

# **BUILDing the health and health care workforce of the future**

**Arizona State University**

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## Mission

Health Solutions promotes excellence in research and **discovery of public value**; fosters **collaboration** among students, faculty, staff and communities; and graduates diverse, **adaptable** problem-solvers, engaged with **complex systems** and processes, to **lead teams** within the health and health care workforce.

The College of Health Solutions (CHS) offers students high quality education with real-world experiences and connections in a variety of health and health care related fields. The college works across the university and with strategic partners to improve health outcomes, lower costs and increase access. The college aims to have a lasting, positive impact on health nationally and globally, starting with efforts locally.

## ASU students are a part of the solution to transform health care

| School of Nutrition and Health Promotion   | School for the Science of Health Care Delivery  | International School of Biomedical Diagnostics  | Department of Biomedical Informatics  | Department of Speech and Hearing Science   | Doctor of Behavioral Health   |
|--|---|---|---|--|---|
| <p><b>4,276 Students</b><br/>4,153 Undergraduate<br/>120 Graduate<br/>65 Faculty<br/>138 Barrett Honors College scholars<br/>\$1.4M Research Expenditures</p> <p><i>Fall 2014 academic data</i></p>  | <p><b>157 Students</b><br/>99 Undergraduate<br/>58 Graduate<br/>15 Faculty<br/>8 Barrett Honors College scholars<br/>\$369k Research Expenditures</p>   | <p><b>24 Students</b><br/>24 Graduate<br/>Courses are taught by faculty from:<br/>College of Health Solutions<br/>College of Nursing &amp; Health Innovation<br/>Dulín City University<br/>Ira A. Fulton Schools of Engineering<br/>Sandra Day O'Connor College of Law</p>  | <p><b>83 Students</b><br/>20 Undergraduate<br/>63 Graduate<br/>14 Faculty<br/>5 Barrett Honors College scholars<br/>\$4.7M Research Expenditures</p>  | <p><b>461 Students</b><br/>323 Undergraduate<br/>138 Graduate<br/>38 Faculty<br/>25 Barrett Honors College scholars<br/>\$3.6M Research Expenditures</p>   | <p><b>264 Students</b><br/>264 Graduate<br/>25 Faculty</p>  |
| <p><b>UNDERGRADUATE MAJORS</b><br/>Applied Science, BAS<br/>Exercise and Wellness, BS<br/>Health Education and Health Promotion, BS<br/>Health Sciences, BS<br/>Kinesiology, BS<br/>Nutrition, BS</p> <p><b>GRADUATE MAJORS</b><br/>Clinical Exercise Physiology, MS<br/>Exercise and Wellness, MS<br/>Exercise and Wellness (Healthy Aging), MS<br/>Nutrition (Human Nutrition), MS<br/>Nutrition (Dietetics), MS<br/>Obesity Prevention and Management, MS<br/>Physical Activity, Nutrition and Wellness, PhD</p> <p><i>As the US healthcare system shifts more emphasis on and resources to health promotion and disease prevention, graduates are uniquely qualified to meet the needs of this rapidly growing workforce.</i></p> <p><i>The BS in Health Education and Health Promotion prepares students to secure the credential of Certified Health Education Specialist (CHES).</i></p> <p><i>Graduates of the ASU Dietetic Internship program have attained a 100% pass rate on the Registration Examination for Dietitians over the past 5 years at the national average of 74%.</i></p> | <p><b>UNDERGRADUATE MAJORS</b><br/>Medical Studies, BS<br/>Public Health, BS<br/>Science of Health Care Delivery, BS</p> <p><b>GRADUATE MAJORS</b><br/>Public Health (Administration and Policy), MS<br/>Public Health (Nutrition), MS<br/>Science of Health Care Delivery, MS</p> <p><i>The school is focused on developing safe, cost-effective, patient-centered health care systems and on education of the health care workforce of the future.</i></p> <p><i>The MS in Science of Health Care Delivery is a 9-month, cohort based program. This program is also offered 100% online.</i></p> <p><i>The school has expert faculty in several areas including: health economics, population health, care models/interprofessionalism, health policy, biomedical informatics, quality improvement, and built environment.</i></p> <p><i>ASU hosts two Master of Public Health (MPH) programs offered by the University of Minnesota.</i></p> | <p><b>GRADUATE MAJOR</b><br/>Biomedical Diagnostics, MS</p> <p><i>The MS degree was developed in partnership with Dublin City University and Ventana Medical Systems. It provides a broad perspective of the field with a focus that includes the technology, science, business, and application of diagnostics.</i></p> <p><i>Together with Dublin City University (DCU), the new transatlantic partnership launched in 2014 with its first cohort of graduate students. The school is advancing research and improving health outcomes locally, nationally and globally.</i></p> <p><i>The diagnostics industry is a strong economic catalyst. It employs more than 3.5 million people worldwide.</i></p> | <p><b>UNDERGRADUATE MAJOR</b><br/>Biomedical Informatics, BS</p> <p><b>GRADUATE MAJORS</b><br/>Biomedical Informatics, MS<br/>Biomedical Informatics, PhD</p> <p><i>Biomedical informatics is the interdisciplinary field that focuses on the effective uses of biomedical data, computer systems, and knowledge to improve patient care and health sciences research.</i></p> <p><i>The department is located at the Mayo-Scottsdale Clinic, and a number of faculty have joint-collaborations with Mayo Clinic.</i></p> <p><i>Partnerships with health leaders like Mayo Clinic, Banner Health, Translational Genomics Research Institute, Barrow Neurological Institute, Dignity Health, among others, infuse the program with practical research mandates and clinical relevance.</i></p> <p><i>Due to an increasing demand for jobs in the field, the new undergraduate degree launched in the fall of 2014.</i></p> | <p><b>UNDERGRADUATE MAJOR</b><br/>Speech and Hearing Science, BS</p> <p><b>GRADUATE MAJORS</b><br/>Audiology, AuD<br/>Communication Disorders, MS<br/>Speech and Hearing Science, PhD</p> <p><i>Clinical majors are among the top 20 fastest growing health professions.</i></p> <p><i>There is a critical need for PhDs in speech and hearing science to fill faculty-researcher positions.</i></p> <p><i>The department focuses on training clinician-scientists to improve the lives of individuals with communication impairments.</i></p> | <p><b>GRADUATE MAJOR</b><br/>Behavioral Health, DBH</p> <p><i>Diverse student body pursuing both clinical and management careers in behavioral health integration.</i></p> <p><i>Practice-based expertise of faculty who make a living doing what they are teaching.</i></p> <p><i>Hands-on internship experience allows students to assist health care centers with the implementation and application of behavioral health integration.</i></p> <p><i>Coursework is inclusive of entrepreneurship, health care systems change, evidence-based interventions for the integrated medical environment, medical literacy, and behavioral health management.</i></p> |
| <p>snhp.asu.edu</p>  | <p>chs.asu.edu/shcd</p>   | <p>chs.asu.edu/isbd</p>   | <p>chs.asu.edu/bmi</p>  | <p>chs.asu.edu/shs</p>   | <p>chs.asu.edu/dbh</p>  |

# Featured research mentors

- Dr. Matt Buman is seeking ASU BUILDing Scholars for a large-scale research study on reducing sitting time and increasing **light-intensity physical activity in the workplace**.
  - This study will engage worksites around ASU and the Phoenix metropolitan area is the evaluation of interventions including the use of sit-stand workstations and worksite environmental and policy changes. This project will incorporate the use of wearable sensors to measure sitting and light-intensity activity behaviors and will assess cardiometabolic health outcomes over the course of the 2-year intervention period.
  - Research assistants will have the opportunity to work alongside a large team of research faculty from two different institutions, postdoctoral fellows, doctoral students, and fellow graduate and undergraduate students.
  - This project will be under the direction of Dr. Matthew Buman in the Exercise Science and Health Promotion Program at ASU on the downtown campus.

# Featured research mentors

- Dr. Punam Ohri-Vachaspati, PhD, RD, is an Associate Professor of Nutrition at the School of Nutrition and Health Promotion. Under the umbrella of public health nutrition, her research aims to understand the **social-ecological determinants of health with a focus on reducing health disparities**.
  - She examines food environments in community settings, schools, and child care centers, and assesses the role federal, state, and local policies play in shaping these environments as they related to obesity prevention efforts. She also studies policies and practices related to food marketing to understand how these efforts drive behaviors.
  - Dr. Ohri-Vachaspati has a very active research group at the ASU School of Nutrition and Health Promotion with doctoral, masters, and undergraduate students working together in a nurturing and supportive environment.
  - Students can join ongoing research projects or work on new or related topics in **public health nutrition, food policy, food marketing, and social determinants of health**. Almost all previous and current students have published their work in peer reviewed journals and / or present at national and local conferences.

# Featured research mentors

- Dr. Shannon Ringenbach is investigating an **innovative exercise program on a stationary bicycle that has a mechanical motor** on it to deliver Assisted Cycle Therapy, which has been suggested to promote neurogenesis in the prefrontal cortex.
  - We will examine behavioral outcomes that are clinical, motor, cognitive, physical and mental health.
  - We have seen improvements in many of these measures in adolescents with Down syndrome, older adults with Down syndrome, Adults with ADHD and adolescents with Autism.

# Featured research mentors

- Dr. Matthew Scotch is an Assistant Professor in the Department of Biomedical Informatics at Arizona State University.
  - His research interest is in the **intersection of public health informatics and bioinformatics**, specifically linking health data on animals and humans to support surveillance of zoonotic diseases (diseases transmittable between animals and humans).
  - He is also working on developing an informatics system to support phylogeography of zoonotic RNA viruses. Research interest: Bioinformatics for Public Health (systems that leverage molecular sequence data to support decision-making at health agencies)

# Thank you!

## Questions?

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