

ACS Webinars™



We will start momentarily at 2pm ET



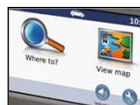
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1

Upcoming ACS Webinars™

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Tuesday, March 1, 2011

Planning Your Job Search, Resume Writing, Interviewing Skills

A four-part ACS Webinar series to help you maximize your job-search effort.



Thursday, March 3, 2011

Valuable Resources for Science and Engineering Consultants

John Newport, Partner at Chemventive LLC and ChemInnoLab LLC.

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2

Have Questions?



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3

ACS WEBINARS™ February 24, 2011



Employment (and Un-employment) Trends in the Chemical and Pharma Industries



Roger Moncarz,
BLS



Brian Roberts,
BLS



Gareth Edwards,
ACS



Moderator:
David Harwell,
ACS Careers


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4


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ACS Chemists and the Chemical Workforce

A look at employment (and unemployment) of chemists by several measures

Gareth Edwards, Research Associate,
American Chemical Society, Department of Member Research



What is the recession?

- Unemployment for 2010 as reported by the BLS reached 9.6%.
- Millions of jobs have been lost.
- The largest predictor of unemployment is level of education.

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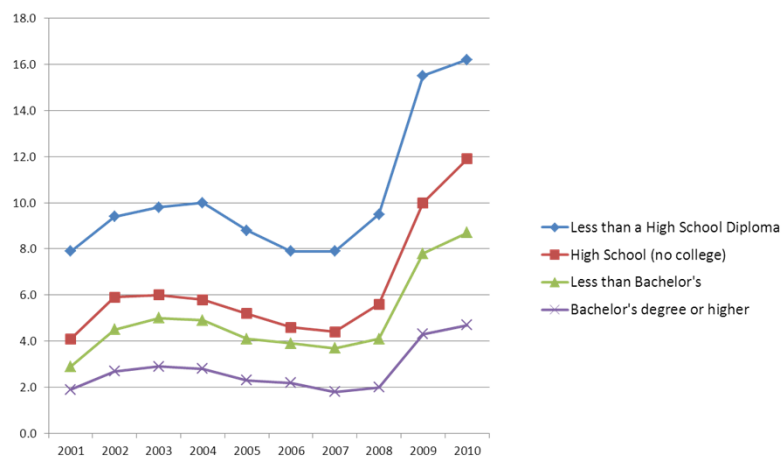
Who is affected the most?

- The lower the education level, the higher the unemployment.
- High school graduates and below have suffered the brunt of the recession.
- People with bachelor's degrees and higher have been relatively "insulated" from experiencing the full effects of the recession.

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7

Unemployment by Educational Attainment



Source: BLS Table A-4. Employment status of the civilian population 25 years and over by educational attainment (not seasonally adjusted)

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8

Chemistry is a Learned Profession



- The stratified nature of unemployment data has led some to refer to this as a “blue-collar” recession.
- Chemists are highly educated and have always had lower unemployment than the general US workforce.
- Over 63% of ACS chemists have a PhD degree and over 99.7% have a bachelor’s degree or higher.

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9

How Unemployment is Measured



- People with jobs are *employed*.
- People who are jobless, looking for jobs, and available for work are *unemployed*.
- People who are neither employed nor unemployed are *not in the labor force*.

Source: http://www.bls.gov/cps/cps_htgm.htm

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10

ACS Data Collection

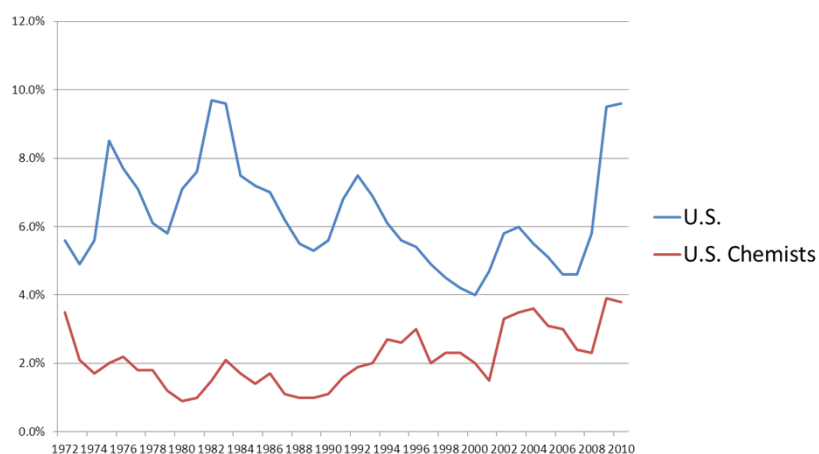


- An employment survey is sent to domestic regular ACS members under 70 who are not retired, not student, and not emeritus.
- Last survey conducted in March to July of 2010.
- Measures education level, base compensation, level of employment, total income, and work specialization.

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11

Chemical Unemployment versus US Unemployment (1972-2010)



Sources: BLS Current Population Survey, ACS Comprehensive Salary and Employment Survey

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12

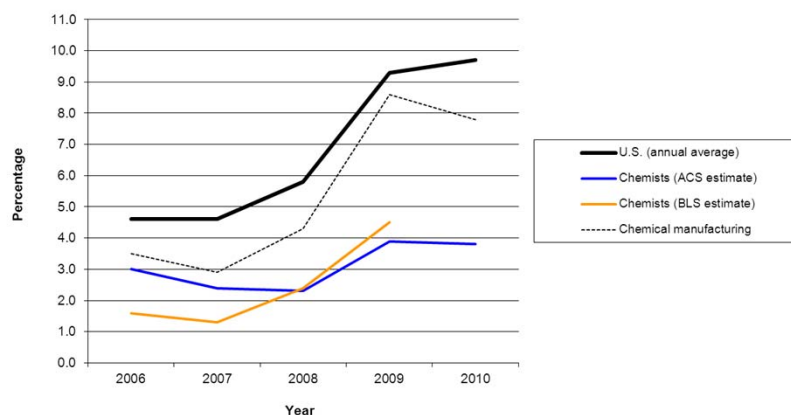


Chemical Unemployment

- Unemployment as of March 2010 was 3.8%, compared with 3.9% in March 2009
- These two years have been the highest level of unemployment since yearly measures began in 1972.



Unemployment is Not Evenly Distributed



SOURCE: U.S. Bureau of Labor Statistics Current Population Survey and ACS Salary and Employment Surveys

Underemployment and Barely Attached Workers



- Of those who were unemployed, the median time of unemployment was 10 months.
- Chemists may taking positions below their qualifications to gain employment (underemployed).
- The unemployment rate has stabilized from people “dropping out” of the workforce combined with people finding underemployment.

Summary



- Unemployment seems to have stabilized for the moment, but full recovery may take much longer.
- New graduates in chemistry are experiencing the worst unemployment of any cohort.
 - 9.4% in 2008, and 15.9% in 2009
- The loss of jobs may be a permanent adjustment without the typical recovery of other recessions.



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Further Information

www.acs.org/salary

BLS Data on Chemistry Occupations

February 24, 2011

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Overview

- Background information
- Employment data
- Resources for additional information



19

Employment Projections Background

- 10 year projections made every two years
- 2008-2018 projections cover over 700 occupations and 200 industries
- Projections are used to produce the *Occupational Outlook Handbook*, which has been published for over 60 years



20

BLS Data

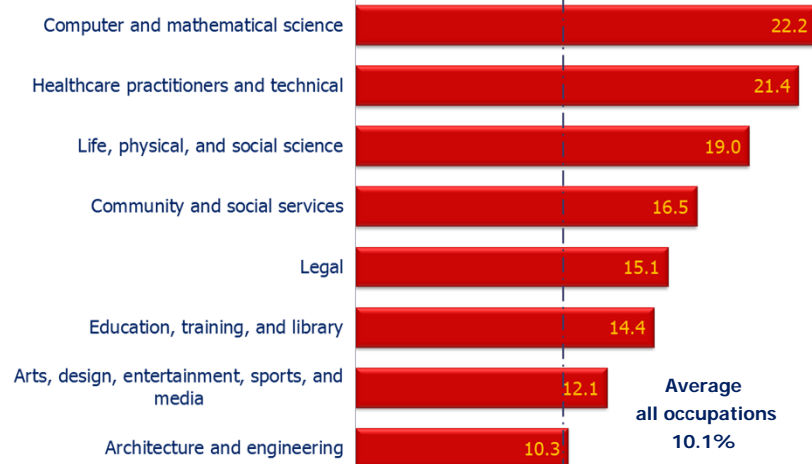
Employment data for Chemistry occupations



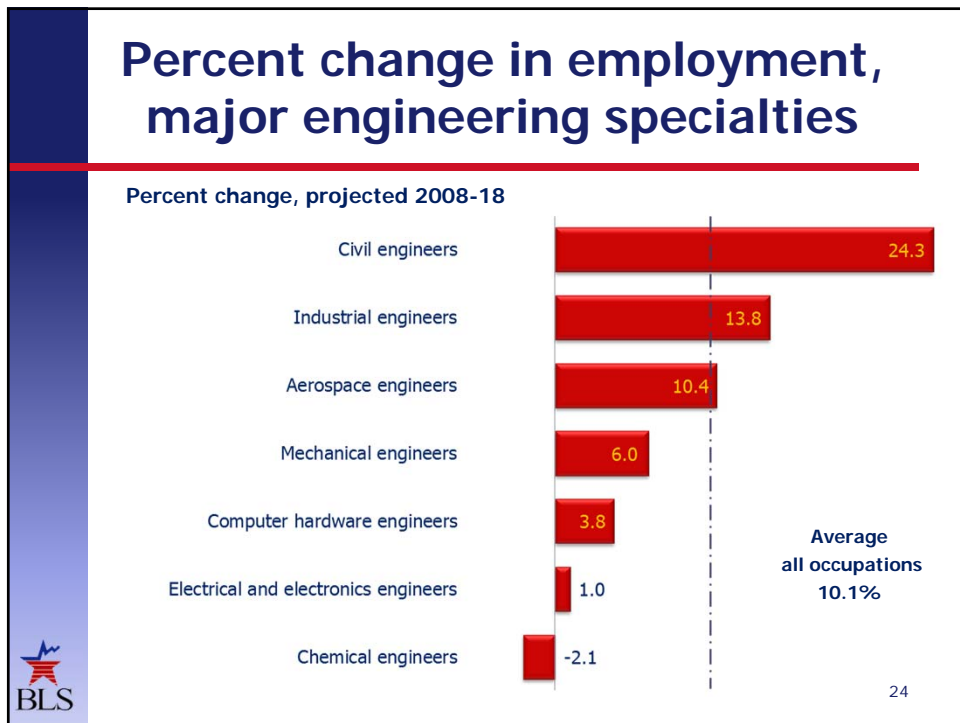
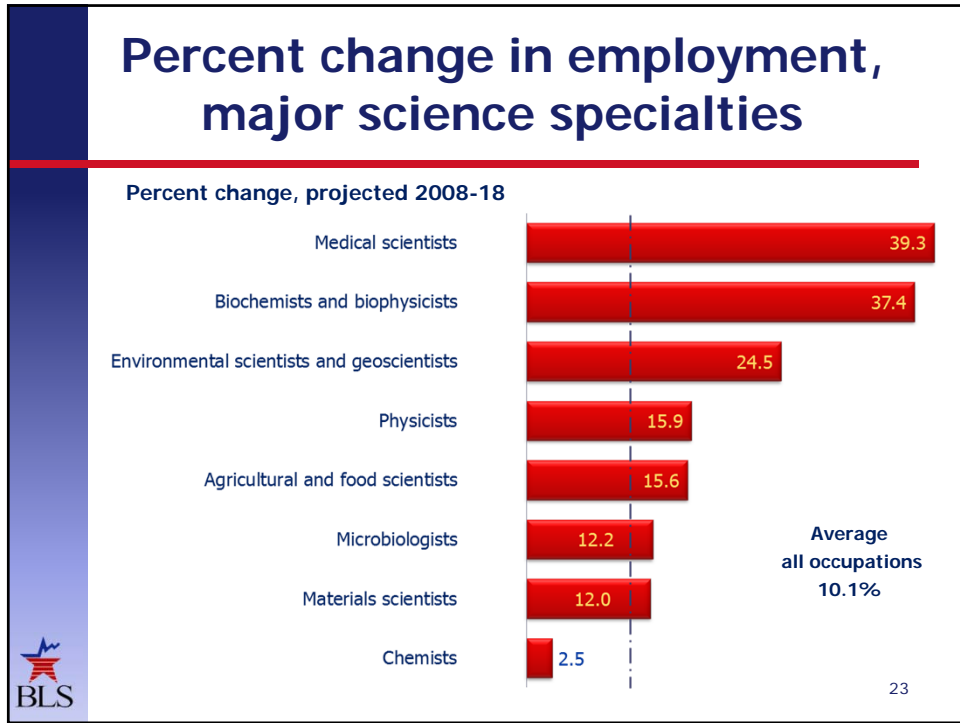
21

Percent change in employment in professional and related occupations

Percent change, projected 2008-18



22



Detailed Projections for Chemical Manufacturing

Industry	2008 Employment	2008-18 Projected Growth Rate
Total, all chemical manufacturing	849,800	-6.7%
Pharmaceuticals	289,800	6.1%
Basic chemicals	152,100	-34.3%
Soap, cleaning compound, and toilet preparation	108,200	-6.6%
All other chemical manufacturing	299,700	-23.9%



25

Detailed Projections for Chemical Engineers

Industry	2008 Employment	2008-18 Projected Growth Rate
Total, all chemical engineers	31,700	-2.1%
Chemical manufacturing	9,700	-16.4%
Engineering services	4,700	12.8%
Scientific research	4,000	12.8%



26

Detailed Projections for Chemists

Industry	2008 Employment	2008-18 Projected Growth Rate
Total, all chemists	84,300	2.5%
Chemical manufacturing	29,100	-6.0%
Scientific research	14,300	.5%
Government	10,500	8.0%
Testing laboratories	8,300	10.1%



27

Detailed Projections for Materials Scientists

Industry	2008 Employment	2008-18 Projected Growth Rate
Total, all materials scientists	9,700	12.0%
Chemical manufacturing	2,200	-.5%
Scientific research	2,600	26.5%
Management of companies	1,600	12.4%
Educational services	500	20.8%



28

Detailed Projections for Biochemists and Biophysicists

Industry	2008 Employment	2008-18 Projected Growth Rate
Total, all biochemists and biophysicists	23,200	37.4%
Scientific research	10,100	50.5%
Pharmaceutical manufacturing	6,700	22.2%
Educational services	1,900	34.7%



29

Employment Outlook: 2008-18

Resources for Additional
Information



30

BLS Data Sites

- Projections by occupation and industry:

www.bls.gov/emp

- ▶ Chemists:

ftp://ftp.bls.gov/pub/special.requests/ep/ind-occ.matrix/occ_pdf/occ_19-2031.pdf

- ▶ Materials Scientists:

ftp://ftp.bls.gov/pub/special.requests/ep/ind-occ.matrix/occ_pdf/occ_19-2032.pdf

- ▶ Biochemists and Biophysicists:

ftp://ftp.bls.gov/pub/special.requests/ep/ind-occ.matrix/occ_pdf/occ_19-1021.pdf

- ▶ Chemical Engineers:

ftp://ftp.bls.gov/pub/special.requests/ep/ind-occ.matrix/occ_pdf/occ_17-2041.pdf



31

BLS Data Sites

- Current data (employment and wages):

www.bls.gov/oes

- State-level Projections:

www.projectionscentral.com



32

Occupational Outlook Handbook

www.bls.gov/ooH

The screenshot displays the Occupational Outlook Handbook (OOH) website for the 2010-11 Edition. The page features the Bureau of Labor Statistics logo and navigation tabs for Home, Subject Areas, Databases & Tables, Publications, and Economic Releases. A sidebar on the left lists various occupational categories such as Management, Professional, Service, Sales, Administrative, Farming, Construction, Installation, Production, Transportation, and James Forde. The main content area includes a search bar, a list of occupations, and a 'Coming this Fall' section. The page also contains a 'Ways to use the Occupational Outlook Handbook site' section with three numbered steps.

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Economic Paradigm Shift



Dow Jones Industrial Average [Watch this index](#)

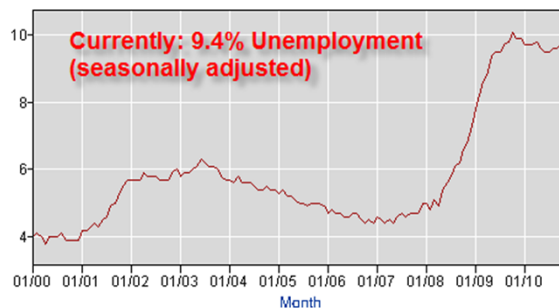
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36

US Unemployment



- Over 15M unemployed workers; half long-term unemployed
- Labor force has actually declined in the past two years as people withdraw from the job market
- Current unemployment numbers are artificially low; the real unemployment rate is probably around 11%

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37

US Worker Surplus



- We must add 337k jobs per month if we are to recover in three years, or 260k per month to recover in five years
- This has never happened in the history of the US, so it is very unlikely that we will come out of this problem in the next 5 years
- Projected recovery will be long term (10 years projected based on rate of job creation) with a surplus of workers for some time to come

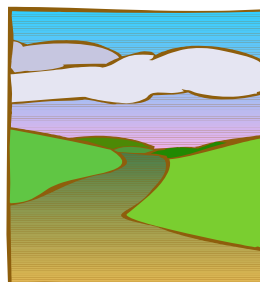
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38

Resources for the Unemployed



- Employment Guides
- Job clubs
- Career Consultants
- Training Discounts
- Unemployment Dues Waiver
- Salary Information and Demographics
- Deferred ACS Insurance Premiums
- ACS Web Edition Journal Subscription Waiver



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39

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42

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43