

HSCI – WTL
Introduction to Health Sciences
Fall 2026

SEMESTER/YEAR: Fall 2026
SEMESTER HOURS: 3.0 Credits (Length: 16 Weeks)
CLINICAL HOURS (if applicable): N/A
PREREQUISITES: N/A

SEMESTER HOURS: 3.0 Credits
CONTACT HOURS: N/A
PREREQUISITES: N/A

FACULTY INFORMATION:

Name: Dr. Rachel Johnson, DNP, MPH, RN
Contact Information: Rachel.johnson@sulross.edu
Office Hours:
 Hours available via e-mail: M-F 8-5
 Hours available on campus: Tues 8-5 and Wed 9-4
 Hours available via phone office/home/cell: 8-5
Phone number(s): 806-789-9387
University e-mail: Rachel.johnson@sulross.edu
Office number:

COURSE DESCRIPTION:

Introduction to Health Sciences provides students with a broad exploration of the health-science field and the many careers that contribute to the health and well-being of individuals and communities. Students will examine health and wellness, human body systems, disease and prevention, healthcare delivery, healthcare professions, public health, mental and behavioral health, health information, ethics, professionalism, technology, and career preparation. Because this is a dual-credit course, students will engage with material at an introductory college level. Students will analyze real-world health situations, evaluate information sources, conduct career research, communicate professionally, and connect scientific concepts to potential career pathways. A central theme throughout the course is: Where does health science happen, who makes it happen, and where could I fit into it?

COURSE OBJECTIVES: Upon completion of this course, students will be able to

- CO 1: Explain foundational health-science concepts, including anatomical terminology, homeostasis, chemistry, genetics, nutrition, metabolism, and major body-system functions.
- CO 2: Apply health-science concepts to real-world situations involving health, disease, prevention, healthcare delivery, public health, mental and behavioral health, and technology.

CO 3: Compare health-science professions, professional responsibilities, ethics, communication expectations, educational pathways, and career opportunities to develop an individualized career plan.

REQUIRED TEXTS:

Textbook: Open Educational Resource (OER) – Free online text

1. Introduction to Health Science. John Carroll University Pressbooks.

<https://jcu.pressbooks.pub/introhealthscience/><https://openstax.org/subjects/nursing>

COURSE LEARNING ACTIVITIES, ASSIGNMENTS, GRADING, AND EXPECTATIONS

ASSESSMENT OF STUDENT LEARNING

Evaluation of student performance is based on evidence of achievement of course objectives. Students are evaluated on participation, knowledge and comprehension of assigned readings, application of course concepts, completion of assignments, examinations, career exploration activities, and the final career pathway project. Criteria for each course activity and assignment, including grading rubrics, are delineated either in the syllabus or in the course modules.

Summary of Measures for Evaluations:

Course Requirements	Points
Weekly Activities & Assignments	20%
Quizzes	10%
Exams x 3	30%
Career Exploration Assignments	15%
Final Career Pathway Project	15%
Comprehensive Final Exam	10%

Total

100%

Calculation of Final Grade:

The final grade is derived as a summary of the points delineated on specific rubrics for the assignments and participation. To pass the course a C (70%) or higher is required. There will be no rounding of final grade.

Grading Scale

A = 90 – 100

B = 80 – 89

C = 70– 79

D = 60 – 69

F = 59 or below

POLICIES FOR EXAMS AND ASSIGNMENTS

Online testing/Assessments: When assigned, examinations will be given via the use of Blackboard or online-proctored exams in the canvas classroom. Instructions will be provided at the time of the examination. (see start [HERE](#) module for Respondus Lockdown browser guides and instructions).

Missed Examinations and Makeup Examinations: Make-up examinations will only be permitted for immediate family emergencies or other reasonable emergencies, as determined by the course faculty. Students are required to notify the instructor immediately by phone as soon as they become aware that they will miss a scheduled examination. Failure to provide timely notification may result in forfeiture of the opportunity to complete a make-up exam.

Approved make-up examinations must be completed within one week of the originally scheduled examination date, unless otherwise approved by the instructor due to extenuating circumstances. Approval for a make-up examination is at the sole discretion of the course faculty.

Late and Make-up Assignments: To receive the designated points for an assignment, it must be submitted on or before the scheduled due date and time. Ten (10) points per calendar day will be deducted for late assignments. Assignments submitted more than three (3) calendar days after the due date will not receive credit.

Regardless of the grade earned, all required course assignments must be completed and submitted in order to successfully pass the course. Assignments submitted after the three-day late submission window may receive a grade of zero but must still be submitted to satisfy course completion requirements unless otherwise approved by the instructor.

Should scheduling conflicts and/or family emergencies arise, students should contact the course faculty by phone as soon as possible. If students communicate with faculty and an agreement is reached, late assignment or make-up assignment extensions may be granted without penalty at the instructor's discretion.

Introduction to Health Sciences

Course Schedule

(This schedule is subject to change by faculty as needed.)

Class Weeks will be from Sunday 12:00 midnight –Sunday 11:59 PM Central Time. All assigned work activities for the week must be completed by Sunday midnight unless otherwise indicated by the instructor. Discussion Boards – The initial entry for the week’s discussion board must be completed by Friday at 11:59pm. Two substantive responses to classmates’ initial entry must be completed by Sunday 11:59pm.

No Late submission on Discussion Post will be accepted.

Week	Topics & Objectives	Learning Activities, Assignments
Week 1 – Chapter 1: Talking About the Human Body	1. Describe anatomy, physiology, levels of organization, and major organ systems. (CO 1) 2. Apply anatomical position, directional terms, planes, cavities, and introductory medical terminology. (CO 1) 3. Explain why accurate anatomical communication is essential across health professions. (CO 3)	Chapter 1 Reading Introduction Post Syllabus Attestation Speak Like a Health Professional Activity Career Exploration: Anatomy in Health Careers
Week 2 – Chapter 2: Maintaining a Balance	1. Explain homeostasis and the role of feedback mechanisms in maintaining internal balance. (CO 1) 2. Apply homeostatic concepts to temperature, blood glucose, vital signs, and common health situations. (CO 2) 3. Connect homeostasis to health-science careers. (CO 3)	Chapter 2 Reading Homeostasis Case Study Career Spotlight Quiz
Week 3 – Chapter 3: Chemistry in the Human Body	1. Describe matter, atoms, elements, molecules, compounds, bonds, and chemical reactions. (CO 1) 2. Explain the importance of acids, and bases to human health. (CO 1)	Chapter 3 Reading Patient Lab Investigation Career Spotlight Quiz
Week 4 – Chapter 4: Water, Acids, Bases & Electrolytes	1. Explain the roles of water, electrolytes, acids, bases, pH, and buffers in the body. (CO 1) 2. Analyze causes and effects of dehydration and fluid/electrolyte imbalance. (CO 2) 3. Connect fluid balance to emergency care, sports medicine, nursing, nutrition, and laboratory science. (CO 3)	Chapter 4 Reading The Dehydrated Athlete Case Study Career Spotlight Quiz
Week 5 – Chapter 5: Crossing the Membrane	1. Explain cell-membrane structure and selective permeability. (CO 1) 2. Compare diffusion, facilitated diffusion, osmosis, and active transport. (CO 1) 3. Apply membrane transport concepts to IV fluids, dehydration, edema, medications, and kidney function. (CO 2)	Chapter 5 Reading Membrane Transport Application Exam 1 – Chapters 1–5
Week 6 – Chapter 6: Genetics	1. Describe DNA, genes, chromosomes, protein synthesis, inheritance, and mutations. (CO 1) 2. Analyze the relationship between genetics, disease risk, family history, and genetic testing. (CO 2) 3. Discuss introductory ethical issues related to genetic testing and privacy. (CO 2, CO 3)	Chapter 6 Reading Family Genetics Case Study Ethics Connection Career Spotlight
Week 7 – Chapter 7: Nutrients	1. Explain the functions of carbohydrates, proteins, lipids, vitamins, and minerals. (CO 1)	Chapter 7 Reading Build a Healthier Day

Week	Topics & Objectives	Learning Activities, Assignments
	2. Relate nutrition patterns and nutrient deficiencies to health and chronic disease. (CO 2) 3. Examine food access, food insecurity, nutrition education, and community resources. (CO 2)	Activity Public Health Connection Quiz
Week 8 – Chapter 8: Metabolism	1. Explain metabolism, ATP, catabolism, anabolism, and cellular energy production. (CO 1) 2. Compare aerobic and anaerobic metabolism and energy balance. (CO 1) 3. Apply metabolic concepts to diabetes, obesity, exercise, nutrition, and metabolic health. (CO 2)	Chapter 8 Reading Metabolism Case Study Career Spotlight Quiz
Week 9 – Chapter 9: Beating and Breathing	1. Describe major structures and functions of the respiratory and cardiovascular systems. (CO 1) 2. Explain ventilation, gas exchange, circulation, oxygen transport, heart rate, and blood pressure. (CO 1) 3. Apply cardiopulmonary concepts to vital signs and health-science careers. (CO 2, CO 3)	Chapter 9 Reading Vital Signs Investigation Career Spotlight
Week 10 – Chapter 10: Messages in the Body	1. Explain cellular communication and basic nervous and endocrine system functions. (CO 1) 2. Describe neural signaling, hormones, receptors, and the stress response. (CO 1) 3. Relate nervous/endocrine regulation to stress, sleep, behavior, and physical health. (CO 2)	Chapter 10 Reading Stress Response Case Study Mental Health Connection Exam 2 – Chapters 6–10
Week 11 – Disease, Prevention & Health Promotion	1. Differentiate health and disease, signs and symptoms, and acute/chronic and communicable/noncommunicable conditions. (CO 2) 2. Explain risk factors, screening, diagnosis, treatment, rehabilitation, prevention, and health promotion. (CO 2) 3. Identify the healthcare professionals involved in prevention and disease management. (CO 3)	Disease Investigation Assignment Case of the Week Career Connection
Week 12 – Public & Community Health	1. Explain public health, population health, epidemiology, surveillance, vaccination, screening, and environmental health. (CO 2) 2. Analyze social determinants of health and health disparities. (CO 2) 3. Describe careers that promote community and population health. (CO 3)	Community Outbreak Investigation Public Health Career Spotlight Quiz
Week 13 – Healthcare Delivery & Health Science Professions	1. Compare primary, acute, emergency, specialty, rehabilitation, long-term, home, hospice, rural, and community care settings. (CO 2) 2. Describe the roles of major health-science career clusters and interdisciplinary teams. (CO 3) 3. Trace a patient across healthcare settings and identify professional responsibilities at each stage. (CO 2, CO 3)	Follow the Patient Activity Health Science Career Investigation Career Pathway Research
Week 14 – Ethics, Professionalism & Patient Communication	1. Demonstrate principles of professionalism, communication, teamwork, empathy, cultural awareness, and patient-centered care. (CO 3) 2. Apply autonomy, beneficence, nonmaleficence, justice, confidentiality, privacy, and professional boundaries to introductory cases. (CO 2, CO 3)	Healthcare Ethics Roundtable Professional Communication Activity

Week	Topics & Objectives	Learning Activities, Assignments
	3. Explain the importance of patient safety and ethical decision-making. (CO 3)	Exam 3 – Weeks 11–14
Week 15 – Health Information, Technology & the Future of Healthcare	1. Describe electronic health records, telehealth, medical imaging, wearables, AI, robotics, genetics, and personalized medicine. (CO 2) 2. Evaluate online health information for credibility, bias, and misinformation. (CO 2) 3. Discuss privacy, technology, and emerging health-science career opportunities. (CO 3)	Can I Trust This? Source Evaluation Future of Healthcare Discussion Final Project Preparation
Week 16 – Where Do I Fit in Health Science?	1. Compare educational pathways, certification, licensure, and career preparation requirements. (CO 3) 2. Integrate scientific, professional, ethical, and career concepts from the course. (CO 1, CO 2, CO 3) 3. Develop and communicate an individualized health-science career pathway. (CO 3)	My Place in Health Science Final Career Pathway Project Career Presentation Comprehensive Final Exam

COURSE EXPECTATIONS:

Verbal and written responses to assignments incorporate evidence that the student has read appropriate assignments and is able to articulate information that reflects individual cognition and understanding of information. Most of the course learning activities will use reflective dialogue and integrative learning approaches to expand, clarify, find meaning, or extend students' understanding of course concepts, topics, and students' investigations into practice issues and reviews of literature.

The course is designed to provide opportunities for you to participate in case analysis, demonstrate clinical reasoning, completion of e-learning assignments, and scholarly writing, make professional presentations, and engage in self-appraisal. APA format is used for written assignments.

Refer technical difficulties related to Blackboard Collaboration to IT resources as soon as possible.

Faculty and Student Picture and Biography:

Faculty will submit a picture and summary of their educational and professional experiences that prepared them to teach in respective courses to be posted online.

During the first week of class, each student must submit a picture of themselves with a brief personal and professional biography including educational and clinical experiences and any personal information that highlights why they are choosing to explore or pursue a health-science pathway.

ONLINE COURSES:

Web courses (offered online) are not self-paced and require considerable work to meet requirements.

Students should be prepared to devote approximately 12 hours per week to accomplish the work required for a 3-hour class (i.e., students should devote approximately the same study time for an online course as

would be spent in a regular class with outside work requirements, a measure generally calculated at 3 hours outside work for each hour in class.) Students **MUST** have a reliable high-speed internet connection available on a regular basis for course work and other assignments whenever University computer laboratories are not open. **Computer labs are open Mon.-Thurs., 8 a.m.-10 p.m., and Fri. 8 a.m-5 p.m.** University computer labs are not open on weekends and holidays, but computers are available at the Southwest Texas Junior College and Sul Ross State University Rio Grande College libraries. A student who fails to participate in assignments during any one work period may be subject to being withdrawn from class and given a grade of F. Students should regularly log in to their class.

STUDENT/FACULTY EXPECTATIONS IN THE TEACHING/LEARNING PROCESS:

Learning is a shared endeavor based upon respectful and collaborative relationships between students and faculty. The learning activities designed for this course were developed based upon the following:

1. As adult learners we are partners in learning.
2. Faculty members serve as a mentor, resource, guide, or coach and professional peer.
3. Our work and life experiences differ and serve to enrich our individual and mutual learning.
4. Each member of the class is committed to preparing for and successfully completing class learning activities.
5. Each member of the class will organize their time, learning goals, and activities to fully participate in the course and assignments.
6. Each member of the class can use computer technology and access resources via the Internet and other mobile technologies as needed for the course.

COMMUNICATIONS:

- Announcements – Check announcements each time you log onto the course.
- Course email – Check course email frequently for communications and make sure your email address is current. Faculty will respond to inquiries and comments within 24 hours Monday- Friday.
- Use of technology: If you have any technical questions, problems or concerns with Blackboard, do not spend more than 15 minutes on any technical problem, seek help immediately. **Contact the 24-7 Help Desk at: 1-888-837-2882 and/or techassist@sulross.edu.**
- Responses to emails and course postings: Please respond to faculty requests and/or communications within 24 hours. Use course or Sul Ross email & if not available, mobile phone or texting between the hours of 9 AM and 6PM if possible. Messages received on the weekends or holidays will be answered by the next working day.

- Assignments: Assignments will be reviewed and returned with feedback/grade within 4 days of submission.
- Writing and use of APA: All written assignments and bulletin board postings will be submitted using the American Psychological Association (APA) Guidelines.
<http://owl.english.purdue.edu/owl/resource/560/01>

ATTENDANCE AND PARTICIPATION:

- Your attendance is expected at every class meeting.
- Readings and learning activities relevant to the weekly topic are identified in the course schedule and modules.
- Scholarly and knowledgeable participation requires that you read assigned readings prior to joining the class discussions.
- If you have an emergency and cannot attend a class meeting or complete an assignment by the due date, you must contact your faculty by phone, email or text as soon as possible and make arrangements to make up the assignments.

Academic Honesty Policy:

The University expects all students to engage in all academic pursuits in a manner that is beyond reproach and to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. The University may initiate disciplinary proceedings against a student accused of any form of academic dishonesty, including but not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials. Academic Dishonesty includes:

1. Copying from another student's test paper, laboratory report, other report, or computer files, data listings, and/or programs, or allowing another student to copy from same.
2. Using, during a test, materials not authorized by the person giving the test.
3. Collaborating, without authorization, with another person during an examination or in preparing academic work.
4. Knowingly, and without authorization, using, buying, selling, stealing, transporting, soliciting, copying, or possessing, in whole or in part, the contents of a non-administered test.
5. Substituting for another student; permitting any other person or otherwise assisting any other person to substitute for oneself or for another student in the taking of an examination or test or the preparation of academic work to be submitted for academic credit.

6. Bribing another person to obtain a non-administered test or information about a non-administered test.
7. Purchasing or otherwise acquiring and submitting as one's own work any research paper or other writing assignment prepared by an individual or firm. This section does not apply to the typing of a rough and/or final version of an assignment by a professional typist.
8. "Plagiarism" means the appropriation and the unacknowledged incorporation of another's work or idea in one's own written work offered for credit.
9. "Collusion" means the unauthorized collaboration with another person in preparing written work offered for credit.
10. "Abuse of resource materials" means the mutilation, destruction, concealment, theft or alteration of materials provided to assist students in the mastery of course materials.
11. "Academic work" means the preparation of an essay, dissertation, thesis, report, problem, a
12. Assignment, or other project that the student submits as a course requirement or for a grade.

Statement for use of AI

The rise of generative AI technologies—such as ChatGPT and DALL·E—has generated significant interest among students in our field. These tools can support a range of academic activities, including idea generation, deeper exploration of complex questions or problems, and creative engagement with course materials.

In this course, we may incorporate generative AI tools (e.g., ChatGPT) to critically examine how such technologies can enhance our understanding of the subject matter. You will receive clear instructions regarding when and how these tools may be used, along with appropriate guidance on attribution where applicable.

Please note: Any use of generative AI tools outside where specified guidelines permit will be considered a violation of academic integrity and treated as plagiarism.

All academic dishonesty cases may be first considered and reviewed by the faculty member. If the faculty member believes that an academic penalty is necessary, he/she may assign a penalty, but must notify the student of his/her right to appeal to the Department Chair, the Associate Provost/Dean, and eventually to the Provost and Vice President for Academic Affairs before imposition of the penalty. At each step in the process, the student shall be entitled to written notice of the offense and/or the administrative decision, an opportunity to respond, and an impartial disposition as to the merits of his/her case.

In the case of flagrant or repeated violations, the Vice President for Academic Affairs may refer the matter to the Dean of Students for further disciplinary action. No disciplinary action shall become effective against the student until the student has received procedural due process except as provided under Interim Disciplinary Action.

AMERICANS WITH DISABILITIES ACT (ADA) STATEMENT

Sul Ross State University is committed to compliance with the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973. Qualified students with disabilities needing academic or other accommodations to facilitate full participation in our programs, services and activities should contact the Accessibilities Coordinator, Ferguson Hall Room 112, Monday – Friday 8:00 a.m. – 5:00 p.m., 432-837-8203 at the Alpine campus.

GENERAL CAMPUS REGULATIONS AND CONDUCT

All students are expected to conduct themselves in a manner consistent with the University's functions as an educational institution. It is also expected that all students who enroll at Sul Ross State University agree to assume the responsibilities of citizenship in the university community. Association in such a university community is purely voluntary, and any student may resign from it at any time when he/she considers the obligation of membership disproportionate to the benefits. All students are subject to university authority, and those students whose conduct is not within the policies of the University rules and regulations are subject to dismissal. Students are responsible for abiding by all published University rules and regulations. Failure to read publications will not excuse the student from the requirements and regulations described therein. The SRSU Student Handbook and other official University publications outline specific regulations and requirements.