This publication offers an estimated analysis of the employment supply and demand for 1992-93 associate, baccalaureate, masters, and doctoral graduates of Michigan colleges and universities. An opening section briefly outlines the methods and definitions used for the analysis, in particular noting that placement directors and academic planning counselors at Michigan colleges and universities evaluated the supply and demand situations for each academic program offered by their respective institutions. This section also briefly analyzes demographic and economic trends affecting the labor market including increases in the minority proportion of the labor force, estimated average salaries, and future trends creating job opportunities. The rest of the document contains four sections, one for each degree level. The lists group areas of specialization and degree granting according to their estimated demand in the job market: limited supply (adequately more positions than graduates), possible shortage (a few more positions than graduates), near-balanced supply (approximately as many positions as graduates), adequate supply (a few more graduates than positions), and surplus (many more graduates than positions). (JB)
Estimated SUPPLY & DEMAND for MICHIGAN'S COLLEGE and UNIVERSITY GRADUATES

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An objective of the Collegiate Employment Research Institute is to publish materials that can be used by high school counselors, college placement officials, employers, and individuals when attempting to make education and career decisions. Reproductions of any materials within this survey are encouraged, with appropriate credits, of course.

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Placement directors and career planning counselors at Michigan colleges and universities evaluated the supply and demand situation for each academic program offered by their respective institutions. An estimated analysis of the supply and demand position for 1992-93 graduates in each is provided. The rating scale for this analysis ranges from "limited supply" (adequately more positions than college graduates) to "surplus" (adequately more college graduates than positions). Although some degrees at the associate’s, bachelor’s, master’s, and doctoral degree levels may appear very low in demand for today’s job market, it is important to realize many provide an excellent entrance for furthering education at a higher level. The definitions for each rating are as follows:

**Definitions**

- **Limited Supply**—Adequately more positions than college graduates.
- **Possible Shortage**—A few more positions than college graduates.
- **Near-Balanced**—Approximately as many positions as college graduates.
- **Adequate Supply**—A few more college graduates than positions.
- **Surplus**—Many more college graduates than positions.

Michigan State University’s *Recruiting Trends 1992-93* portrayed the current job market for new college graduates as "tight" for the fourth straight year. However, this year’s college graduates will witness a smaller decline in employment opportunities when compared to the last three years. The 2.1% decrease in opportunities for 1992-93 graduates is considerably better than before. In 1991-92 the decline was 10%; 1990-91, 9.8%; and in 1989-90, 13.3% (Scheetz 1992).

When rating geographical regions of the country for job availability, employers responding to the *Recruiting Trends* survey expected employment opportunities for new college graduates to remain quite competitive in all geographical regions of the country. Job availability was expected to be somewhat better in the southeastern, northcentral, and southwestern regions of the United States. The more competitive job markets for new college graduates were expected in the southcentral, northwestern, and northeastern regions of the country (Scheetz 1992).

According to the *Occupational Outlook Handbook*, tomorrow’s opportunities will focus primarily on population trends and racial/ethnic group composition. The labor force will decrease by ten percent by the year 2005 due to a declining population growth. The distribution of racial/ethnic groups within the labor force will also be altered by this date. According to statistics from
1990, 79 percent of the labor force was white, while African-Americans, Hispanics, and Asians/other ethnic groups constituted 11, eight, and three percent, respectively. By the year 2005, whites will maintain 73 percent of the labor force; African-Americans, 12 percent; Hispanics, 11 percent; and Asian/other ethnic groups, four percent.

The age distribution within the labor force will also be changing. Individuals between the ages of 35 and 54 will increase from 36 percent of the labor force to 48 percent.

Many of the job opportunities available into the next century will result from replacement needs. Employment in fields with small or no growth may still offer job availability because of replacement needs. Occupations with the largest numbers of replacements will generally be low paying and low status whereas occupations with relatively few replacements will deliver higher status, higher pay and require lengthier education and training. However, individuals who have donated several years to education or training may not always be marketable in another profession.

Earnings are expected to increase steadily for higher levels of education. The Occupational Outlook Quarterly reported for 1990 an average earning of $19,168 for an individual with fewer than four years of high school. A person possessing five or more years of college is expected to receive an average annual pay of $49,153.

The Follow-Up Report for 1990-91 which charts the success rate of Michigan State University graduating students reported an average salary for an individual with a bachelor’s degree of $25,455; master’s, $33,840; and doctoral degrees, $38,917. The bachelor’s degree recipients witnessed a five percent salary increase from the previous year while master’s and doctoral graduates received four and 7.7 percent, respectively (Career Development 1992).

Post-graduation status according to the Follow-Up Report listed bachelor’s degree recipients as 61 percent employed; master’s degree recipients, 68 percent; and doctoral graduates, 95 percent. Graduate school was also a factor with 21 percent of the bachelor’s degree recipients attending; 19 percent of master’s degree recipients; and 2 percent of doctoral or professional degree recipients (Career Development 1992).

Sources:


## Estimated Supply and Demand for Michigan’s College and University Graduates Of 1992-93

### ASSOCIATE’S DEGREES

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<th>Chef/Cook</th>
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<td>Civil Technologies</td>
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<td>Computer Technology</td>
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<td>Clerk Typist</td>
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<td>Corrections</td>
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<td>Court Reporting</td>
<td>Near-Balanced Supply</td>
<td>Criminal Justice</td>
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<tr>
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<tr>
<td>Dental Hygiene</td>
<td>Accounting and Computing</td>
<td>Diesel Engine Mechanics</td>
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<tr>
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<td>Office Supervision and Management</td>
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<td>Petroleum Technology</td>
<td>Technology</td>
<td>Emergency Medical Technology</td>
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<tr>
<td>Physical Therapy Assisting</td>
<td>Architecture</td>
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<tr>
<td>Physical Sciences</td>
<td>Astrophysics</td>
<td>Engineering Technology</td>
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<td>Audiology</td>
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<tr>
<td>Respiratory Therapy</td>
<td>Banking and Finance</td>
<td>Foreign Languages, Multiple Emphasis</td>
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<tr>
<td>Secretarial, Executive</td>
<td>Biological/Physical Sciences</td>
<td>Funeral Services</td>
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<tr>
<td>Secretarial, Legal</td>
<td>Biology</td>
<td>Geology</td>
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<tr>
<td>Secretarial, Medical</td>
<td>Bookkeeping</td>
<td>Graphic Arts</td>
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<tr>
<td>Stenographic</td>
<td>Business Statistics</td>
<td>Graphic/PrintingCommunication</td>
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<td>Business Data Entry Equipment</td>
<td>Heavy Equipment Maintenance</td>
</tr>
<tr>
<td></td>
<td>Business Administration and Management</td>
<td>Home Furnishings Aide</td>
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<tr>
<td></td>
<td>Business Systems Analysis</td>
<td>Illustration Design</td>
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<td></td>
<td>Business Data Programming</td>
<td>Industrial Design</td>
</tr>
<tr>
<td></td>
<td>Cardiopulmonary Technology</td>
<td></td>
</tr>
</tbody>
</table>
Industrial Management
Industrial Technology
Law Enforcement
Legal Assisting
Library and Archival Sciences
Life Sciences
Machine Tool Operation
Management Science
Manufacturing Technology
Marketing
Marketing Management
Mathematics, General
Mathematics Education
Meatcutting
Mechanical Engineering
Mechanical Drafting
Mechanical Design Technology
Mechanics and Repairs
Medical Records Technology
Medical Assisting
Medical Laboratory Technology
Medical Office Supply
Merchant Marine Officers
Metallurgical Technology
Nursing
Nursing Assistant
Occupational Therapy
Occupational Therapy, Assisting
Optometry
Physical Science
Physical Therapy
Physics
Radiograph Medical Technology
Real Estate Sales
Receptionist/Communication Operator
Restaurant Management
Retailing
Sales
Sanitation Technology
Science Education
Security Services
Small Business Management
Soil Sciences
Transportation and Materials
Moving
Typing, General Office
Welding Technology
Welding/Brazing/Soldering

Adequate Supply
- Agribusiness/Agricultural Production
- Anthropology
- Architectural Interior Design Technology
- Audiology/Speech Pathology
- Bible Studies
- Business Computer Operation
- Business/Personal Services
- Marketing
- Business Education
- Chemistry Technology
- Clinical Pastoral Care
- Communication Electronics
- Crafts, General
- Criminal Justice Administration
- Dance
- Diagnostic and Treatment Services
- Dramatic Arts
- Economics
- Family Resource Management
- Fine Arts, General
- Fire Control/Safety Technology
- Forestry and Related Sciences
- French
- German
- Graphic Arts Technology
- Graphic Design
- History
- Home Furnishings and Equipment
- Home Economics
- Humanities and Social Sciences
- Industrial Arts Education
- Industrial Equipment Maintenance
- Interior Design
- International Business Management
- Journalism
- Liberal Studies
- Major Appliance Repair
- Materials Handling
- Medical Technology
- Mental Health/Human Services Assisting
- Music, Education
- Occupational Safety/Health Technology
- Oceanography
- Office Products/Equipment Marketing
- Personal Services
- Personnel Management
- Physical Education
- Political Science/Government
- Psychology
- Public Policy Studies
- Public Relations
- Radio/TV Production, Broadcasting
- Real Estate Appraisal
- Renewable Natural Resources
- Savings and Loan Marketing
- Sheet Metal
- Small Engine Repair
- Social Sciences, General
- Social Work, General
- Sociology
- Spanish
- Speech, Debate, and Forensics
- Tourism
- Transportation and Travel Marketing
- Woodworking

Surplus
- Area Studies
- Art History
- Art Education
- Banking Marketing
- Instrumentation Technology
- Mental Health/Human Services Technology
- Music Theory and Composition
- Music History and Appreciation
- Optometric Technology
- Painting
- Philosophy and Religion
- Photographic Technology

Estimated Supply and Demand for Michigan College and University Graduates of 1992-93
Collegiate Employment Research Institute - Michigan State University
## BACHELOR'S DEGREES

### Limited Supply
- Chemical Technology
- Education of Emotionally Handicapped
- Hotel/Motel Management
- Industrial Engineering
- Industrial Production Technology
- Legal Assisting
- Nursing, General
- Radiograph Medical Technology
- Trade and Industrial Supervision Management

### Possible Shortage
- Accounting
- Architectural Design and Construction Technology
- Banking and Finance
- Bilingual/Bicultural Education
- Biochemistry/Biophysics
- Building Construction Management
- Business Data Processing
- Chemical Engineering
- Community Services
- Computer Science
- Computer Engineering
- Corrections
- Court Reporting
- Data Processing
- Education for Physically Handicapped
- Education, Reading
- Education for Deaf/Hearing Impaired
- Education for Mentally Handicapped
- Electrical Engineering
- Electrical/Electronic Technology
- Environmental and Health Engineering
- Funeral Services
- Geriatrics
- Industrial Technology
- Industrial Sales
- Industrial Arts
- Information Sciences and Systems
- Insurance Marketing
- Legal Secretarial Management Information Systems
- Management Science
- Manufacturing Technology Marketing
- Materials Engineering
- Mathematics Education
- Mechanical/Related Technologies
- Mechanical Engineering
- Medical Laboratory Technology
- Medical Assisting
- Mental Health/Human Services
- Metallurgical Engineering
- Music Education, Vocal
- Nuclear Engineering
- Occupational Therapy
- Office Supervision/Management Operations Research
- Petroleum Engineering
- Physical Therapy
- Plastics Technology
- Product Management
- Recreation Therapy
- Science Education
- Special Education, General Special Learning Disabilities
- Systems Engineering
- Technical Education
- Toxicology

### Near-Balanced Supply
- Adult Education
- Advertising
- Aeronautical Technology
- Aerospace/Astronautical Engineering
- Agribusiness/Agricultural Production
- Agricultural Engineering
- Agricultural Economics
- Agricultural Business
- Allied Health
- Anthropology
- Astrophysics
- Automotive Technology
- Biological/Physical Sciences
- Biology
- Business/Personal Services Marketing
- Business Statistics
- Business Systems Analysis
- Business and Management
- Business Administration and Management
- Chemistry, General
- Child Development/Care and Guidance
- City/Community/Regional Planning
- Civil Engineering
- Clothing and Textiles
- Communicative Technology
- Criminal Justice
- Criminology
- Dietetics
- Drafting and Technology Drawing
- Earth Science
- Education, Junior High
- Education for Visually Handicapped
- Estimated Supply and Demand for Michigan College and University Graduates of 1992-93

*Collegiate Employment Research Institute - Michigan State University*
Surplus

African Studies
Afro-American Studies
American Studies
Arabic
Archeology
Asian Studies, General
Baltic Languages
Business Home Economics
Cinematography/Film
Conservation
Ecology
European Studies
Greek
Greek, Modern
Health Care Administration
Hebrew
Humanities and Social Sciences
Italian
Latin
Lat.n American Studies
Linguistics
Literature, English
Literature, American
Music Theory and Composition
Painting
Philosophy
Religion
Wildlife Management
Limited Supply

Allied Health, Other
Anesthesiology
Geological Engineering
Management Science
Maternal/Child Health
Medical Surgical
Metallurgical Engineering
Pharmacy
Psychiatric/Mental Health
Special Learning Disabilities
Speech Pathology/Audiology
Systems Engineering

Possible Shortage

Accounting
Analytical Chemistry
Banking and Finance
Bilingual/Bicultural Education
Chemical Engineering
Chemistry, General
Composition
Computer Engineering
Computer Science
Education/Visually Handicapped
Educational Media
Educational Testing/Evaluation
Electrical Engineering
Engineering Mechanics
Hotel/Motel Management
Inorganic Chemistry
Labor/Industrial Relations
Library/Archival Sciences
Library Science
Manufacturing Science
Marketing Management
Materials Engineering
Mathematics, General
Mathematics Education
Mechanical Engineering
Medical Technology
Microbiology
Music Education
Nuclear Engineering
Nursing, General
Occupational Therapy
Operations Research
Organic Chemistry
Pharmacology, Human and Animal
Physics
Public Health
Science Education
Social Work, General
Special Education, General
Taxation
Transportation Management

Near-Balanced Supply

Adult Education
Advertising
Aerospace/Astronautical Engineering
Agricultural Economics
Agricultural Engineering
Anthropology
Bacteriology
Biochemistry and Biophysics
Bioengineering/Biomedical Engineering
Biological/Physical Sciences Biology
Biometrics/Biostatics
Business Administration and Management
Business Economics
City/Community/Regional Planning
Civil Engineering
Community College Education Administration
Criminal Justice Studies
Curriculum and Instruction
Earth Science
Education Administration

Educational Supervision
Elementary/Secondary Education Administration
English Education
English, General
Exercise Physiology
Experimental Psychology
Family Resource Management
Food Sciences
Foreign Language Education
Forestry and Related Sciences
Geophysics and Seismology
Higher Education Administration
Horticulture Science
Immunology
Individual and Family Development
Industrial/Organizational Psychology
Journalism
Marine Engineering
Mining and Mineral Engineering
Music Therapy
Organizational Behavior
Personnel Management
Public Relations
Public Administration
Reading Education
Russian
Statistics
Wildlife Management

Adequate Supply

Agribusiness/Agricultural Production
Agronomy
Area Studies
Art Education
Art History/Education
Botany
Business Education
Clinical Microbiology
Communications

Estimated Supply and Demand for Michigan College and University Graduates of 1992-93
Collegiate Employment Research Institute - Michigan State University
Creative Writing
Dramatic Arts
Economics
Elementary Education
Family Relations
Fine Arts, General
French
Geography
Geology
German
Health Sciences
History
Home Economics, General
Humanities and Social Sciences
Interior Design
Liberal Studies
Linguistics
Music Performance
Parks and Recreation
Management
Physical Education
Political Science/Government
Pre-Elementary Education
Psychology
Radio/TV
Religious Education
Renewable Natural Resources
School Psychology
Sculpture
Social Foundations
Social Sciences, General
Social Science Education
Sociology
Spanish
Teacher Education
Veterinary Medicine

Surplus

American Studies
Classics
Comparative Literature
Eastern European Studies
Greek
Italian
Latin
Painting
Philosophy

Estimated Supply and Demand for Michigan College and University Graduates of 1992-93
Collegiate Employment Research Institute - Michigan State University
DOCTORAL DEGREES

**Limited Supply**
- Analytical Chemistry
- Anatomy
- Applied Mathematics
- Computer Science
- Electrical Engineering
- Forestry and Related Sciences
- Geography
- Immunology
- Industrial Engineering
- Industrial/Organizational Psychology
- Inorganic Chemistry
- Medicine, Human
- Metallurgical Engineering
- Organic Chemistry
- Osteopathic Medicine
- Pathology
- Pharmacology, Human and Animal
- Pharmacy
- Psychology, Clinical
- Speech Pathology/Audiology
- Trade and Industrial Education

**Possible Shortage**
- Accounting
- Banking and Finance
- Biochemistry and Biophysics
- Business Administration and Management
- Chemical Engineering
- Chemistry, General
- Computer Engineering
- Dentistry
- Educational Statistics and Research
- Educational Media
- Educational Testing and Evaluation
- Engineering Mechanics
- Experimental Psychology
- Food Sciences
- Law
- Library/Archival Sciences
- Materials Engineering
- Mathematics Education
- Mathematics, General
- Mechanical Engineering
- Microbiology
- Nursing, General
- Operations Research
- Physical Chemistry
- Physics
- Physiological Psychology
- Physiology, Human and Animal
- Reading Education
- School Psychology
- Science Education
- Social Psychology
- Social Work, General
- Special Education, General
- Statistics
- Systems Engineering
- Technical Education
- Transportation Management
- Zoology

**Near-Balanced Supply**

**Adequate Supply**
- Communications
- Curriculum and Instruction
- Developmental Psychology
- Economics
- Education Administration
- English Education
- English, General
- Higher Education Administration
- History
- Horticulture Science
- Industrial Arts Education
- Marketing Management
- Music Education
- Parks and Recreation Management
- Personnel Management
- Political Science/Government
- Public Administration
- Renewable Natural Resources
- Sociology
- Student Counseling
- Teacher Education
- Veterinary Medicine
- Wildlife Management

**Surplus**
- Dramatic Arts
- Entomology
- Geology
- Musicology
- Physical Education
- Social Foundation

*Estimated Supply and Demand for Michigan College and University Graduates of 1992-93*
*Collegiate Employment Research Institute - Michigan State University*
The Collegiate Employment Research Institute was established by Michigan's Legislature in 1984. The Institute is charged with the task of examining issues on career development and employment for college graduates.

Various research projects are underway, including the study covered in this report, to provide information for use by career counselors, college placement officials, human resources administrators, and individuals when attempting to make career planning and job campaigning decisions.

If you have any questions about this study or any other Institute project, please contact a member of the Institute.

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If so, please send any corrections, with a copy of this label, to the address above.