

BS IN PUBLIC HEALTH (HEALTH INFORMATICS AND DATA SCIENCE)



SACRAMENTO STATE

In Workflow

1. PUBH Chair (aleta.baldwin@csus.edu)
2. HHS College Committee Chair (andrea.becker@csus.edu)
3. HHS Dean (sac19804@csus.edu)
4. Academic Services (catalog@csus.edu)
5. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
6. Faculty Senate Executive Committee Chair (kathy.honeychurch@csus.edu)
7. Faculty Senate Chair (kathy.honeychurch@csus.edu)
8. Dean of Undergraduate and Graduate (s.storms@csus.edu)
9. Provost (erika.cameron@csus.edu; minekh@csus.edu)
10. President (khtudor@csus.edu)
11. Chancellor's Office (catalog@csus.edu)
12. Board of Trustees (torsetj@csus.edu)
13. WASC (elisa.trimboli@csus.edu)
14. Catalog Editor (catalog@csus.edu)
15. Registrar's Office (k.mcfarland@csus.edu)

Approval Path

1. 2025-10-05T21:05:15Z
Aleta Baldwin (aleta.baldwin): Approved for PUBH Chair
2. 2025-10-15T00:08:05Z
Andrea Becker (andrea.becker): Approved for HHS College Committee Chair
3. 2025-10-15T00:08:23Z
Robert Pieretti (sac19804): Approved for HHS Dean

New Program Proposal

Date Submitted: 2025-10-04T18:50:32Z

Viewing: BS in Public Health (Health Informatics and Data Science)

Last edit: 2025-10-04T18:50:31Z

Changes proposed by: Jenny Wagner (223020083)

Academic Group: (College)

Health & Human Services

Academic Organization: (Department)

Public Health

Catalog Year Effective:

2026-2027 Catalog

NOTE: This degree major program will be subject to program review evaluation within six years after implementation.

Individual(s) primarily responsible for drafting the proposed degree major program:

Name (First Last)	Email	Phone 999-999-9999
Jenny Wagner	jenny.wagner@csus.edu	916-278-7046

Academic Master Plan Projection

Has this degree been approved for inclusion in the Academic Master Plan?

Yes

Attach Projected Degree Proposal form

Sacramento-cap-2025.docx

New degree major proposals must receive prior approval for inclusion in the Academic Master Plan before a New Program proposal can be submitted to Workflow. Submissions to the AMP can be made through the Miscellaneous Request form.

Type of Program:

Major

Is this a pilot program?

No

Delivery Format:

Hybrid

Does this major plan to include any formal options, concentrations, or special emphases?

No

Title of the Program:

BS in Public Health (Health Informatics and Data Science)

Designation: (degree terminology)

Bachelor of Science

Briefly describe the program proposal (new or change) and provide a justification:

This proposed concentration responds to the increasing demand for a workforce skilled in health informatics and data science within public health. According to labor market insights provided by the CSUS Career Center in partnership with Lightcast, employment for Health Informatics Specialists and Health Information Technologists is projected to grow by 8% and 18%, respectively, over the next decade. In addition to aligning with labor market needs, this concentration will strengthen students' quantitative and analytic competencies—skills repeatedly identified as critical by practicing public health professionals on our department's Community Advisory Committee.

University Learning Goals

Undergraduate Learning Goals:

Competence in the disciplines
Intellectual and practical skills
Personal and social responsibility
Integrative learning

Program Learning Outcomes

Program Learning Outcomes

Learning Outcome
1. Apply health promotion, prevention, and protection theories and concepts to address a public health concern.
2. Integrate diverse disciplines such as sociology, psychology, chemistry, biology, anatomy, and physiology in the identification and control of psycho#social and physical factors affecting health.
3. Integrate effective writing composition and oral communication skills in health promotion activities.
4. Work collaboratively with others in problem solving, research, decision#making and the completion of projects.
5. Articulate values, ethics and standards of the profession.

Learning Outcomes Display

Course Code	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
BIO 20		✓			
BIO 10		✓			
PUBH 50	✓	✓			
PUBH 98	2✓	1	2✓		2✓
STAT 1				1	
PUBH 100	✓		✓	✓	✓
PUBH 116	2		2	2	2
PUBH 118	3✓	3✓	2✓	2✓	2✓
PUBH 147	2✓			3✓	
PUBH 148		2✓			
PUBH 151			3✓		2✓
PUBH 152	✓			✓	✓
PUBH 170	2			2	2
PUBH 171	2			3	1
PUBH 172	3		2	2	
PUBH 173	2				
PUBH 174	✓			2	
DS 105		✓		✓	
CSC 10		✓			

MIS 15		✓			
DS 102		✓			
MIS 101		✓			
MIS 170		✓			
GEOG 109		✓			
GEOG 110		✓	✓		
MIS 150		✓			
MIS 140		✓			
PUBH 155	2			2	
PUBH 153	✓			✓	✓
PUBH 124	2		2		2
PUBH 195				3	3

Will this program be required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

No

Please attach a Comprehensive Program Assessment Plan

BS Public Health_Assessment CO Grids PUBH.xlsx

Please attach a Curriculum Map Matrix

BSPH conc comps matrix IDMs PUBH.docx

Please attach a five-year budget projection

BSPH_HIDS_Budget_Commentary.docx

Please attach the updated roadmap:

BS_HealthInformaticsandDataScience_PUBH.docx

Catalog Description:

Units required for Major: 54-58

Total units required for BS: 120

Program Description

The academic area of study in Public Health is part of the College of Health and Human Services. Students pursue a Public Health concentration leading to a degree with specialization and job skills applicable to one of two professional areas of study: Health Promotion or Occupational Safety & Health. The program supports focused academic preparation in each concentration such that Public Health BS graduates will have job appeal in their chosen professional field.

Students can expect to be involved in both coursework and field experiences across areas of Public Health practice and within each concentration, such as consumer health issues, alcohol and other drugs, human sexuality, health promotion, unintentional injury causes and prevention, and other personal, occupational, and community health and safety issues.

Students should check the Department website for requirements and speak with the Public Health academic advisor to help with their academic plans.

Note: Students graduating with a BS in Public Health (all concentrations) will not be subject to the University's Foreign Language Graduation Requirement. Students who change major may be subject to the University's Foreign Language Graduation Requirement.

Admission Requirements: Course prerequisites and other criteria for admission of students to the degree major program, and for their continuation in it.

Admission Requirements

Direct Admission

When applying to Sacramento State through CSU Apply, selecting Public Health (all concentrations) will grant admission without any additional supplemental documentation.

The Bachelor of Science in Public Health program requires 12 units of lower-division courses that should be completed prior to starting upper division coursework.

Additional Information

Repeat Policy: Public Health majors can only repeat Public Health courses one time if they receive less than a "C." Students must meet with their academic advisor before petitioning the department to repeat the course. Refer to the Repeat Policy section of the Sacramento State Catalog for additional information.

Advising: It will be necessary to work very closely with an advisor to complete the BS degree in a timely manner. Therefore, the Public Health faculty strongly recommends that all Public Health students consult with an advisor prior to enrollment for any course. This procedure should be followed each semester.

Minimum Grade Requirement

All courses must be completed with at least a "C" grade.

Program Requirements: (If new courses are being created as part of a new program, it will be useful to propose courses first.)

Program Requirements

Code	Title	Units
Required Lower Division Courses (12 Units)		
BIO 20 or BIO 10	Biology: A Human Perspective ¹ Basic Biological Concepts	3
PUBH 50	Healthy Lifestyles	3
PUBH 98	Public Health Professions Seminar	3
STAT 1	Introduction to Statistics ¹	3
Required Upper Division Courses (45 Units)		
PUBH 100	Fundamentals of Safety and Health	3
PUBH 116	Public Health Policy, Management & Administration	3
PUBH 118	Introduction to Public Health (This has been revised to Introduction in Public Health)	3
PUBH 147	Health Data Analysis	3
PUBH 148	Epidemiology	3
PUBH 151	Introduction to the U.S. Healthcare System	3
PUBH 152	Healthcare Systems and Operations	3
PUBH 170	Course PUBH 170 Not Found	3
PUBH 171	Course PUBH 171 Not Found	3
PUBH 172	Course PUBH 172 Not Found	3
PUBH 173	Course PUBH 173 Not Found	3
PUBH 174	Course PUBH 174 Not Found	3
DS 105	Decision Analytics	3
Choose two from the following:		6
CSC 10	Introduction to Programming Logic	
MIS 15	Introduction to Business Programming	
DS 102	Foundation and Tools for Business Analytics	
MIS 101	Computer Information Systems for Management	
MIS 170	Information Systems Security	
GEOG 109	Geographic Information Systems	

GEOG 110	Spatial Analysis in GIS	
MIS 150	Database Systems for Business	
MIS 140	Business Data Communication	
PUBH 155	Introduction to Healthcare Process Improvement	
PUBH 153	Administration of Healthcare Organizations	
PUBH 124	Ethical Considerations in Public Health 	
PUBH 195	Fieldwork - Health or Safety	
Total Units		57

¹ Course also satisfies General Education (GE)/Graduation Requirement.

Note: Public Health courses depend upon concentration, permission of the faculty advisor, program coordinator, and department chair.

General Education Requirements¹

Code	Title	Units
Area A: Basic Subjects (9 Units)		
A1 - Oral Communication		3
A2 - Written Communication		3
A3 - Critical Thinking		3
Area B: Physical Universe and Its Life Forms (6 Units)		
B1 - Physical Science ²		0
B2 - Life Forms		3
B3 - Lab (Note: Lab experience to be taken with one of the following: B1, B2 or B5 ²		0
B4 - Math Concepts ²		0
B5 - Additional Course (Any B to reach 12 units) - Take upper-division course to complete Area & upper division requirements.		3
Area C: Arts and Humanities (12 Units)		
C1 - Arts		3
C2 - Humanities		3
C1/C2 - Area Course C		3
C1/C2 - Area C Course - Take upper-division course to complete Area & upper division requirements.		3
Area D: The Individual and Society (6-9 Units)		
Area D Course		3
Area D Course		3
Area D Course - Take upper-division course to complete Area & upper division requirements. ³		0 - 3
Area E: Understanding Personal Development (3 Units)		
Area E Course		3
Area F: Ethnic Studies (3 Units)		
Area F Course		3
Total Units		39-42

¹ To help you complete your degree in a timely manner and not take more units than absolutely necessary, there are ways to use single courses to meet more than one requirement (overlap). For further information, please visit the General Education page (<https://catalog.csus.edu/colleges/academic-affairs/general-education/>).

Note: There is no way to list all possible overlaps so please consult with a professional advisor. The Academic Advising Center can be visited online (<http://www.csus.edu/acad/>), by phone (916) 278-1000, or email (advising@csus.edu).

² Required in Major; also satisfies GE.

³ Department offers students a "select from the following option":
 • If student chooses to take ENVS 165, they will meet upper division Area D.

Graduation Requirements¹

Code	Title	Units
Graduation Requirements (required by CSU) (9 Units)		
American Institutions: U.S. History		3
American Institutions: U.S. Constitution & CA Government		3
Writing Intensive (WI)		3
Graduation Requirements (required by Sacramento State) (6 Units)		
English Composition II		3

Race and Ethnicity in American Society (RE)	3
Foreign Language Proficiency Requirement ²	0

¹ To help you complete your degree in a timely manner and not take more units than absolutely necessary, there are ways to use single courses to meet more than one requirement (overlap). For further information, please visit the General Education page (<https://catalog.csus.edu/colleges/academic-affairs/general-education/>).

Note: There is no way to list all possible overlaps so please consult with a professional advisor. The Academic Advising Center can be visited online (<http://www.csus.edu/acad/>), by phone (916) 278-1000, or email (advising@csus.edu).

² If not satisfied before entering Sacramento State, it may be satisfied in General Education Area C2 (Humanities). "C- or better required." The alternative methods for satisfying the Foreign Language Proficiency Requirement are described here: <https://www.csus.edu/college/arts-letters/world-languages-literatures/foreign-language-requirement.html>

Note: Students with a declared major of BS in Public Health (Occupational Health and Safety), BS in Public Health (Health Care Administration), or BS in Public Health (Community Health Education) are exempt from the Foreign Language Graduation Requirement.

For undergraduate programs, provisions for articulation of the proposed major with community college programs:

N/A

Will this program require specialized accreditation?

Will this program require accreditation?

No

Need for the Proposed Degree Major Program

Is the proposed degree program offered at any California State University campus or any neighboring institutions?

No

For graduate programs, the number of declared undergraduate major and the degree production over the preceding years of the corresponding baccalaureate program:

N/A

Professional uses of the proposed degree major program:

Graduates of the proposed program will be prepared for a wide range of professional opportunities at the intersection of public health, health care, and information technology. Career paths include positions such as public health data analyst, health informatics specialist, clinical data analyst/manager, and health information systems coordinator. With growing demand in these areas, this concentration will provide students with pathways into both public and private sectors. For example, potential employers include local, state, and federal health agencies, as well as health care industry (e.g., hospitals, health systems, insurers).

Existing Support Resources for the Proposed Degree Major Program

List faculty members, with rank, appointment status, highest degree earned, date and field of highest degree, and professional experience (including publications if the proposal is for a graduate degree), who would teach in the proposed program:

Name	Rank	Appointment Status	Highest Degree Earned	Year of Highest Degree Earned (YYYY)	Publications/Professional Experience
Nitin Roy	Assistant Professor	Full Time	Doctorate	2018	Tian, Y., Zhao, D., Shu, C. M., Roy, N., Qi, M., & Liu, Y. (2021). Study on thermal stability and thermal decomposition mechanism of 1-((cyano-1-methylethyl) azo) formamide. <i>Process Safety and Environmental Protection</i>. Bai, M.; Liu, Y.; Liu, L.; Yin, J.; Zhang, Y.; Zhao, D.; & Roy, N. (2021). Kinetics of polyethylene pyrolysis in the atmosphere of ethylene. <i>Journal of Thermal Analysis and Calorimetry</i>, 144(2), 383-391. Bai, M.; Liu, Y.; Lu, L.; Yin, J.; Zhang, Y.; Zhao, F.D.; Roy N. Kinetics of polyethylene pyrolysis in the atmosphere of ethylene, <i>Journal of Thermal Analysis and Calorimetry</i>, 2021, pp.1-9. Roy, N.; Mannan, M. S.; Hasan, M. M. F. Systematic Incorporation of Process Safety in Hazardous Chemicals Supply Chain Optimization, <i>Journal of Loss Prevention in Process Industries</i>, 2020, 68, 104262. Roy, N.; Laboureur, D.M.; Yu, M.; Pasman, H.J.; O'Connor, M.; Mannan, M.S. Patterns and trends in injuries due to consumer propane incidents, <i>ACS Chemical Health & Safety</i>, 2020, 27, 4, 251–258. Roy, N.; Eljack, F.; Jiménez-Gutiérrez, A.; Zhang, B.; Thiruvankataswamy, P.; El-Halwagi, M.; Mannan, M. S. A review of safety indices for process design. <i>Current Opinion in Chemical Engineering</i>, 2016, 14, 42-48. ("Highly Cited Paper Current Opinions in Chemical Engineering") Thiruvankataswamy, P.; Eljack, F. T.; Roy, N.; Mannan, M. S.; El-Halwagi, M. M. Safety and techno-economic analysis of ethylene technologies, <i>Journal of Loss Prevention in the Process Industries</i>, 2016, 39, 74-84. ("Highly Cited Paper Journal of Loss Prevention in Process Industries")

Jenny L. Wagner	Assistant Professor	Full Time	Doctorate	2023	Gosdin, M. M., Hoeft, T., Henderson, S., Wagner, J., & Hinton, L. (2024). Missing link: a qualitative analysis of community-based organisations' contributions to partnered collaborative care to treat late-life depression. <i>BMJ open</i>, 14(4), e074403. Manoukian, M. A., Mumma, B. E., Wagner, J. L., Linvill, M. T., & Rose, J. S. (2024). Measuring the Effect of Off-Balancing Vectors on the Delivery of High-Quality CPR during Ambulance Transport: A Proof of Concept Study. <i>Prehospital emergency care</i>, 28(1), 107-113. Peterson, R. L., Gilsanz, P., Lor, Y., George, K. M., Ko, M., Wagner, J., ... & Whitmer, R. A. (2023). Rural residence across the life course and late-life cognitive decline in KHANDLE: a causal inference study. <i>Alzheimer's & dementia: diagnosis, assessment & disease monitoring</i>, 15(1), e12399. Ford, J. S., Rouleau, S. G., Wagner, J. L., Adams, C. B., May, L. S., Parikh, A. K., & Holmes, J. F. (2023). Assessment of a COVID-19 vaccination protocol for unhoused patients in the emergency department. <i>Vaccine</i>, 41(9), 1611-1615. Brazil, N., Wagner, J., & Ramil, R. (2023). Measuring and mapping neighborhood opportunity: A comparison of opportunity indices in California. <i>Environment and Planning B: Urban Analytics and City Science</i>, 50(3), 757-775.
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Susan Perez	Professor	Full Time	Doctorate	2014	The Southern Center for Maternal Health Equity (SCMHE): a multisector multifaceted community-based approach to reduce disparities in maternal morbidity and mortality in the ... M Goldin Evans, M Wallace, AN Bazzano, JR Biggio Jr, K Cruz, A Gamble, ... Frontiers in Public Health 12, 1465779 2024 Near-miss and maternal sepsis mortality: A qualitative study of survivors and support persons ME Bauer, SL Perez, EK Main, GS Norman, LJ Fish, MA Caldwell, C Allen, ... European Journal of Obstetrics & Gynecology and Reproductive Biology 299 ... 7 2024 Learning Lessons from the COVID-19 Pandemic—A Qualitative Assessment of the Experiences of Pregnant Latinas Infected with COVID-19 and Their Perspectives on Vaccination M Lopez, J Altamirano, S Melchor, S Perez, Y Maldonado, N Aziz, ... Journal of racial and ethnic health disparities, 1-7 2024 483 Black and Hispanic patient-centered voices of antepartum anemia: a community engaged approach I Igbiosa, S Perez, S Davies-Balch, DJ Lyell American Journal of Obstetrics & Gynecology 230 (1), S264-S265 2024 Evaluation of a quality improvement intervention to reduce anastomotic leak following right colectomy (eagle): Pragmatic, batched stepped-wedge, cluster-randomized trial in 64 ... J Azevedo, L Fernandez, P Azevedo, A Amado, M Paiva, R Saraiva, ... Oxford Univ Press 2023 Evaluation of a quality improvement intervention to reduce anastomotic leak following right colectomy (EAGLE): pragmatic, batched stepped-wedge, cluster-randomized trial in 64 ... EESA Collaborative The British journal of surgery 111 (1), znad370 7* 2023 Identifying the Information Needs and Format Preferences for Web-Based Content Among Adults With or Parents of Children With Attention-Deficit/Hyperactivity Disorder: Three ... DA Scholze, MM Gosdin, SL Perez, JB Schweitzer JMIR formative research 7 (1),
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Carol L Mansyur	Associate Professor	Full Time	Doctorate	2006	Ashton, C. M., Del Junco, D. J., Soucek, J., Wray, N. P., & Mansyur, C. L. (1997). The association between the quality of inpatient care and early readmission: a meta-analysis of the evidence. <i>Medical care</i>, 35(10), 1044-1059. Mansyur, C. L., Rustveld, L. O., Nash, S. G., & Jibaja-Weiss, M. L. (2015). Social factors and barriers to self-care adherence in Hispanic men and women with diabetes. <i>Patient education and counseling</i>, 98(6), 805-810. Mansyur, C. L., Rustveld, L. O., Nash, S. G., & Jibaja-Weiss, M. L. (2015). Social factors and barriers to self-care adherence in Hispanic men and women with diabetes. <i>Patient education and counseling</i>, 98(6), 805-810. Mansyur, C. L., Rustveld, L. O., Nash, S. G., & Jibaja-Weiss, M. L. (2016). Hispanic acculturation and gender differences in support and self-efficacy for managing diabetes. <i>The Diabetes Educator</i>, 42(3), 315-324.
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Space and facilities that would be used in support of the proposed program: Show how this space is currently used and what alternate arrangements, if any, will be made for the current occupants.

Only classroom space and facilities would need to be used to support the proposed program.

Library resources to support the program, specified by subject areas, volume count, periodical holdings, etc.:

No additional library resources are needed to support the program.

Equipment and other specialized materials currently available:

No other equipment or other specialized materials are needed.

Additional Support Resources Required

Enrollment and faculty positions should be shown for all discipline categories which will increase because of the new program and for all discipline categories which will decrease because of the new program. If faculty positions are to be transferred into the new program from other areas, the reductions in faculty positions should be shown on the appropriate discipline category or categories:

N/A

Any special characteristics of the additional faculty or staff support positions needed to implement the proposed program:

N/A

The amount of additional lecture and/or laboratory space required to initiate and sustain the program over the next five years: Indicate any additional special facilities that will be required. If the space is under construction, what is the projected occupancy date? If the space is planned, indicate campus wide priority of the facility, capital outlay program priority, and projected date of occupancy.

None.

Additional library resources needed: Indicate the commitment of the campus to purchase or borrow through interlibrary loan these additional resources.

None.

Additional equipment or specialized materials that will be 1) needed to implement the program and 2) needed during the first two years after initiation: Indicate source of funds and priority to secure these resource needs.

None.

Please attach any additional files not requested above:

DPH_CollegeofBusinessConsultation_InformaticsConcentration.pdf

DPH_GeographyConsultation_InformaticsConcentration.pdf

DPH_ComputerScienceConsultation_InformaticsConcentration.pdf

Key: 598