computer Software Engineers, Systems Software	10,170	334	2,480	24.4%	\$82,138	Bachelor's Degree	Computers & Electronics; Engineering & Technology; English Language
Computer and Information Systems Managers	9,780	262	1,230	12.6%	\$111,871	Bachelors or Higher, plus Work Experience	Computers & Electronics; Administration & Management; Customer & Personal Service
Civil Engineers	6,960	229	1,110	15.9%	\$73,070	Bachelor's Degree	Engineering & Technology; Design; Building & Construction
Database Administrators	4,040	188	710	17.6%	\$69,988	Bachelor's Degree	Computers & Electronics; Customer & Personal Service; English Language
Medical Scientists, except Epidemiologists	1,780	87	510	28.7%	\$68,619	Doctoral Degree	Biological; English Language; Mathematics
Biomedical Engineers	360	23	220	61.1%	\$79,206	Bachelor's Degree	Biology; Mathematics; Engineering & Technology

Selected jobs are based on growth factors in Ohio's 2008 to 2018 Occupational Projections. Included occupations were ranked in the top 200 projected new jobs and top 200 in percentage growth with average annual earnings of at least \$51,824 per year. Average annual earnings are from the May 2005 Occupational Employment Statistics survey in Ohio. *Teacher earnings are typically for a 9% month year. Earnings in each group are ranked by total annual openings. Total annual openings are the sum of projected new job growth annually plus the estimated net replacement needs, generally due to retirement.

What are the Buckeye Top Fifty?

- The Buckeye Top Fifty are high-wage occupations in Ohio that are in demand by employers and are projected to stay in demand.
- The Top Fifty pay average annual earnings of more than \$59,600.
- Within each occupational cluster, occupations are ranked by the total expected annual openings.

Why do I care?

When considering a career, examine the number of current job openings, projected growth for the career, average wages and educational requirements. It is important to note that almost all of these high-wage jobs require postsecondary education and training.



For more information...

Visit Ohio Labor Market Information on the web at <http://OhioLMI.com> or contact us at 1-888-296-7541 or 1-614-752-9494. To locate jobs in high-wage occupations, go to <http://OhioMeansJobs.com>.

John R. Kasich, Governor
State of Ohio

Michael B. Colbert, Director
Ohio Department of Job and Family Services
Office of Workforce Development
Bureau of Labor Market Information

Ohio Department of Job and Family Services

Buckeye Top Fifty UT Analysis

Buckeye Fifty	Program	UT College
Accountants and Auditors	Accounting	College of Business and Innovation
Public Relations Specialists	Communications/Marketing	College of Business and Innovation
Computer Software Engineers, Applications	Computer Network Specialist	College of Business and Innovation
Financial Analysts	Finance	College of Business and Innovation
Real Estate Sales Agents	Finance (minor in Real Estate)	College of Business and Innovation
Personal Financial Advisors	Finance or Financial Services	College of Business and Innovation
Employment, Recruitment & Placement Specialists	Human Resource Management	College of Business and Innovation
Compensation, Benefits & Job Analysis Specialists	Human Resource Management	College of Business and Innovation
Network Systems & Data Communication Analysts	Information Systems	College of Business and Innovation
Computer Systems Analysts	Information Systems	College of Business and Innovation
Network and Computer Systems Administrators	Information Systems	College of Business and Innovation
Computer and Information Systems Managers	Information Systems	College of Business and Innovation
Database Administrators	Information Systems	College of Business and Innovation
Market Research Analysts	Marketing	College of Business and Innovation
Training and Development Specialists	Organizational Leadership and Management Human Resource Management	College of Business and Innovation
Public Relations Specialists	Communications Marketing	College of Communication and the Arts
Cost Estimators	Construction Engineering Technology	College of Engineering
Network Systems & Data Communication Analysts	Information Technology	College of Engineering
Computer Systems Analysts	Information Technology	College of Engineering
Network and Computer Systems Administrators	Information Technology	College of Engineering
Computer Software Engineers, Systems Software	Information Technology	College of Engineering
Computer and Information Systems Managers	Information Technology	College of Engineering
Database Administrators	Information Technology	College of Engineering
Biomedical Engineers	Biomedical Engineering	College of Engineering
Civil Engineers	Civil Engineering	College of Engineering
Athletic Trainers	Athletic Training Program	College of Health Sciences
Medical and Health Services Managers	Health Care Administration	College of Health Sciences
Occupational Therapists	Occupational Therapy	College of Health Sciences
Physical Therapists	Physical Therapy	College of Health Sciences

CAREER SERVICES OPERATIONAL PLAN

Respiratory Therapists	Respiratory Care	College of Health Sciences
Speech-Language Pathologists	Speech Language Pathology	College of Health Sciences
Market Research Analysts	Economics	College of Language Literature and Social Sciences
Mental Health Counselors	Psychology	College of Language Literature and Social Sciences
Physicians & Surgeons	Doctor of Medicine	College of Medicine and Life Sciences
Physician Assistants	Physician Assistant Program	College of Medicine and Life Sciences
Medical Scientists, except Epidemiologists	Biology	College of Natural Science and Mathematics
Registered Nurses	Undergraduate Nursing	College of Nursing
Pharmacists	Pharmacy Doctorate	College of Pharmacy and Pharmaceutical Sciences
Mental Health Counselors	Counselor Education	College of Social Justice and Human Service
Paralegals and Legal Assistants	Paralegal	College of Social Justice and Human Service
Mental Health & Substance Abuse Social Workers	Counselor Education Social Work	College of Social Justice and Human Service
Medical and Public Health Social Workers	Social Work	College of Social Justice and Human Service
Instructional Coordinators	Curriculum and Instruction	Judith Herb College of Education