15 Industries with Highest Talent Demand

- Semiconductor & Optoelectronics
- Network communications
- IT distribution channels
- Telecommunications services
- Information services
- Software
- Computer

- Financial services
- Wholesale & retail
- Cleaning supplies & beauty
- Broadcasting & Media
- Hotel
- Automotive industry
- Food
- Textile

More than half of them are IT related.

Source: Common Wealth Magazine
2013 Average Monthly Salary - for Male

Source: Directorate General of Budget, Accounting and Statistics, Executive Yuan
2013 Average Monthly Salary - for Female

<table>
<thead>
<tr>
<th>Sector</th>
<th>Salary (NT $)</th>
</tr>
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<tbody>
<tr>
<td>Postal services</td>
<td>56011</td>
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<tr>
<td>Telecommunications</td>
<td>55698</td>
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<tr>
<td>Finance and Insurance</td>
<td>53534</td>
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<tr>
<td>Data processing &amp; information providing</td>
<td>52455</td>
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<tr>
<td>Computer system design services</td>
<td>50711</td>
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<tr>
<td>Information and communications services</td>
<td>49055</td>
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<tr>
<td>Sales and office support service</td>
<td>45076</td>
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<tr>
<td>Professional, scientific, and technical service</td>
<td>43094</td>
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<tr>
<td>Corporate management and consultancy</td>
<td>42752</td>
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<tr>
<td>Accounting Services</td>
<td>41036</td>
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<tr>
<td>Real Estate</td>
<td>36275</td>
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<tr>
<td>Private security and detective services</td>
<td>34733</td>
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<tr>
<td>Manufacture of computer, electronic and optical products</td>
<td>30693</td>
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<tr>
<td>Accommodation and food</td>
<td>25834</td>
</tr>
<tr>
<td>Education Services</td>
<td>20529</td>
</tr>
</tbody>
</table>

Source: Directorate General of Budget, Accounting and Statistics, Executive Yuan
Different pay for the same job—a social issue

Source: Directorate General of Budget, Accounting and Statistics, Executive Yuan
Top 10 Information Industries

- Electronic components
- Semiconductor
- Computer system
- Computer peripherals
- Software Application Design
- Photonics and communications equipment and devices
- MIS integration
- Internet
- Multimedia image and video processing
- Optics, watches, and other precise machinery

Source: Global Views Monthly
Careers in Information

- Computer and information technology consultant
- Software designer and engineer
- Web design and development
- System analyst
- Computer analyzing and programming
- Computer operating and managing
- Technician for user services

- Telecommunication engineer and consultant
- Managing, consulting
- Commerce analyst
- Financial and banking sector
- Information department of industries and government
- Logistics and administrative support
- Secretary, assistant
- Teaching, researching

Accounts for almost 60% of job vacancies every year!

Source: Global Views Monthly
Information Technology is Everywhere

- Camera → computer with camera lens
- Mobile phone → computer with wireless communication capability
- iPod → computer that plays and controls music
- Car → computer with wheels
- Smart Phone → a mini computer
Information Network is Everywhere

- Communication: E-mail, MSN, Skype, Facebook, Google Phone...
- Search: Google, Yahoo, Bing
- Shopping: eBay, Amazon, ...
- Map: Google Earth, online driving directions
- Game: online poker, video games
- Sharing: Peer-2-Peer file sharing
Information services is everything about generating, recording, processing, storing, searching, displaying and disseminating information.
Information Technology Applications

- Artificial Intelligence

- Roomba
- Mars Rover
- CMU’s Sandstorm
Information Technology Applications

• Animation
Information Technology Applications

• Operating Platform & Search Engine

Did you mean: computer science
Information Technology Applications

- Medicine, Genomics
Information Technology Applications

- Consumer Electronic Products
Information & Cranial Neurology

- Use computer to explore the secrets of cranial nerves

Light traveling into the eye

Brain activity: what it looks like when you think

A neuron: your brain is made up of millions of these
Information & Sports: Aqua Robot
Information & Sports: RoboCup
Information & Health Care

Robot Flo speaking and dancing!
Information & Biology

We can use computer science to find patterns in DNA, model biological systems, determine the structure of molecules, and much much more...
Information & Art
Information & Economics

TAC/SCM Scenario

Agent
- automated
- optimizing

Suppliers
- strict MTO
- variable supply and prices

Manufacturers
- limited capacity
- competition for uncertain supplies and orders

Customers
- different levels and variability of demand
- "hard" due dates

Offers

RFQs & orders

Production schedule

Delivery schedule

RFQs & orders

Offers
Our course groups

- Basic programming
- Advanced programming
- Basic hardware
- Theory
- Mathematics
- Software system
- Hardware system
- Professional Elective Programs
Professional Elective Programs

- Program of Multimedia Technologies and Applications
- Program of Network and System
- Program of Software Systems and Applications
- Digital Life Technology Program
Program of Multimedia Technologies and Applications

- Introduction to Image Processing
- Introduction to Digital Signal Processing
- Introduction to Virtual Reality
- Introduction to Soft Computing
- 3D Computer Graphics on Game Development
- Computer Game Architecture and Design
- Multimedia Systems
- Computer Vision
Program of Network and System

- Introduction to Cloud Computing
- Introduction to Parallel Computing
- Introduction to Information Security Management System
- Introductory VLSI Design
- Introduction to Embedded System Design
- Graph Theory
- Information Security
- Data Communications
- Wireless Networks
- Network Programming Design
- Computer Network Practice
- Internet Protocols
Program of Software Systems and Applications

- Introduction to Artificial Intelligence
- Introduction to Bioinformatics
- Algorithm Design and Analysis
- Internet System Design
- Internet System Practice
- XML Design and Applications
- Data Mining and Applications
- Advanced Computer Programming
- Database Systems
- Software Engineering
- Information Retrieval
- System Programming
Digital Life Technology Program

- Introduction to Distributed Systems
- Introduction to Image Processing
- Introduction to Computer Networks
- Introduction to Embedded System Design
- Introduction to Optimization Methods
- 3D Computer Graphics on Game Development
- Mobile Device Programming Design
- Data Mining and Applications
- Database Systems
- Computer Networks
- Multimedia Systems
- Wireless Networks
- Principles of Communications
Careers & Prospects

- Graduate with bachelor's degree
- Military service
- Graduate school
- Enter job market
- Take a break
- Start own business
Graduate school

In Taiwan
Domestic

Recommendation /application

Examination

Related tests

Application

Other Country
Abroad

Five-year
program
NDHU CSIE—5 Year BS & MS option

- Beginning from the 2nd semester of the 3rd year, undergraduate students can apply for the permission to enroll in graduate-level courses. Once approved, such students become “pre-qualified graduate students”.

- The pre-qualified graduate students should receive their bachelor degrees on or before the 2nd semester of the 4th year (or the 8th semesters in total), and participate in the examination or the application selection to enter the master program. Once approved, such students become true graduate students of CSIE.

3+2 Benefits

Pre-Qualified Graduate Students pay ½ of tuition at their 4th BS year

$50,000 NTD Scholarship for graduate students with strong academic performance

Receiv Master Degree in 1 year

Study graduate-level classes early, Pay Less for costly graduate tuition
Enter job market

- Electronics and information related industries
- Information application related positions
Software and networks

Telecommunications and communications related industries

Computer and consumer electronics manufacture

Optoelectronic and optical related industries

Semiconductor related industries

Electronic components and parts

Electronics and information related industries

Source: 104 Job Bank
Software and networks related industries

- Computer system integration services industry
- Computer software services industry
- Internet related industries
- Multimedia related industries
- Digital content industry
- Other industries related to software and networks

Source: 104 Job Bank
Computer and consumer electronics manufacture

Computer and peripherals manufacture

Data storage and related devices manufacture

Consumer electronics manufacture

Source: 104 Job Bank
Telecommunications & communications related industries

- Telecommunication related industries
- Communication equipment and devices related industries
- Other telecommunications and communications related industries

Source: 104 Job Bank
Optoelectronic industry

Optical equipment and materials manufacture

Optoelectronic and optical related industries

Source: 104 Job Bank
Electronic component related industries

- PCB manufacture
- Passive electronic components manufacture
- Other electronic components and parts manufacture

Source: 104 Job Bank
Semiconductor related industries

- IC design
- Semiconductor manufacture
- Other semiconductor related industries

Source: 104 Job Bank
Program of Network & Systems Careers

- Basic hardware
- Hardware system
- Elective courses
- Telecommunication and mobility related industries
- Embedded system applications
  - Cloud computing applications
  - VLSI (Very Large Scale Integration)
  - Parallel computing
  - Internet related industries
  - Wireless network applications
  - fault-tolerant computing
  - Telecommunication and mobility related industries
  - Embedded system applications
Program of Multimedia Technologies and Applications

Careers

- Signal/image processing
- Multimedia related industries
- 3D images related industries
- Pattern recognition
- Virtual reality
- Information security
- Cryptography

Advanced programming

Theories and elective courses

- Basic programming

- Intelligent human-machine interface
- Digital learning
Basic programming

Advanced programming

Software system

Program of Software Systems and Applications
Careers

Analysis and integration of system design

Computer software services

Data construction and management

Data mining and analysis

Software development

Bioinformatics

Artificial intelligence

Computer chess match
Digital Life Technology Program

Careers

- Basic programming
- Advanced programming
- Elective courses

- Digital Content Industry
- E-Learning
- Mobile device
- Game industry
- Virtual reality

- Consumer electronics manufacture
- Computer system integration service

Job
Every industry needs information technology.

- Sales, accounting, logistics, administrative support
- Banking, commerce, manufacturing
- Government information department
- Market search, system establishment, data analysis
- Teaching, managing, consulting…etc.
Start your own business

- Idea
- Funding
- Techniques
- Management
- Marketing
- Services
- ...
Plan to take a break

- Reasons
  - Temporary job loss
  - Short-term study
  - Training for the next step
  - Travel
  - Just need a break
- Can be constructive with a proper plan.
- Need to plan and prepare carefully.
- Take a break, and hit the road again!
Career Planning Resources

- Section of Graduates' Placement and Alumni Service, Office of Student Affairs, NDHU
  (http://www.student.ndhu.edu.tw/)
- Bureau of Employment and Vocational Training, Ministry of Labor, Taiwan
  (http://www.ejob.gov.tw/)
- National Youth Commission, Executive Yuan, Taiwan
  (http://www.nyc.gov.tw/)
- 104 Job Bank
  (http://www.104.com.tw/)
- Cheers Magazine
  (http://www.cheers.com.tw/)
A Smart Choice

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