

PTAP-140 Therapeutic Exercise 3 cr.

Clinical techniques related to stretching, strengthening, posture, balance, coordination, agility, and aerobic conditioning. Prerequisites: PTAP-110, PTAP-125, PTAP-130, and PTAP-150. Offered: Fall and Summer.

PTAP-150 PTA Procedures I 4 cr.

Clinical procedures related to patient care including hand washing, vitals, pain assessment, body mechanics, ROM, bed mobility, and transfers. Offered: Spring and Summer.

PTAP-160 PTA Procedures II 3 cr.

Clinical procedures related to patient care including modalities, massage, airway clearance techniques, and wound care. Prerequisites: PTAP-110, PTAP-125, PTAP-130, and PTAP-150. Offered: Fall and Summer.

PTAP-210 Principles of Rehabilitation 5 cr.

Treatment strategies for patients with complex diagnoses such as developmental disorders, CVA, TBI, SCI, AKA/BKA, and UMN/LMN lesions. Prerequisites: PTAP-140 and PTAP-160. Offered: Fall & Spring.

PTAP-230 Clinical Externships (Acute) 4 cr.

This full-time four week externship offers direct patient care experience in a hospital setting. Externships may be completed in any geographical area provided a legal contract is established between the physical therapy facility and San Juan College. Prerequisites: PTAP-140 and PTAP-160. Corequisites: PTAP-250. Offered: Fall and Summer.

PTAP-250 PTA Procedures III 4 cr.

Clinical procedures related to patient care including traction, electrotherapy, aquatics and hydrotherapy. Prerequisites: PTAP-140 and PTAP-160. Corequisites: PTAP-240 Offered: Fall and Summer

PTAP-260 Seminar 2 cr.

Study of career related topics including obtaining licensure and developing a career plan. Prerequisites: PTAP-140 and PTAP-160. Offered: Fall & Spring.

PTAP-270 Clinical Externship (Outpatient) 3 cr. TO 7 cr.

This externship is a full-time clinical externship that provides experience in direct patient care in an outpatient/rehab setting. This externship may be completed in any geographical area provided a legal contract is established between the physical therapy facility and San Juan College. Prerequisites: PTAP-210, PTAP-230, PTAP-250, and PTAP-260, minimum grade C. Corequisites: PTAP-230. Offered: Fall & Spring.

PTAP-290 Clinical Externship (Rehab) 7 cr.

Clinical externships provide students with the opportunity to apply clinical skills acquired in the academic setting. This externship offers experience in direct patient care in an outpatient/rehabilitation setting. Externships may be completed in any geographic area provided a legal contract is established between the physical therapy facility and San Juan College. Prerequisites: PTAP-210, PTAP-230, PTAP-250, and PTAP-260. Minimum grade C. Offered: Fall & Spring. Faculty Permission Required.

READING**RDNG-050 Reading Fundamentals 3 cr.**

Build basic reading skills, with emphasis on comprehension, vocabulary. The course is offered for a letter grade. Course not applicable towards any degree or certificate. (RR option course) Offered: All.

RDNG-095 Critical Reading 3 cr.

Develop critical reading skills for academic and life-long learning, using a variety of sources. Course not applicable towards degree. (RR option course). Prerequisites: Complete RDNG-050 or appropriate Reading Accuplacer score. Offered: All.

RDNG-113 Academic Reading and Study Strategies 3 cr.

Develop academic reading and study skills for college, using authentic academic textbook material. Prerequisites: Completion of RDNG-095 or appropriate Reading Accuplacer score. Offered: All.

RDNG-252 Diagnostic Teaching Reading/Elem School 3 cr.

Theoretical and practical aspects of diagnostic teaching of reading. Offered: On Demand.

RDNG-256 Reading in the Content Fields 3 cr.

An in-depth study of reading and study skills. The structures of the different disciplines studied in all grades. Offered: On Demand.

RENEWABLE ENERGY**RENG-150 Modeling with Google SketchUp 3 cr.**

Modeling and representing renewable energy systems in both two and three dimensions will be covered using Google SketchUp Pro. Creating two dimensional drawings will be introduced along with the basics of creating three dimensional models. Creating, analyzing, and presenting three dimensional models of renewable energy systems will be explored in detail. Offered: Fall & Spring. Faculty Permission Required.

RENG-220 PV Theory & System Design 4 cr.

Basic photovoltaic (PV) energy conversion theory is introduced in relation to current silicon semiconductor technology. DC electrical energy production from incident solar radiation is covered along with PV module interconnection to meet load requirements. PV module performance specifications are compared to field performance in a laboratory setting. Inverter theory (for AC electrical energy production) and efficiency are discussed, as well as storage system sizing, charge controller operation and issues of connectivity with the existing utility electrical grid. Prerequisites: RENG-252 and INST-144, minimum grade C. Offered: Spring.

RENG-242 PV Installation and the NEC I 3 cr.

This hands-on course will first cover the National Electric Code (NEC) specifics concerning the photovoltaic(PV) installation - articles 90 to 400. Then, code compliant wiring of basic residential electrical systems will be explored in detail. Students will use materials designed for installation practice both indoors and out. Existing PV installations will be visited and studied. Minimum grade required: C. Corequisites: RENG-242L, INST-144. Offered: Fall. Faculty Permission Required.

RENG-242L PV Installation & NEC I Lab 2 cr.

This course is the first in a two-semester laboratory sequence and accompanies RENG 242. Minimum grade required: C
Corequisites: RENG-242. Offered: Fall. Faculty Permission Required.

RENG-243 PV Installation and NEC II 3 cr.

This hands-on course will cover the National Electric Code (NEC) specifics concerning photovoltaic (PV) installation - article 690. Then, code compliant wiring of modules, inverters, charge controllers and batteries will be explored in detail. Students will use materials designed for installation practice both indoors and out. Existing PV installations will be visited and studied. Minimum grade required: C. Prerequisites: RENG-242, RENG-242L, and INST-144. Corequisites: RENG-243L, RENG-150. Offered: Spring. Faculty Permission Required.

RENG-243L PV Installation & NEC II Lab 2 cr.

This course is the second in a two-semester laboratory sequence and accompanies RENG-243. Minimum grade required: C
Corequisites: RENG-243. Offered: Spring. Faculty Permission Required.

RENG-252 Passive Solar Design and Analysis 4 cr.

Starts with an overview of various aspects of energy production, consumption, and quantification. Emphasis will be placed on efficiency and conservation. Quantification of incident solar energy is covered in detail along with the basic physics of energy conversion. Building energy analysis, including passive solar, will involve designing spreadsheets and using modeling software. Prerequisites: PHYS-111 and COSC-116. Offered: Fall.

RENG-260 Solar Thermal Design & Application 3 cr.

This course starts with an overview of various active solar thermal systems for both domestic water and space heating. Quantification of energy output for several non-concentrating collector types will be covered in detail and then used in the development of spreadsheets to model system behavior. Installation, start-up, and troubleshooting will be discussed. Concentrating, large-scale power plant basics are covered generally. Minimum grade required: "C." Prerequisites: RENG-252 with a C or higher. Offered: Spring.

RESPIRATORY THERAPY**RESP-110 RT Orientation & Patient Assessment 3 cr.**

This course introduces the scope of practice, education, licensure, organizations and brief history of the profession of respiratory care. It also presents the basic techniques of patient interview, medical record review, physical assessment, basic ECG, laboratory and chest x-ray assessment of the patient with cardiopulmonary disorder. Minimum grade required: C
Corequisites: RESP-112, RESP-114. Offered: Spring. Faculty Permission Required.

RESP-112 Community Health & Infection Control 3 cr.

This course presents an introduction to community health that includes basic concepts in epidemiology in the community, transmission of infectious diseases affecting public health, biological agents and bioterrorism. It also discusses

microbiological concepts that apply to the health sciences with the care of patients and protection against infectious diseases. Included are sterilization, disinfection and aseptic techniques. Corequisites: RESP-110, RESP-114. Offered: Spring. Faculty Permission Required.

RESP-114 Respiratory Physics/Medical Gas Therapy 3 cr.

This course introduces the basic concepts in the physics and the applications of gas laws in respiratory therapy. It discusses the physical characteristics of medical gasses, production, regulation, storage and distribution, and the therapeutic and diagnostic uses of oxygen. Minimum grade required: "C." Corequisites: RESP-110, RESP-112. Offered: Spring. Faculty Permission Required.

RESP-116 Cardiopulmonary Pharmacology 3 cr.

This course presents major pharmacological agents used in treating cardio-pulmonary diseases. It provides a discussion of pharmaceutical classification, drug action, and modes of administration, the metric system, medications and special handling procedures. Also included are cardiac drugs, sedatives, and pain maintenance drugs as they relate to cardio-pulmonary function. Minimum grade required: "C." Prerequisites: RESP-110. Minimum grade required: C. Corequisites: RESP-118, BIOL-253. Offered: Fall.

RESP-118 Diagnostic & Therapeutic Techniques 5 cr.

This course introduces basic cardiopulmonary diagnostic testing, specifically arterial blood gas (ABG) analysis and pulmonary function testing (PFT). It also covers the various therapeutic modalities used in respiratory care for humidity and aerosol therapy, lung expansion therapy, bronchial hygiene, chest physiotherapy and airway clearance. Prerequisites: RESP-110, RESP-112, and RESP-114. Minimum grade required: C. Corequisites: RESP-116, BIOL-253. Offered: Fall.

RESP-120 Cardiopulmonary Pathophysiology 3 cr.

This course presents a study of cardiopulmonary diseases, the etiology, clinical manifestations, clinical laboratory testing, respiratory laboratory testing, and respiratory care management of the disease. Prerequisites: RESP-116 and BIOL-253. Minimum grade required: C. Corequisites: RESP-122, RESP-124, RESP-126, RESP-128. Offered: Spring.

RESP-122 Critical Care Management 4 cr.

This course presents basic emergency airway management techniques and the concepts, applications, and monitoring of patients on mechanical ventilation. Included are non-invasive monitoring techniques, transcutaneous, capnography, and respiratory mechanics. Prerequisites: RESP-116, RESP-118, and BIOL-253. Minimum grade required: C. Corequisites: RESP-120, RESP-124, RESP-126, RESP-128. Offered: Spring.

RESP-124 Special Procedures in Respiratory Care 2 cr.

This course discusses chest tube and drainage systems, hemodynamic monitoring, sleep studies, bronchoscopy, Holter monitoring, exercise testing, and metabolic studies. Prerequisites: RESP-116, RESP-118, and BIOL-253. Minimum grade required: C. Corequisites: RESP-120, RESP-122, RESP-126, RESP-128. Offered: Spring.