

BACHELOR OF SCIENCE IN HEALTH INFORMATICS (CLINICAL APPLICATIONS MINOR)

Web Site: <https://twu.edu/informatics/undergraduate-programs/>

The B.S. in Health Informatics with a Clinical Applications Minor begins with a comprehensive computer science core and combines academic components from the clinical nursing program. This online interdisciplinary, interprofessional program thoroughly prepares students for the diverse careers available to those with in-demand data science-oriented degrees. The program teaches key components of clinical informatics such as telehealth, data applications, human-computer interaction, and electronic health records. At TWU, small class sizes provide quality learning environments and active engagement with an outstanding and dedicated university faculty.

Marketable Skills

Defined by the Texas Higher Education Coordinating Board's 60x30 Strategic Plan (<https://reportcenter.highered.texas.gov/agency-publication/miscellaneous/the60x30-strategic-plan/>) as, "Those skills valued by employers that can be applied in a variety of work settings, including interpersonal, cognitive, and applied skills areas. These skills can be either primary or complementary to a major and are acquired by students through education, including curricular, co-curricular, and extracurricular activities."

1. Apply knowledge of computer science, information science, nursing, health sciences and informatics theory to nursing practice, education, healthcare administration, or research, in collaboration with other health informatics specialists.
2. Work effectively as a member of an inter-professional project team to coordinate database and project development, determine project scope and limitations, critically analyze issues, and solve problems.
3. Design and validate clinical/healthcare databases, including designing and testing logic checks.
4. Plan, coordinate, and implement security measures to safeguard information in computer files against accidental or unauthorized damage, modification or disclosure.
5. Prepare reports or correspondence concerning project specifications, activities, or status.
6. Demonstrate personal accountability and work habits, integrity, and ethical behavior.
7. Proficient in the software tools to achieve the skills listed, including but not limited to Java, Python, Perl, SQL, NoSQL, R, Microsoft Project, Microsoft Visio, Tableau, SAS, SPSS, modeling software.

Admissions

All applicants must meet the general undergraduate admission requirements (<http://catalog.twu.edu/undergraduate/admission-information/>).

Degree Requirements

Total Semester Credit Hours (SCH): 120

Major: 43 SCH **Minor:** 18 SCH

Program Code: INFOHLTH.BS **CIP Code:** 51.2706.00

Texas Core Curriculum

Code	Title	SCHs
ENG 1013	Composition I	3
ENG 1023	Composition II	3
Mathematics		3
Life & Physical Sciences		6
Language, Philosophy, & Culture		3
Creative Arts		3
HIST 1013	History of the United States, 1492-1865	3
HIST 1023	History of the United States, 1865 to the Present	3
POLS 2013	U.S. National Government	3
POLS 2023	Texas Government	3
Social & Behavioral Sciences		3
CAO: Women's Studies		3
CAO: First Year Seminar, Wellness or Mathematics		3
Total SCHs		42

Courses Required for Major

Code	Title	SCHs
CSCI 1423 & CSCI 1421	Programming Fundamentals I and Programming Fundamentals I - Laboratory	4
CSCI 1513	Introduction to Informatics	3
CSCI 2493	Programming Fundamentals II	3
CSCI 3053	Data Structures	3
CSCI 3423	Database Management	3
CSCI 3513	Information Systems Project Management	3
CSCI 3603	Foundations of Data Science	3
CSCI 4313	Networking and Data Communication	3
HS 3033	Medical Terminology	3
HS 3383	Legal and Ethical Issues in Health Informatics	3
LS 3053	Interdisciplinary Information Retrieval	3
MATH 1713	Elementary Statistics II	3
NURS 2213	Introduction to Health Informatics	3
NURS 4923	Capstone in Interprofessional Informatics	3
Total SCHs		43

Courses Required for Minor

Code	Title	SCHs
NURS 3213	Business Analysis of Health-Generated Data	3
NURS 3223	Internet Resources for Health Promotion	3
NURS 4113	Applications and Devices for Health Promotion	3
NURS 4213	Interface Design in Health Informatics	3
NURS 4313	Telecommunications/Networking for Remote Management	3
NURS 4723	Applied Statistics in Healthcare Informatics	3
Total SCHs		18

Departmental Requirements

Code	Title	SCHs
MATH 1703	Elementary Statistics I (may be applied from core)	3
Elective (to include 3 SCH global perspectives)		15
Total SCHs		18

Minor Course	3
Social & Behavioral Science Core	3
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SCHs	15

Recommended Plan of Study

First Year

Fall		TCCN	SCHs
CSCI 1421	Programming Fundamentals I - Laboratory		1
CSCI 1423	Programming Fundamentals I	COSC 1436	3
CSCI 1513	Introduction to Informatics		3
ENG 1013	Composition I	ENGL 1301	3
HIST 1013	History of the United States, 1492-1865	HIST 1301	3
UNIV 1231	Learning Frameworks: The First Year Experience	EDUC 1100, EDUC 1200, EDUC 1300	1
Mathematics (MATH 1703 recommended core)			3
SCHs			17

Spring		TCCN	SCHs
CSCI 2493	Programming Fundamentals II	COSC 1437	3
ENG 1023	Composition II	ENGL 1302	3
HIST 1023	History of the United States, 1865 to the Present	HIST 1302	3
MATH 1713	Elementary Statistics II		3
Creative Arts Core			3
SCHs			15

Second Year

Fall		TCCN	SCHs
CSCI 3053	Data Structures		3
CSCI 3423	Database Management		3
POLS 2013	U.S. National Government	GOVT 2305	3
NURS 2213	Introduction to Health Informatics		3
Life/Physical Sciences Core			3
SCHs			15

Spring		TCCN	SCHs
HS 3033	Medical Terminology		3
MATH 1013	Financial and Quantitative Literacy (Recommended Core CAO)	MATH 1332	3
POLS 2023	Texas Government	GOVT 2306	3
Life/Physical Sciences Core			3
Language, Philosophy, & Culture Core			3
SCHs			15

Third Year

Fall		TCCN	SCHs
CSCI 3513	Information Systems Project Management		3
CSCI 3603	Foundations of Data Science		3
LS 3053	Interdisciplinary Information Retrieval		3

Spring		TCCN	SCHs
HS 3383	Legal and Ethical Issues in Health Informatics		3
Multicultural Women's Studies (CAO) Core			3
Minor Course			3
Minor Course			3
Elective (Global Perspectives course)			3
SCHs			15

Fourth Year		TCCN	SCHs
Fall			
CSCI 4313	Networking and Data Communication		3
Minor Course			3
Minor Course (Upper Level)			3
Elective			3
Elective			3
SCHs			15

Spring		TCCN	SCHs
NURS 4923	Capstone in Interprofessional Informatics		3
Minor Course (Upper Level)			3
Elective			3
Elective			3
Elective			1
SCHs			13
Total SCHs:			120