

Commission on Professionals in Science and Technology

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Associate Director



National Research Council
Committee on Enhancing the Master's
Degree in the Natural Sciences

March 28-29, 2007



<http://www.cpst.org>

... Your workforce data source.

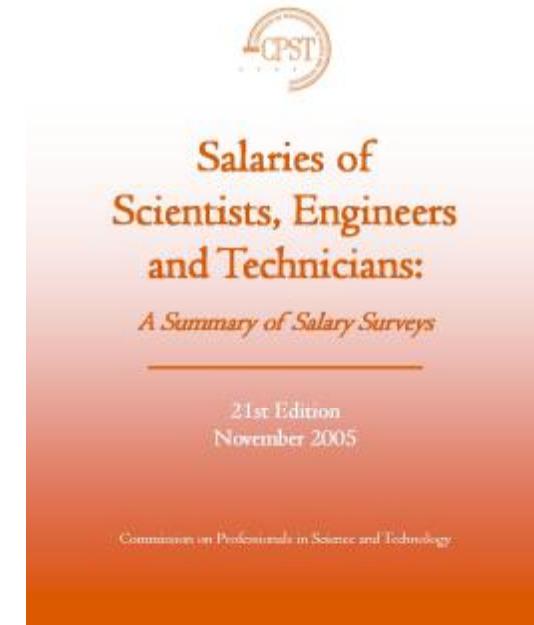
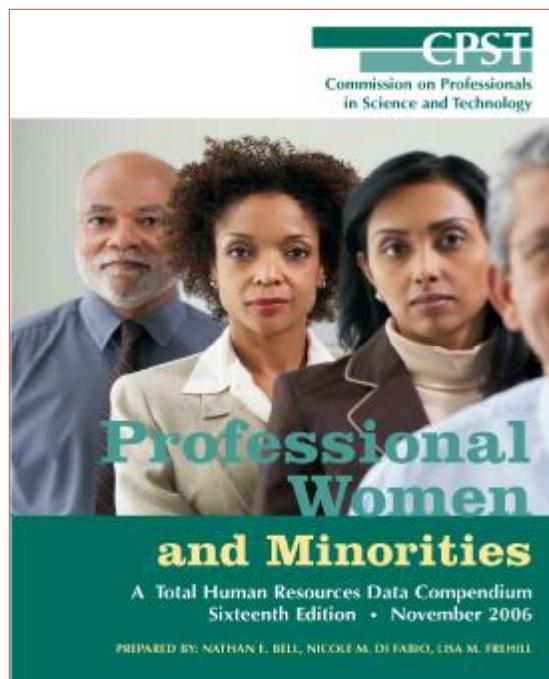
About CPST

- § Founded in 1953
- § Non-Profit Membership Organization
 - § Professional Scientific Societies
 - § Corporations
 - § Academic Institutions
 - § Foundations
 - § Individuals
- § Participating Organization of AAAS

Mission

- § Collect, analyze, and disseminate reliable information about U.S. STEM workforce
- § Promote best programs of education and training of STEM workers
- § Develop policies for the utilization of scientific and technical human resources

Flagship Publications



<http://www.cpst.org>

... Your workforce data source.

What We Don't Know

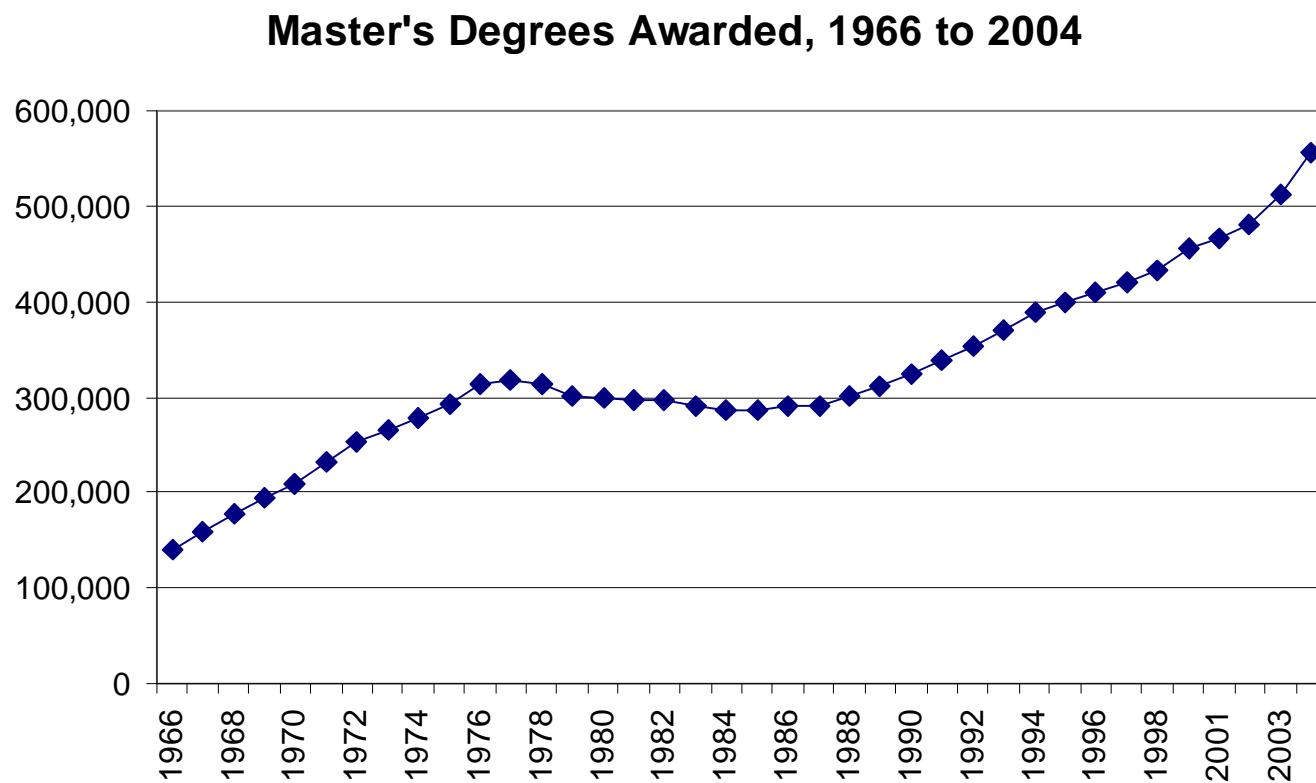
- § No comprehensive national data on enrollments in STEM at the master's level
- § No comprehensive national data on sources and mechanisms of support for master's students
- § No national data on the type of master's degree awarded, i.e. en route, stand alone, consolation prize, professional

What We Know

Master's degree data are available by:

- § Academic institution
- § Institutional control (public/private)
- § Fine field (6-digit CIP code)
- § Sex
- § Race/ethnicity
- § Citizenship

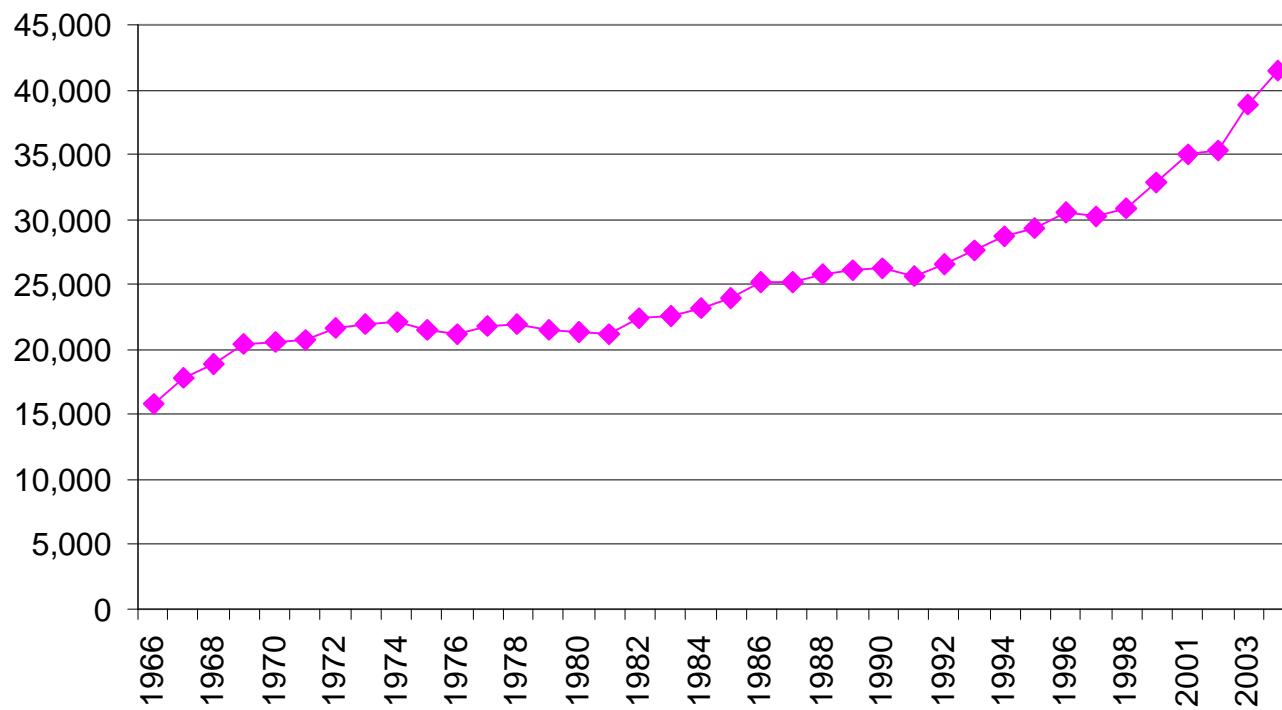
Master's Degree Production Quadrupled Between 1966 & 2004



Source: CPST, data derived from National Science Foundation, WebCASPAR Database

Slower Growth for Natural Sciences Master's Degrees

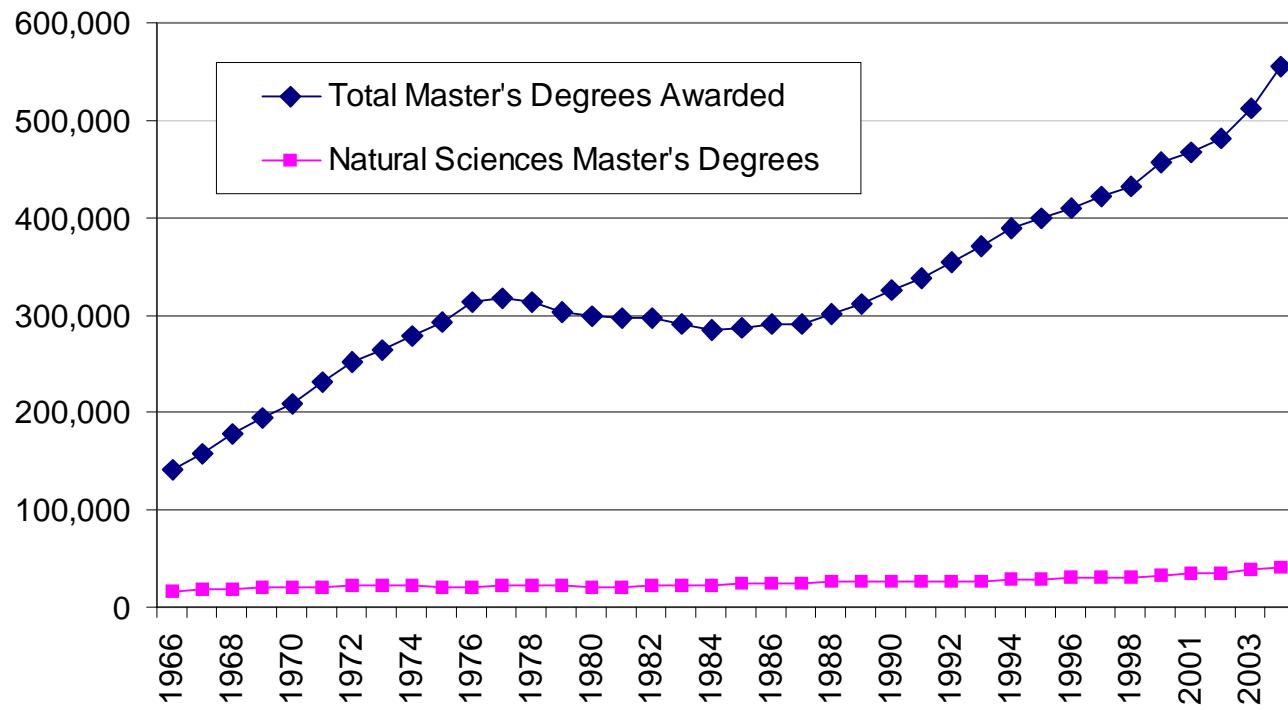
Natural Sciences Master's Degrees, 1966 to 2004



Source: CPST, data derived from National Science Foundation, WebCASPAR Database

Less than 10% of Master's Degrees are in the Natural Sciences

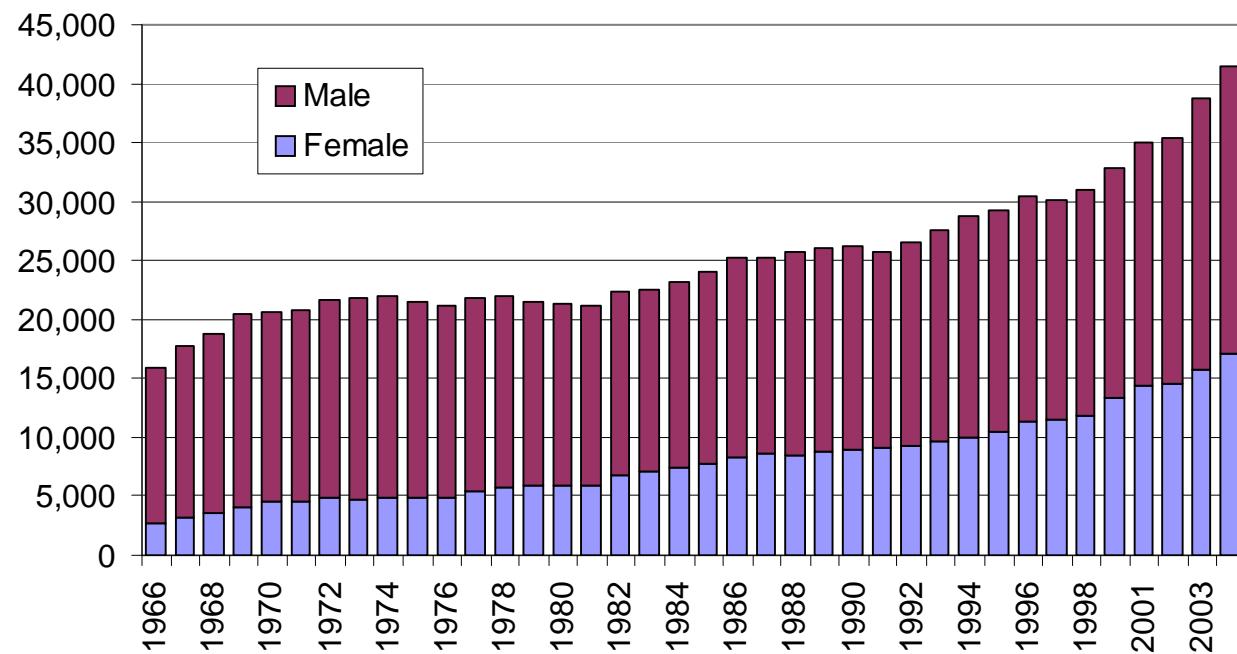
Master's Degrees Awarded, 1966 to 2004



Source: CPST, data derived from National Science Foundation, WebCASPAR Database

Women earned 41% of N.S. Master's Degrees in 2004

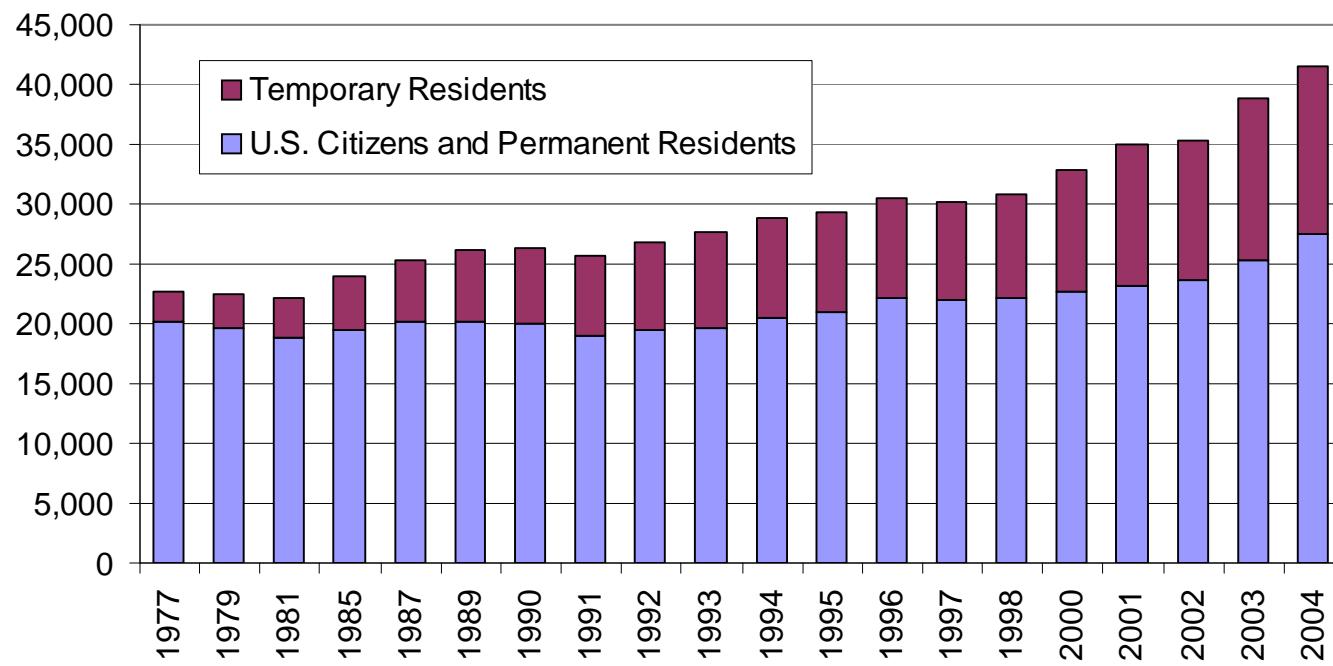
Master's Degrees by Sex, 1966 to 2004



Source: CPST, data derived from National Science Foundation, WebCASPAR Database

Increase in N.S. Master's Degrees to Temporary Residents

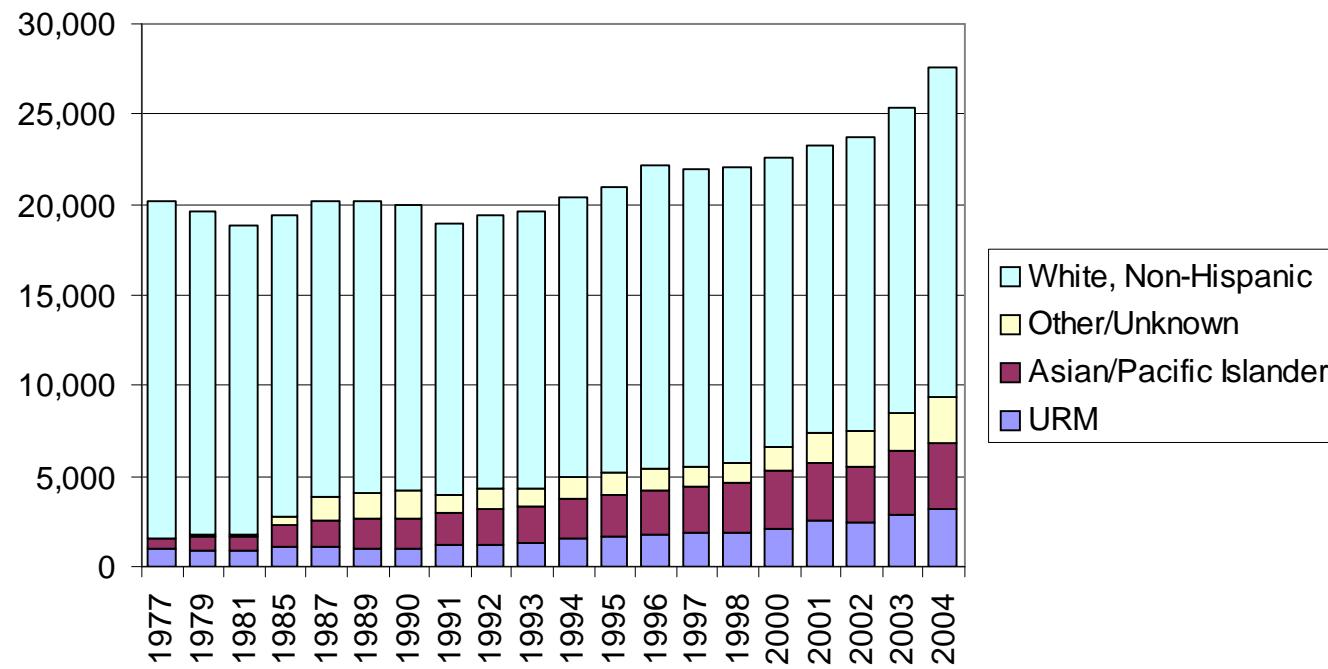
**Natural Sciences Master's Degrees by Citizenship,
1977 to 2004**



Source: CPST, data derived from National Science Foundation, WebCASPAR Database

Increasing Numbers of Minorities Earn Natural Sciences Master's

**N.S. Master's Degrees to U.S. Citizens & Permanent
Residents by Race/Ethnicity, 1977 to 2004**



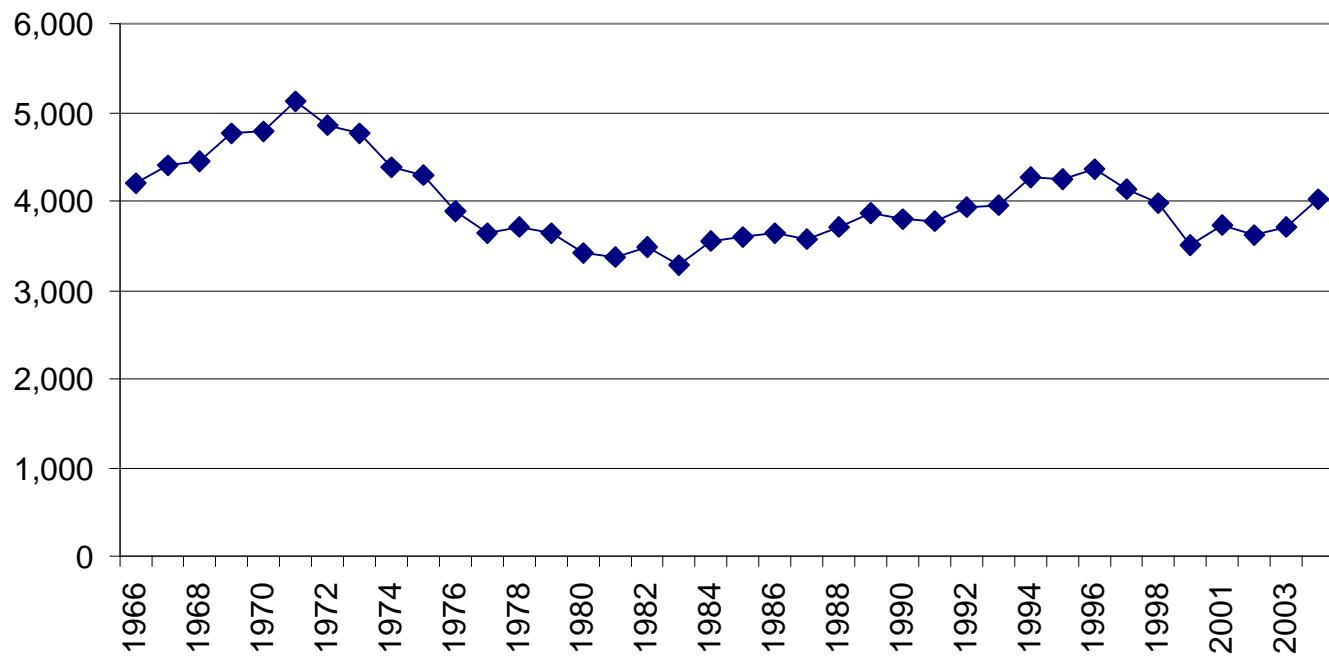
Source: CPST, data derived from National Science Foundation, WebCASPAR Database

Changing Demographics in Natural Sciences Master's Recipients

	1977	2004
White Male	62%	25%
White Female	20%	18%
Underrepresented Minority Male	3%	4%
Underrepresented Minority Female	2%	4%
Asian/Pacific Islander Male	2%	5%
Asian/Pacific Islander Female	1%	4%
Temporary Resident Male	9%	21%
Temporary Resident Female	2%	12%

Fewer Physical Sciences Master's were Awarded in 2004 than in 1966

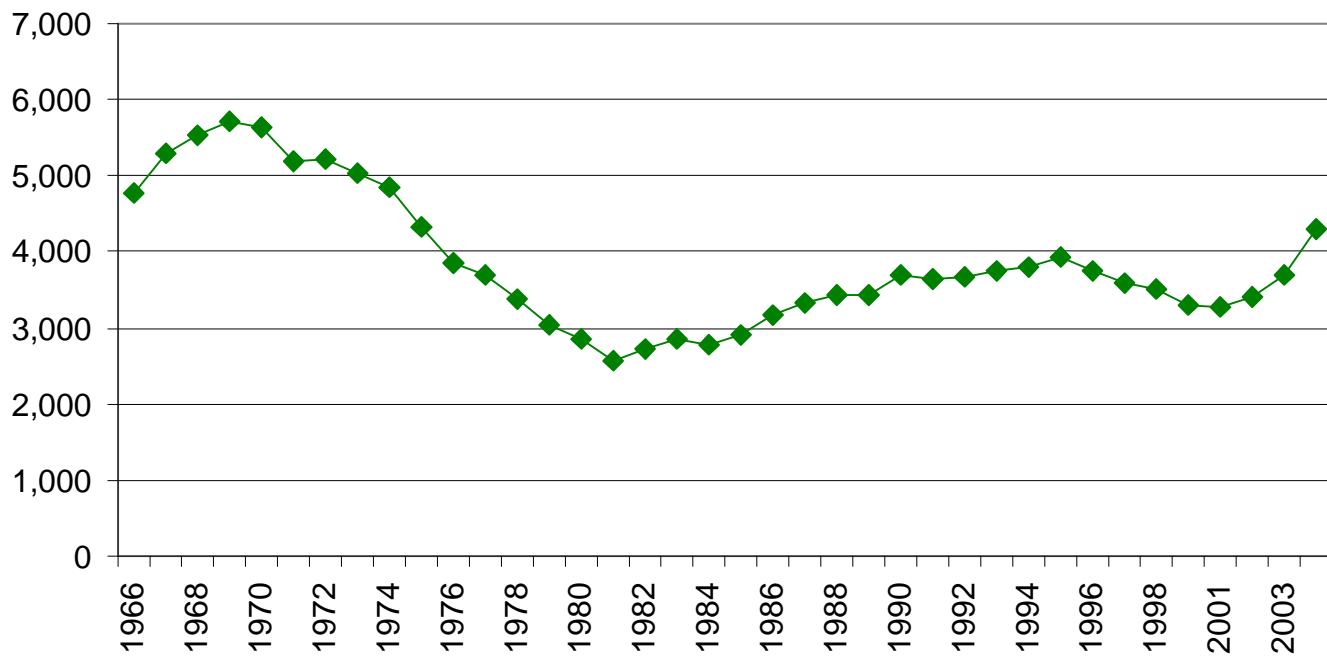
**Master's Degrees in the Physical Sciences,
1966 to 2004**



Source: CPST, data derived from National Science Foundation, WebCASPAR Database

The Story is Much the Same in Mathematics and Statistics

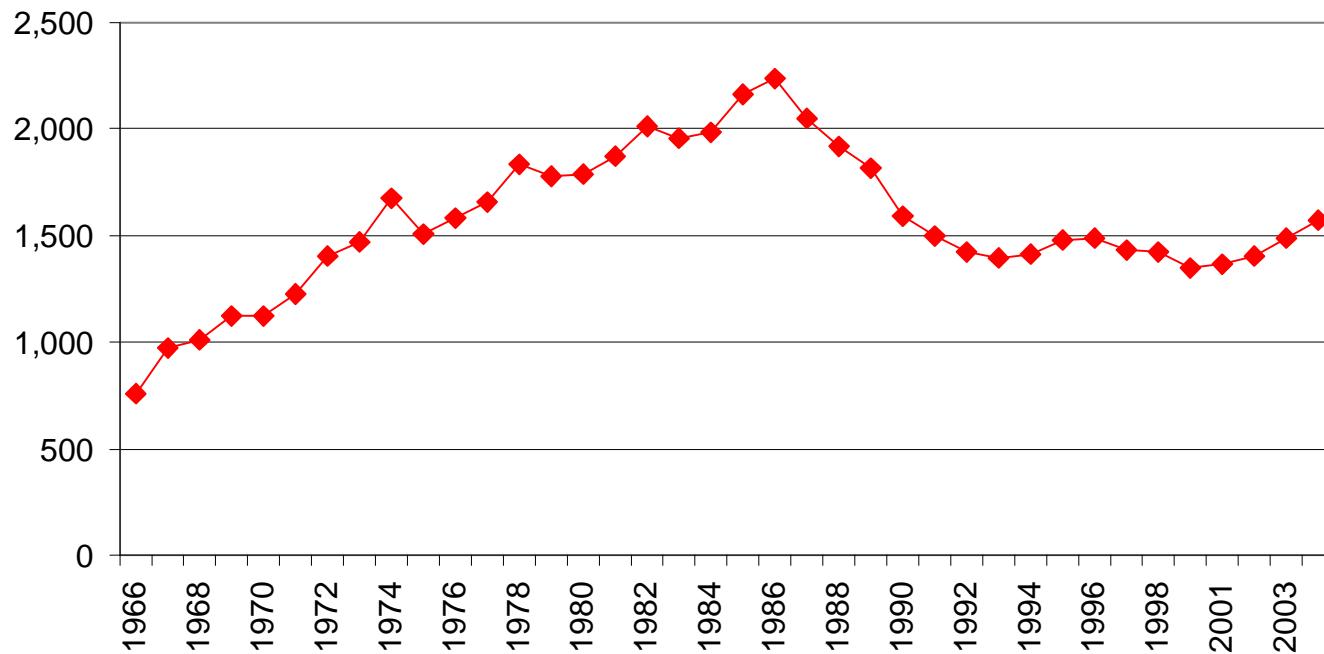
**Master's Degrees in the Mathematics and Statistics,
1966 to 2004**



Source: CPST, data derived from National Science Foundation, WebCASPAR Database

EAO Sciences Degree Production Doubled Between 1966 and 2004

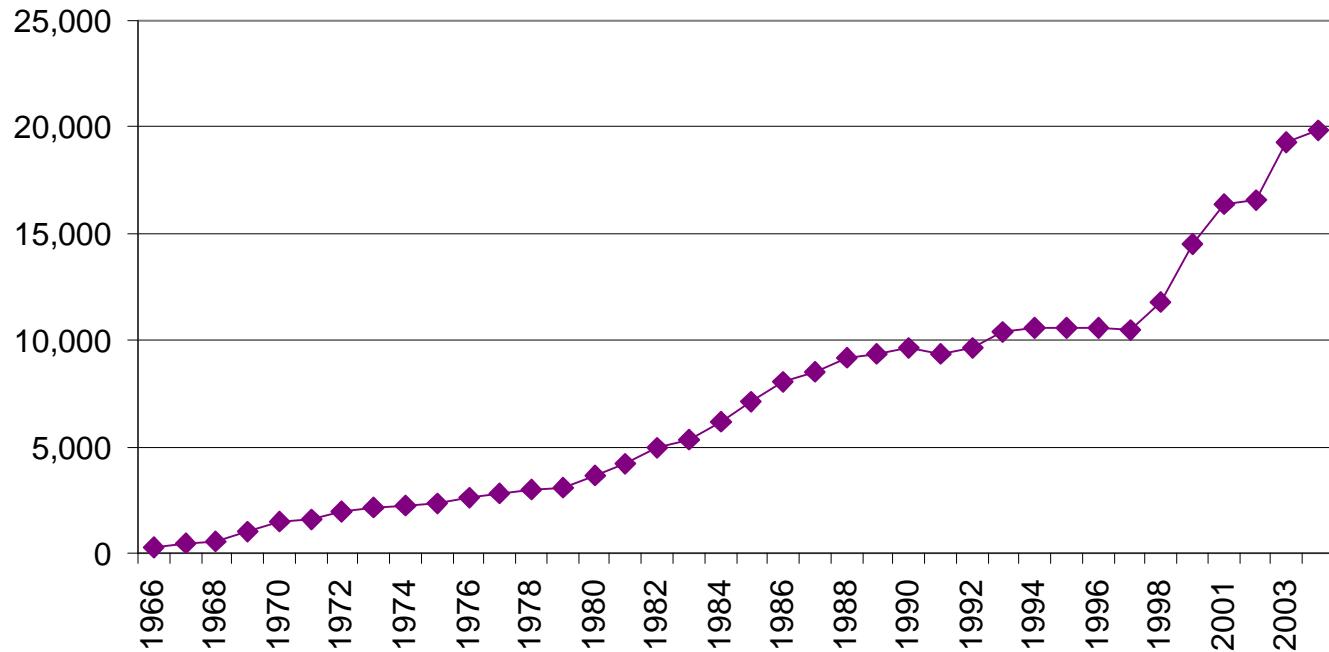
**Master's Degrees in the Earth, Atmospheric
and Ocean Sciences, 1966 to 2004**



Source: CPST, data derived from National Science Foundation, WebCASPAR Database

Radical Change in Computer Science Master's Degree Production

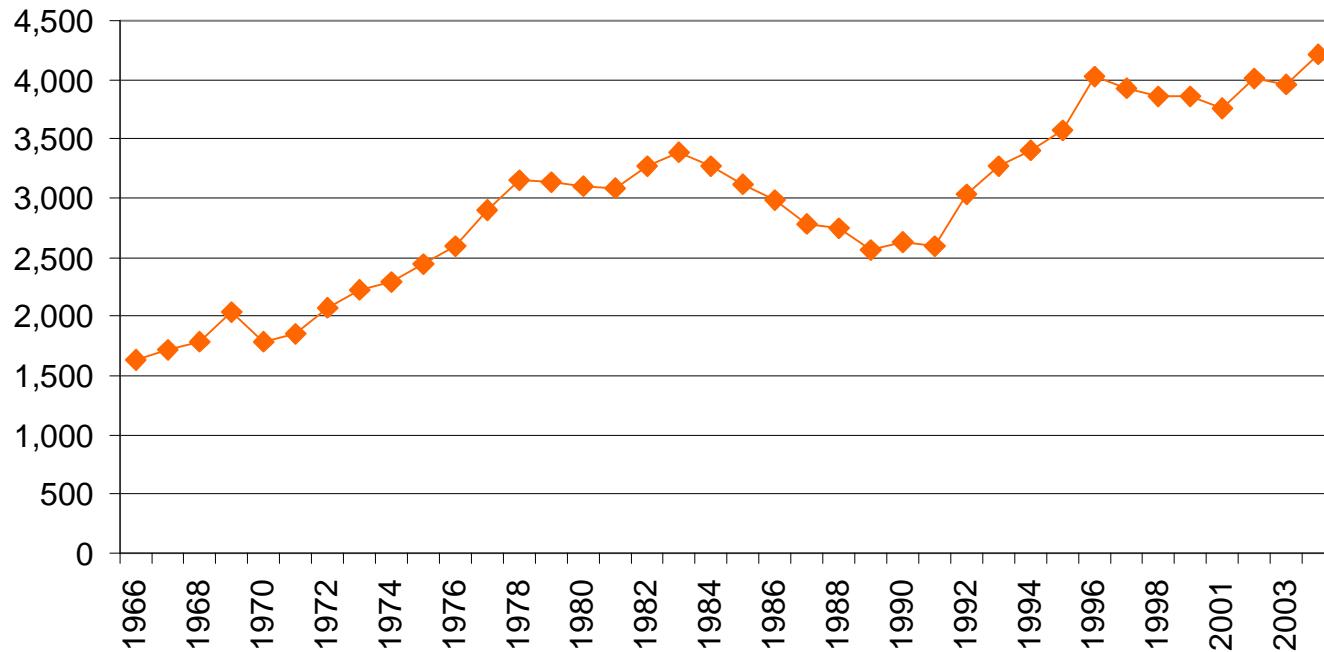
**Master's Degrees in the Computer Sciences,
1966 to 2004**



Source: CPST, data derived from National Science Foundation, WebCASPAR Database

Agricultural Sciences Master's Degree Production Nearly Tripled

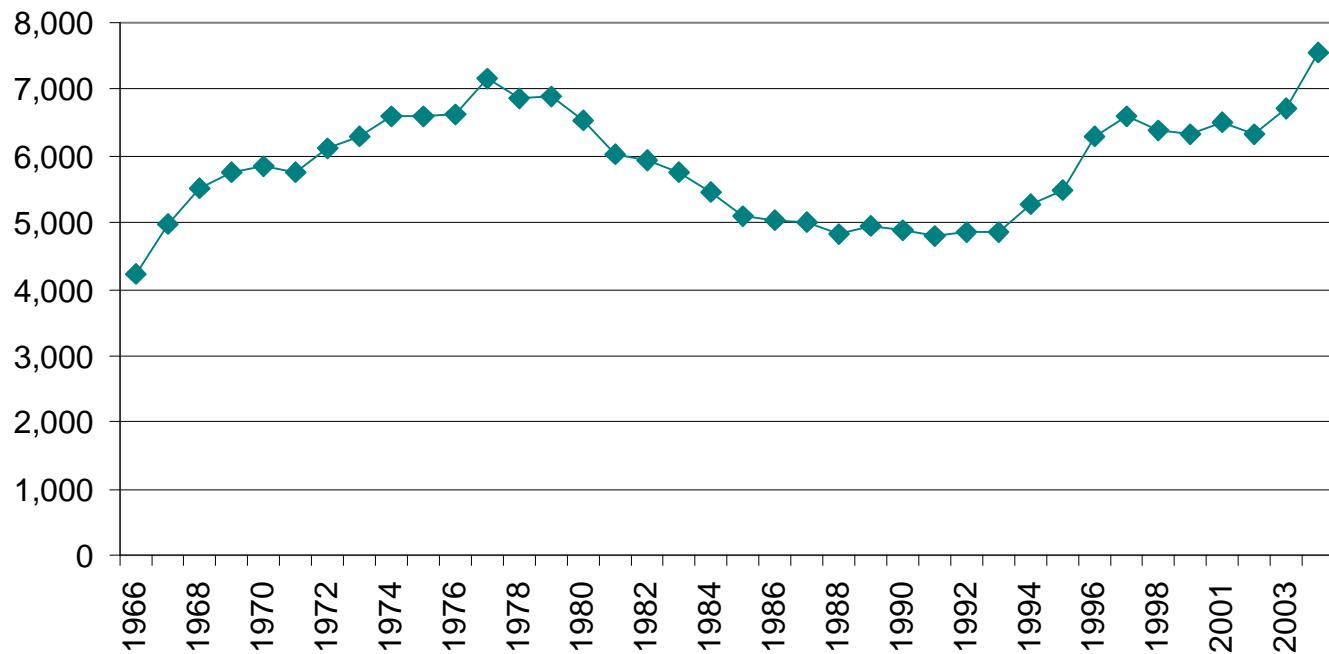
**Master's Degrees in the Agricultural Sciences,
1966 to 2004**



Source: CPST, data derived from National Science Foundation, WebCASPAR Database

The Biological Sciences

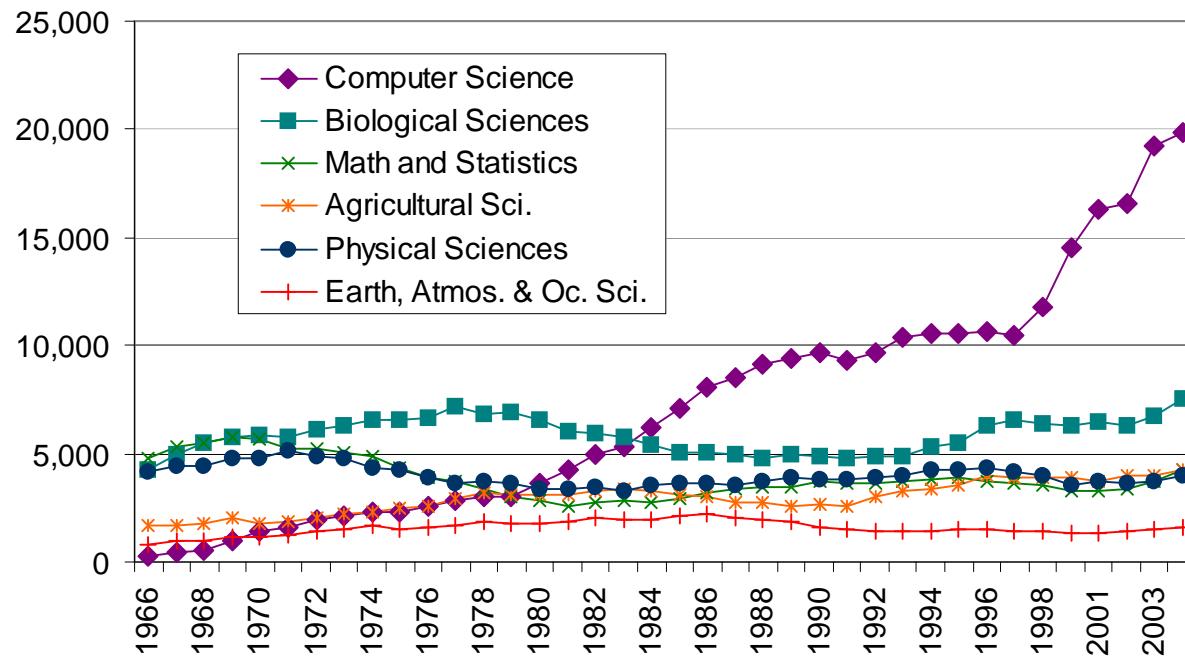
**Master's Degrees in the Biological Sciences,
1966 to 2004**



Source: CPST, data derived from National Science Foundation, WebCASPAR Database

Computer Science is the Largest Field within the Natural Sciences

**Master's Degrees in the Natural Sciences
by Field, 1966 to 2004**



Source: CPST, data derived from National Science Foundation, WebCASPAR Database

Science Master's Clearinghouse, www.sciencemasters.org

Science Master's Education
A Clearinghouse for Master's Education in the Sciences, Mathematics & Engineering
Provided By The Commission on Professionals in Science and Technology (CPST)

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Select Graph To Display
Engineering
Selected Engineering Master's Degrees 2004
10,000

Welcome to the Science Master's Education Website

This clearinghouse is provided by the Commission on Professionals in Science and Technology (CPST). It contains the latest data and information about master's education in science, mathematics and engineering. Here you will find a database of over 2,000 programs from over 300 institutions as well as articles, tables and data pertaining to science master's education and the master's workforce. The clearinghouse was developed with funding provided by the Alfred P. Sloan Foundation.

What's New

New Science Master's Education Book
The Council of Graduate Schools (CGS) has published a broad and comprehensive guide to best practices, activities and processes required to create a professional master's program which draws on the experiences of participants in the CGS Professional Master's Initiative. This book provides essential advice for graduate deans, universities and faculty on the development of collaborative degrees as well as interaction with business.

Featured Master's Program
Monday, March 26th



Health Care Informatics
Middle Tennessee State University
Murfreesboro, Tennessee 37132
WEB
MAP
Categories: Medical-Related Field, Bioinformatics

Science Master's Clearinghouse Highlights

- § Recent articles on STEM master's education
- § 180+ data tables and charts on STEM master's education and the STEM workforce
- § Over 2,050 STEM master's programs – searchable by discipline, state, university, keyword
- § 156 "professional" programs – stand alone, final project or thesis, internship, business fundamentals, prepare students to enter business/industry

Sample Program Listing

Science Master's Education
A Clearinghouse for Master's Education in the Sciences, Mathematics & Engineering
Provided By The Commission on Professionals in Science and Technology (CPST)

CPST Home Contact Us Search Site Map

Food Safety and Toxicology

Michigan State University
East Lansing, Michigan 48824

Category: Agricultural Science

Contact: Pattie McNeil
Distance Learning Program Coordinator
National Food Safety and Toxicology Center
1651 Food Safety Bldg.
Phone: 517-432-3100

Master's Program Web Site: [Food Safety and Toxicology](#)

Program Description

Welcome to the online Professional Master of Science in Food Safety Program. It is a pleasure to announce the initiation of a program that has been in steady development for more than two years with input from active food chain participants representing production through public health and including local, state, national and international aspects of food safety.

[More Info On The Web](#)

Additional Information

► This program is a Sloan Funded Professional Master's program
► This program provides online courses
► This program accommodates working professionals
► View all programs offered by Michigan State University
► View programs offered in Michigan
► View all programs in the category Agricultural Science
► View Sloan Foundation funded programs

PSM
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4,221 agricultural sciences master's degrees were awarded in 2004, an 18% increase from 1995

Contact Information

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