## RAE Russian and Eastern Studies

### RUSSIAN

**RAE 101 ELEMENTARY RUSSIAN.**
The students are introduced to the language through grammatical explanations, recitation practice, and oral as well as written exercises. The emphasis is on the spoken language of everyday use, reading of graded Russian texts, vocabulary building and accurate pronunciation. Extensive work with tape recordings. Lecture, three hours; supervised recitation, one hour per week.

**RAE 102 ELEMENTARY RUSSIAN.**
A continuation of RAE 101. Lecture, three hours; supervised recitation, one hour per week. Prereq: RAE 101 or equivalent.

†**RAE 115 BEGINNING KAZAKH I.**

†**RAE 116 BEGINNING KAZAKH II.**

**RAE 201 INTERMEDIATE RUSSIAN.**
Systematic study of grammar. Introduction through simplified texts to the life and culture of Tsarist and Soviet Russia. Dictation, composition, conversation, and extensive oral practice. Lecture, three hours; recitation, one hour per week. Prereq: RAE 102 or the equivalent. (Required.)

**RAE 202 INTERMEDIATE RUSSIAN.**
A continuation of RAE 201. Lecture, three hours; recitation, one hour per week. Prereq: RAE 201 or equivalent. (Required.)

†**RAE 261 SURVEY OF RUSSIAN LITERATURE.**

**RAE 270 INTRODUCTION TO RUSSIAN CULTURE.**
A general introduction to Russian culture from its origins through the early 20th century designed to acquaint students with the roots of Russian religion, art, architecture, music, folklore, and everyday life.

**RAE 280 RUSSIAN AND SOVIET CULTURE OF THE 20TH CENTURY.**
A broad survey of Russian civilization as it has developed in the arts, law, and in its socio-religious values. Taught in English.

**RAE 303 RUSSIAN PRONUNCIATION AND CONVERSATION.**

**RAE 304 RUSSIAN PRONUNCIATION AND CONVERSATION.**

**RAE 305 ADVANCED RUSSIAN GRAMMAR.**
Detailed study of advanced points of Russian grammar, such as verbal aspect, verbs of motion, participles, conditional constructions, time expressions. Prereq: RAE 202 or equivalent.

**RAE 306 ADVANCED RUSSIAN GRAMMAR.**
Continuation of RAE 305. Detailed study of advanced points of Russian grammar such as reflexives, passives, complex/compound sentences, word formation, word order, syntax. Prereq: RAE 305 or consent of instructor.

**RAE 331 CLASSICAL ARABIC LITERATURE (in English).**
Reading from some of the major works of Arabic literature (poetry and prose) of the 6th-14th centuries which are an integral part of the Arab cultural heritage, e.g., the Mu‘allaqat, Koran, Ibn Ishaq’s Sirah; al-Tabari’s Ta’rikh; Abu’l Faraj’s Kitab al-Aghani; al-Ghazzali’s Ihya; al-Hariri’s Maqamat; and Ibn Khaldun’s Muqaddimah.

†**RAE 340 KAZAKH CULTURAL HISTORY I.**

†**RAE 342 KAZAKH CULTURAL HISTORY II.**

**RAE 370 RUSSIAN FOLKLORE (in English).**
Central issues of Russian folk culture, particularly related to ritual, material culture, and oral lore; patterns and functions of folk architecture, clothing, and crafts in 19th C. peasant life.

**RAE 380 SURVEY OF 19th CENTURY RUSSIAN LITERATURE (in English).**
A survey of Russian literature of the 19th Century. Emphasis is on the development of romanticism, the rise of realism, and end-of-century decadence. All readings, lectures, and discussions are in English. Students taking the course for Russian major credit are expected to do outside work in Russian.

**RAE 390 MODERN RUSSIAN LITERATURE (in English).**
Russian literature of the 20th Century, including modernist trends, Socialist Realism, non-conformist trends, Russian literature abroad. Students taking the course for Russian major credit will be assigned outside work in Russian.

**RAE 395 INDEPENDENT WORK IN RUSSIAN.**
Students who have the proper qualifications may undertake a special problem in reading and research. May be repeated to a maximum of six credits. (Recommended.)

**RAE 400G SEMINAR ON SPECIAL TOPICS IN RUSSIAN.**
Detailed investigation of a given topic, author or theme. Research to be conducted at least in part using Russian materials. Subject will be announced prior to preregistration. May be repeated to a maximum of six credits.

**RAE 410 STRUCTURE AND STYLISTICS OF RUSSIAN.**
A concise structural study of Russian grammar combined with readings illustrating the relationship between grammar and style in Russian prose and verse. Attention is also given to techniques and elements of formal textual analysis. Prereq: Third year knowledge of Russian.

**RAE 411 STRUCTURE AND STYLISTICS OF RUSSIAN.**
A continuation of RAE 410. Prereq: RAE 410 or equivalent. (Recommended.)

**RAE 420 RUSSIAN TRANSLATION.**
Translation of unadapted texts from Russian to English, theory of translation, practice translation of Russian texts of various kinds, both technical and literary, focus on specific stylistic requirements, translation of short texts from English to Russian, introduction to oral interpretation. Prereq: RAE 303-304 or equivalent.

**RAE 430G BUSINESS RUSSIAN.**
Development of written and oral skills in Russian needed to conduct business activities in Russian-speaking areas of the former Soviet Union using various materials from banking, advertising, law, economics and industry. Prereq: Third year knowledge of Russian.

¶**RAE 460G TOLSTOY (in English).**

¶**RAE 463 RUSSIAN PLAYS (in Russian).**

¶**RAE 495G ADVANCED INDEPENDENT WORK IN RUSSIAN AND EASTERN STUDIES.**
Independent research in Russian and Eastern Studies on an advanced level for undergraduate and graduate students. Students will be required to establish a written contract with the relevant faculty member describing the tasks to be completed in the course. May be repeated to a maximum of six credits, or a total of six credits of RAE 395 and 495G.

### HEBREW

**RAE 130 ELEMENTARY HEBREW.**
Coverage of Hebrew grammar designed to prepare students to use Hebrew for their particular needs and programs.

**RAE 131 ELEMENTARY HEBREW.**
Continuation of RAE 130. Prereq: RAE 130 or consent of instructor.

**RAE 230 INTERMEDIATE HEBREW.**
Hebrew grammar and introduction to the reading of specimens of Hebrew prose. Prereq: RAE 131 or consent of instructor.

**RAE 231 INTERMEDIATE HEBREW.**
Readings in selected Hebrew authors. Prereq: RAE 230 or consent of instructor.

**RAE 324 JEWISH THOUGHT AND CULTURE I: FROM ANCIENT ISRAEL TO THE MIDDLE AGES.**
A survey of Jewish intellectual and material civilization from its beginnings in ancient Israel to its efflorescence in the medieval period.

**RAE 325 JEWISH THOUGHT AND CULTURE II: FROM THE EXPULSION FROM SPAIN TO THE PRESENT.**
A survey of Jewish intellectual and material civilization from the expulsion from Spain in 1492 to the destruction of European Jewry in the Holocaust and the re-establishment of Israel.
many basic applications in the fields of diagnostic radiology physics, therapy physics, and nonionizing radiations. Lecture, two hours; laboratory, two and one-half hours. Prereq: RAE 141.

RAS 240 INTERMEDIATE MODERN STANDARD ARABIC. (3)
A continuation of RAE 140, stressing comprehension of written and oral material, the ability to read Arabic aloud and to compose written material, and the ability to speak. Prereq: RAE 140.

RAS 241 INTERMEDIATE MODERN STANDARD ARABIC. (3)
A continuation of RAE 240, stressing comprehension of written and oral material, the ability to read Arabic aloud and to compose written material, and the ability to speak. Prereq: RAE 240.

OTHER DEPARTMENTAL OFFERINGS

RAE 150 BEGINNING CHINESE I. (4)
A course in first semester Chinese language.

RAE 151 BEGINNING CHINESE II. (4)
A course in second semester Chinese language. Prereq: RAE 150 or equivalent.

RAE 250 INTERMEDIATE CHINESE I. (4)
A course in third semester Chinese language. Prereq: RAE 151 or equivalent.

RAE 251 INTERMEDIATE CHINESE II. (4)
A fourth semester course in Chinese language. Prereq: RAE 250 or equivalent.

RAE 328 ISLAMIC CIVILIZATION I. (3)
The rise of Islam and its classical development.

RAE 330 ISLAMIC CIVILIZATION II. (3)
The Islamic world’s response to westernization and the resultant reassertion of its cultural role in the modern world.

RAE 401 SEMINAR IN RUSSIAN AND EAST EUROPEAN STUDIES (Subtitle required). (3)
Interdisciplinary seminar on a topic in Russian and East European Studies. Prereq: Junior standing.

RAE 425 TOPICS IN JUDAIC STUDIES (Subtitle required). (3)
Variable in content, this course focuses on important texts and issues in Jewish history, religion, literature, and philosophy. May be repeated to a maximum of six credits under different subtitles.

RAE 435 TOPICS IN ISLAMIC STUDIES (Subtitle required). (3)
Variable in content, this course focuses on important texts and issues in Islamic history, religion, literature, and philosophy. May be repeated to a maximum of six credits under different subtitles.

RAS Radiation Sciences

RAS 540 FUNDAMENTALS OF RADIATION BIOLOGY. (3)

RAS 541 RADIOISOTOPE METHODOLOGY. (3)

RAS 545 RADIATION HAZARDS AND PROTECTION. (3)
An analysis of common radiation hazards encountered in medicine, research, industry, and the environment. Regulations and procedures for the safe use of ionizing and nonionizing radiations. Lecture, two hours; laboratory, two and one-half hours. Prereq: PHY/RM 472G or consent of instructor. (Same as PHY/RM 545.)

RAS 546 GENERAL MEDICAL RADIOLOGICAL PHYSICS. (3)
The uses and dosimetric aspects of radiation in medicine will be analyzed, including many basic applications in the fields of diagnostic radiology physics, therapy physics, and nuclear medical physics. Prereq or concur: RM/PHY 472G or consent of instructor. (Same as PHY/RM 546.)

RAS 575 APPLIED HEALTH PHYSICS LABORATORY. (3)
RC 510 ORIENTATION TO REHABILITATION RESOURCES. (3) A study of the breadth of agencies, programs, and services involved in the provision of rehabilitation services for persons with disabilities, including medical, educational, institutional, and community resources. Relationships among agencies, staffing patterns, funding sources, and professionals involved in providing services to individuals with disabilities are overviewed. Lecture, two hours; laboratory, two hours per week. Prereq: Twelve hours of social or behavioral sciences, or graduate standing, or consent of instructor.

RC 515 MEDICAL AND PSYCHOSOCIAL ASPECTS OF DISABILITIES I. (3) This course is designed to prepare rehabilitation counselors and social workers to become interpreters of medical information concerning major disabilities and to provide an understanding of the psychosocial factors encountered by the disabled. Focus will be on how these factors affect adjustment to a disability, and on professional practice with the disabled. Topics include concepts of medical and psychosocial aspects of disability, which relate to conditions that impair bodily systems and/or structures due to illness or accident that result in permanent and/or chronic functional limitations. Prereq: College level courses in biology and psychology or consent of instructor. (Same as SW 515.)

RC 516 MEDICAL AND PSYCHOSOCIAL ASPECTS OF DISABILITIES II. (3) This course is designed to prepare rehabilitation counselors and social workers to become interpreters of medical information concerning major disabilities and to provide an understanding of the psychosocial factors encountered by the disabled. Focus will be on how these factors affect adjustment to a disability, and on professional practice with the disabled. Topics include concepts of medical and psychosocial aspects of disability, which relate to conditions that impair bodily systems and/or structures due to illness or accident that result in permanent and/or chronic functional limitations. Prereq: College level courses in biology and psychology or consent of instructor. (Same as SW 516.)

RC 520 PRINCIPLES OF REHABILITATION COUNSELING. (3) A comprehensive introduction to rehabilitation as a human service system in modern America. Philosophical, historical, legislative, and organizational structures; rehabilitation programs and related specialties; referral and delivery systems, the rehabilitation process; and professional issues and ethics. Prereq: Twelve hours of social or behavioral science, or graduate standing, or consent of instructor.

RC 530 CULTURAL DIVERSITY IN REHABILITATION COUNSELING. (2) This course is designed to assist students to develop an understanding of factors which relate to race/ethnicity, gender, disability, age, and sexual orientation as these concern participation and successful completion of rehabilitation programs. Emphasis is placed on addressing cultural myths and stereotypes. Case studies and illustrations for counseling persons from culturally diverse backgrounds will be presented. Prereq: Consent of instructor.

RC 540 CHEMICAL DEPENDENCY IN REHABILITATION COUNSELING. (3) This course is designed to provide students with information about the effects of alcohol and other drug usage. Implications for rehabilitation counseling will be presented. Content will include an overview of theories, models of substance abuse, evaluation and assessment, and case management. Issues pertaining to gender, age, ethnicity, family prenatal exposure, dual diagnosis, and adult children of substance abusers will be addressed. Prereq: Consent of instructor.

RC 546 TRANSDISCIPLINARY SERVICES FOR STUDENTS WITH MULTIPLE DISABILITIES. (3) This course will focus on the philosophical issues related to teaching students with deaf-blindness and other multiple disabilities. Professionals will discuss pertinent information related to planning for this population of students, particularly in the areas of communication, physical management, health, sensory input, and vitality. Students will utilize information obtained to plan for a student with deaf-blindness or other multiple disabilities. Strategies presented for planning will include transdisciplinary assessment, person-centered planning, and activity-based instruction. Prereq: EDS 375 or EDS 600 or consent of instructor. (Same as EDS 546.)

RC 547 COLLABORATION AND INCLUSION IN SCHOOL AND COMMUNITY SETTINGS. (3) This course will focus on inclusion of students with moderate to severe disabilities in all aspects of school and community life, with special consideration given to the individual student planning variables that must be addressed in meeting the needs of each school-age student and for preparing students to function as fully and independently in their communities as possible. The course is designed to meet the needs of those pursuing certification in Moderate and Severe Disabilities and pursuing degrees in Elementary and Secondary Education, Vocational Rehabilitation, School Psychology, Social Work, Physical Therapy, Communication Disorders, and related disciplines. Prereq: Consent of instructor. (Same as EDS 547.)

RC 558 SPECIAL TOPICS IN REHABILITATION COUNSELING. (1-3) Study of a selected topic within the field of rehabilitation. Topic to be chosen annually in accordance with student needs and interests. May be repeated to a maximum of six credits. (Same as EDS 558.)

RC 610 CASE MANAGEMENT IN REHABILITATION COUNSELING. (3) Development of rehabilitation counseling skills and techniques. Understanding of behavior, and implementation of appropriate intervention strategies for facilitating persons with disabilities through the rehabilitation process. Case management techniques, ethics, consultation strategies, and specialized counseling skills development. Prereq: EDP 652 and RC 520 or consent of instructor.

RC 620 VOCATIONAL EVALUATION AND WORK ADJUSTMENT FOR THE SEVERELY DISABLED. (3) Methods and techniques used in determining and enhancing the vocational potential of persons with disabilities. Commercial evaluation systems, work adjustment techniques, personal adjustment training, the role of evaluation in rehabilitation. Laboratory experience will include administration and interpretation of vocational tests. Lecture: two hours; laboratory: two hours per week. Prereq: A vocational theories course and RC 520 or consent of instructor.

RC 630 PLACEMENT SERVICES AND TECHNIQUES IN REHABILITATION COUNSELING. (3) Development of skills for placement of persons with disabilities into a variety of settings: competitive employment, supported employment, independent living, philosophy of placement, preplacement analysis, client readiness techniques, job development, job engineering, employer attitudes, business rehabilitation, and social security disability. Occupation information and its use in the placement process. Labor market analysis and procedures for analyzing client residual and transferable work skills. Procedures for employability skills development. Prereq: A vocational theories course, RC 520 and 620 or consent of instructor.

RC 640 REHABILITATION IN BUSINESS AND INDUSTRY. (3) This course is designed to provide students with a comprehensive knowledge of rehabilitation in business environments. Skills to develop a professional working relationship between the rehabilitation professional, employers, the insurance industry, and other professionals will be taught. A thorough overview of worker compensation, related legislation, and other insurance will be presented. The roles and functions of the rehabilitation professional in business rehabilitation counseling will be discussed. Prereq: Twelve hours of study in rehabilitation counseling or consent of instructor.

RC 650 REHABILITATION COUNSELING THEORY AND PRACTICE I. (3) This is a two-semester sequence course. This sequence is designed to provide an overview of theories of counseling and how they can be applied in a rehabilitation counseling context with regard to persons with disabilities. A goal of this course is to acquire knowledge about theoretical orientations and to integrate theory with practice. Emphasis will be on helping students clarify beliefs, values, and personal style, and connecting those to the beliefs, values, and personal style of various theories. Emphasis will be on helping students to recognize culture, class, and gender components, as well as identifying commonalities across theories as these relate to rehabilitation counseling. A goal is to develop rehabilitation counselors who function as reflective decision makers. Prereq: Admission to the rehabilitation counseling program or consent of instructor.
2001-2002 Course Descriptions – Rehabilitation Sciences

RC 660 REHABILITATION COUNSELING THEORY AND PRACTICE II. (3) This is a two semester sequence course. This sequence is designed to provide an integration of techniques of counseling which are derived from theories of counseling and how they can be applied in a rehabilitation counseling context with regard to persons with disabilities. A goal of this course is to integrate theory with practice. The emphasis in this second course will be on the application of counseling theory to rehabilitation counseling practice with persons who have disabilities. Counseling techniques will be taught in the context of rehabilitation settings. A primary objective is to develop rehabilitation counselors who function as reflective decision makers. Prereq: RC 650 or consent of instructor.

RC 710 PRACTICUM IN REHABILITATION COUNSELING. (3) Learning experiences under faculty supervision in a community-based or state rehabilitation agency. Application of rehabilitation counseling methods, techniques, and vocational knowledge in working with persons with disabilities. Lecture, two hours; laboratory, 14 hours per week. May be repeated once to a maximum of six credits. Prereq: A minimum of 12 graduate hours in rehabilitation counseling and consent of instructor.

RC 720 INTERNSHIP IN REHABILITATION COUNSELING. (3,6,9) Advanced learning experiences in a rehabilitation setting or agency. Lecture, two hours; laboratory, 14 to 42 hours per week. May be repeated once to a maximum of nine credits. Prereq: A minimum of successful completion of one year in the Rehabilitation Counseling Program and RC 710 and consent of instructor.

RC 740 ADMINISTRATION, SUPERVISION AND PROGRAM EVALUATION IN REHABILITATION COUNSELING. (1-3) Administrative and supervisory aspects of rehabilitation service delivery. Administration, clinical and technical supervision, staffing, and organizational structure(s) of the rehabilitation service delivery system (state, local, and federal). Research, program evaluation, political and ethical aspects of rehabilitation administration and supervision are overviewed. Prereq: A minimum of 12 graduate hours in rehabilitation counseling or consent of instructor.

RC 750 REHABILITATION RESEARCH. (1-3) Application of basic research principles to the field of rehabilitation. Specific focus on client characteristics, constructs of disability, rehabilitation outcomes, counselor-client variables, and rehabilitation service components. Rehabilitation research and utilization projects, research funding and related grant mechanisms. Prereq: A basic research course and RC 520 or consent of instructor.

RC 760 CONTEMPORARY PRACTICES IN REHABILITATION. (1-3) Contemporary practices including supported employment, independent living, engineering and technology, family matters, client rights, ethical practices, cultural diversity, aging, and present and future trends in the field of rehabilitation. Analysis of legislation, value systems, political and economic fluctuations and research. Prereq: A minimum of 12 graduate hours in rehabilitation counseling or consent of instructor.

RC 782 DIRECTED INDEPENDENT STUDY. (1-3) Study of an individually selected topic relevant to a student’s academic development. May be repeated to a maximum of six credits. Prereq: Consent of instructor.

RHB Rehabilitation Sciences

RHB 701 REHABILITATION THEORIES AND APPLICATION THROUGH THE LIFE SPAN. (3) Explores the theories common to all the rehabilitation therapies (PT, CD, OT) and that form a foundation for the rehabilitation sciences. Included are theories specific to client characteristics, constructs of disability, rehabilitation outcomes, counselor-client variables, and rehabilitation service components. Rehabilitation research and utilization projects, research funding and related grant mechanisms. Prereq: Admission to the Rehabilitation Sciences Ph.D. program or consent of the instructor.

RHB 702 REHABILITATION SERVICES IN HEALTH CARE SYSTEMS AND DELIVERY. (3) An analysis of emerging trends in health care systems and delivery with specific emphasis on the impact on the rehabilitation fields. Topics include the financing of health care delivery, organizational changes in response to evolving reimbursement strategies, team functioning, management of change, legislative issues, and the ethical and legal implications of rehabilitation service delivery in the new models. Prereq: Admission to the Rehabilitation Sciences Ph.D. Program or consent of the instructor.

RHB 740 PEDIATRIC ASSESSMENT: NEONATES TO ADOLESCENTS. (3) Provides information regarding the assessment of children, neonates to adolescents, in areas of gross, fine, and oral motor and sensory-perceptual skills. Evaluates various qualitative and quantitative measures of motor development, motor control, and activities of daily living in a pediatric population. Investigates the use of assessment tools and protocols for specific disciplines and interdisciplinary teams including speech/language pathology, and physical and occupational therapies. Prereq: Admission to the Rehabilitation Sciences Ph.D. program or consent of the instructor.

RHB 742 INTERVENTION STRATEGIES: NEONATES TO ADOLESCENTS. (3) Investigation of treatment interventions for children with physical disabilities to maximize independence in functional activities. Overview of the treatment and management of children in areas of gross, fine, and oral motor, sensory-perceptual, and communication skills. Development of treatment and management protocols for specific disciplines and inter- disciplinary teams including speech/language pathology, and physical and occupational therapies. Prereq: Admission to the Rehabilitation Sciences Ph.D. program or consent of the instructor.

RHB 744 ADVANCED TOPICS IN MOTOR DEVELOPMENT. (3) Investigation of motor development, control, and learning strategies in pediatrics. In depth analysis of movement for specific function tasks and motor dysfunction with identification of both primary and secondary designated problem areas in children with neuro-developmental concerns. Prereq: Admission to the Rehabilitation Sciences Ph.D. program or consent of the instructor.

RHB 749 DISSERTATION RESEARCH IN REHABILITATION SCIENCES. (0-9) Half-time to full-time work on dissertation. May be repeated to a maximum of six semesters. Prereq: Admission to the Rehabilitation Sciences Ph.D. program.

RHB 750 AGING AND ADULT NEUROLOGICAL DISORDERS: ASSESSMENT. (3) This interdisciplinary course prepares the student to assess functional abilities in the adult with a neuromotor disorder. The student will learn functional assessment strategies for motor control, cognition, communication, feeding, swallowing, and activities of daily living (ADL) for adults with neuromotor disorders. Prereq: Admission to the Rehabilitation Sciences Ph.D. program or consent of instructor.

RHB 752 AGING AND ADULT NEUROLOGICAL DISORDERS: INTERVENTION. (3) This course provides an interdisciplinary view of management of the rehabilitation needs of adults with neuromotor disorder. The course will concentrate on ways to maximize independence in functional activities and improve the quality of life in this population of adults. Prereq: Admission to the Rehabilitation Sciences Ph.D. program or consent of instructor.

RHB 760 ASSESSMENT OF MOVEMENT DYSFUNCTION. (3) An introduction to the normal and abnormal movement patterns and its relationship to dysfunction in individuals from birth to advanced age. Topics include theories of motor programming, skill acquisition and maturation; assessment of movement patterns (normal) and abnormal (dysfunction) and theories of interventions to impact movement strategies. Prereq: Admission to the Rehabilitation Sciences Ph.D. program or consent of instructor.

RHB 762 TREATMENT OF MOVEMENT DYSFUNCTION. (3) Treatment interventions for individuals to enhance normal and improve or alter abnormal movement patterns serves as the focus of this course. The implications of dysfunction on individuals from birth to advanced age will be examined. Topics include theories of motor programming and how they are impacted via therapeutic measures; skill acquisition and redevelopment following injury or disease; how therapeutic measures impact movement patterns (normal) and abnormal (dysfunction); and an examination of theories of interventions to impact movement strategies. Prereq: Admission to the Rehabilitation Sciences Ph.D. program or consent of instructor.

RHB 769 RESIDENCE CREDIT FOR THE DOCTORAL DEGREE. (0-9) May be repeated to a maximum of 18 credits. Prereq: Admission to the Rehabilitation Sciences Ph.D. program.

RHB 770 PROFESSIONAL SEMINAR IN REHABILITATION SCIENCES. (1) A study of selected topics in the Rehabilitation Sciences with emphasis on recent research and theory in the disciplines of communication disorders, occupational therapy, and physical therapy. Includes topics in health systems and delivery, interdisciplinary issues, and research methodologies. May be repeated to a maximum of six credits. Prereq: Admission to the Rehabilitation Sciences Ph.D. program or consent of the instructor.
RM Radiation Medicine

RM 472G INTERACTION OF RADIATION WITH MATTER. (3)
Basic aspects of the interaction of ionizing radiation with matter. Bohr atom, atomic spectra, radioactivity, energetics of decay. Sources of radiation, penetration of charged particles, electromagnetic radiation, and neutrons through matter; excitation and ionization processes; selected nuclear reactions; basic radiation detection and dosimetry. Prereq: PHY 213 or 232; MA 114 (may be taken concurrently); or equivalent. (Same as PHY 472G.)

RM 545 RADIATION HAZARDS AND PROTECTION. (3)
An analysis of common radiation hazards encountered in medicine, research, industry, and the environment. Regulations and procedures for the safe use of ionizing and non-ionizing radiations. Lecture; two hours; laboratory, two and one-half hours. Prereq: PHY/RM 472G or consent of instructor. (Same as PHY/RAS 545.)

RM 546 GENERAL MEDICAL RADIOLOGICAL PHYSICS. (3)
The uses and dosimetric aspects of radiation in medicine will be analyzed, including many basic applications in the fields of diagnostic radiology physics, therapy physics, and nuclear medical physics. Prereq or concur: RM/PHY 472G or consent of instructor. (Same as PHY/RAS 546.)

RM 601 ADVANCED RADIATION DOSIMETRY. (2)

RM 647 PHYSICS OF DIAGNOSTIC IMAGING I. (3)
Specialized and advanced topics in diagnostic imaging, including modulation transfer function analysis, image processing algorithms, acceptance testing, CT, NMR, ultrasound, etc. Prereq: PHY/RM/RAS 546 or consent of instructor. (Same as RAS 647.)

RM 648 PHYSICS OF DIAGNOSTIC IMAGING II. (3)
A continuation of RAS/RM 647. Specialized and advanced topics in nuclear medicine imaging physics, including positron emission tomographic procedures, emerging new modalities, and quality control. Prereq: RM/RAS 647 or consent of instructor. (Same as RAS 648.)

RM 649 PHYSICS OF RADIATION THERAPY. (3)
Specialized external beam and brachytherapy treatment planning; advanced Bragg-Gray cavity applications, including Nga and TG-21; calibration, acceptance testing, and quality control of therapy physics equipment. Prereq: RAS/RM/PHY 546 and RAS/ RM 601, or consent of instructor. (Same as RAS 649.)

RM 660 GRADUATE PRACTICUM IN RADIATION MEDICINE. (1-6)
Applied field work at the graduate level in the sciences relating to radiation medicine. May be repeated to a maximum of six credits. Prereq: Graduate standing in the bioradiation or medical sciences, plus consent of instructor.

RM 695 RESEARCH IN THE HEALTH-RELATED RADIATION SCIENCES. (1-4)
Independent directed research on theoretical and practical problems in the health-related radiation sciences. May be repeated to a maximum of eight credits. Prereq: Graduate standing in one of the radiation-related sciences, plus consent of instructor. (Same as RAS 695.)

RM 740 MAMMALIAN RADIATION BIOLOGY. (2)
The physical and biological sequelae of radiation effects will be discussed emphasizing human and mammalian responses and radiation health. Emphasis will be for health and medical workers. Prereq: Consent of instructor; BIO/RM 540 or RM 546 or equivalent background. (Same as BIO 740.)

RM 825 SECOND-YEAR ELECTIVE, RADIATION MEDICINE. (1-4)
With the advice and approval of his or her faculty adviser, the second-year student may choose approved electives offered by the Department of Radiation Medicine. The intent is to provide the student an opportunity for exploration and study in an area which supplements and or complements required course work in the second-year curriculum. Pass-fail only. Prereq: Admission to second-year medical curriculum and approval of adviser.

RM 842 RADIATION ONCOLOGY. (1)
Use of radiation therapy in clinical treatment of malignancy. Staging, histology, spread, treatment techniques, acute and late effects of radiation therapy. Prereq: RM 740 and an introductory anatomy course, or equivalent, and consent of instructor.

RM 848 PRACTICUM IN BRACHYTHERAPY PHYSICS. (1-3)
This course offers practicum training in the clinical use of therapy physics and health physics in brachytherapy. May be repeated to a maximum of three credits. Laboratory: 40 hours per week. Prereq: RM/HRS 649, or equivalent, and consent of instructional staff.

RM 849 PRACTICUM IN EXTERNAL BEAM THERAPY PHYSICS. (1-6)
This course offers practicum training in the professional use of therapy physics in external beam radiation therapy. May be repeated to a maximum of six credits. Laboratory: 40 hours per week. Prereq: RM/HRS 649, or equivalent, and consent of instructor.

RM 850-899 FOURTH-YEAR ELECTIVE FOR MEDICAL STUDENTS. (1-6)
With the advice and approval of the faculty adviser and the Student Progress and Promotions Committee, the fourth-year student may choose approved electives offered by the various departments in the College of Medicine. The intent is to provide the student an opportunity to develop his knowledge and clinical competence. Prereq: Admission to the fourth year, College of Medicine and/or permission of the Student Progress and Promotions Committee.

Approved electives:
RM 850 RADIATION ONCOLOGY
RM 852 RESEARCH IN RADIATION MEDICINE

RS Religious Studies

RS 130 INTRODUCTION TO COMPARATIVE RELIGION. (3)
Comparative study of major world and selected regional religions with emphasis on analysis of beliefs, rituals, artistic expression and social organization. Eastern and Western religions are considered. (Same as ANT 130.)

RSD Restorative Dentistry

RSD 810 FUNDAMENTALS OF OPERATIVE DENTISTRY I. (2)
This lecture course in operative dentistry is designed to provide a beginning student with basic knowledge about cavity preparation and restorative techniques for amalgam and resin composite. This course, together with a complementary laboratory course, RSD 814, is directed at preparing the student with knowledge and skills in the diagnosis and treatment of carious lesions necessary for patient care in operative dentistry. Prereq: RSD 812, or consent of course director; coreq: RSD 814.
RSD 812 PRINCIPLES OF DENTAL ANATOMY, MORPHOLOGY AND OCCLUSION. (6)
This introductory course is designed to provide the student dentist with the necessary working knowledge of dental anatomy, dental morphology and basic dental occlusion for all succeeding courses in preclinical and clinical dentistry. This includes a detailed study of individual teeth, the relationship of dental form and function, mandibular movement and the basic introduction and use of the dental articulator. Lectures and laboratory experiences related to dental biomaterials are included as needed. Lecture, 45 hours; laboratory 99 hours. Prereq: Approval of the dean and/or his designee for academic affairs and the consent of the course director.

RSD 814 PRECLINICAL OPERATIVE DENTISTRY I. (2)
This first-year preclinical laboratory course in operative dentistry is designed to provide a beginning student with basic skills for cavity preparation and restorative techniques for amalgam and resin composite. This course, together with the complementary lecture series course, RSD 810, is directed at preparing the student with the knowledge and skill necessary for patient care in operative dentistry. Laboratory 69 hours. Prereq: RSD 812, RSD 810 as corequisite, or consent of instructor.

RSD 816 ESTHETIC DENTISTRY I. (1)
This lecture course is designed to provide a beginning student the basic principles of cavity preparation and restoration with esthetic dental materials. Materials include resin composite, resin ionomer and glass ionomer. This course, together with the complementary laboratory course, RSD 818, is directed at preparing the student with knowledge and skills in the diagnosis and treatment of defective tooth structure associated with anterior teeth. Prereq: RSD 812, RSD 810, RSD 814 or the consent of the course director.

RSD 818 PRECLINICAL ESTHETIC DENTISTRY I. (1)
This first-year preclinical course in esthetic dentistry is designed to provide a beginning student with the basic skills for cavity preparation and restorative techniques for tooth-colored restorative materials. This course, together with the complementary lecture series course, RSD 816, is directed at preparing the student for patient care in esthetic dentistry. Prereq: RSD 812, RSD 810, RSD 814 or consent of the course director.

RSD 821 CLINICAL RESTORATIVE DENTISTRY I. (3)
This course emphasizes clinical application of the principles taught in preclinical courses. Concepts of diagnostic and therapeutic procedures as well as preventive measures are applied in the clinical setting with emphasis on the demonstration of competency in rendering primary care type treatment procedures. Prereq: RSD 814; coreq: RSD 824.

RSD 822 PRINCIPLES OF DENTAL OCCLUSION AND ARTICULATION. (3)
This course is directed toward the examination, diagnosis, treatment planning, and treatment of various occlusal problems. The student will learn the skills needed to analyze the dental occlusion of patients and to plan successful occlusal therapy including restorative procedures and fixed prosthodontic treatment. The course will concentrate on developing technical skills and learning assessment criteria related to mounted study casts, occlusal examination and analysis, selective occlusal adjustment, diagnostic waxing and planning, and the fabrication of a muscle relaxation occlusal splint. Lecture, 23 hours; laboratory, 27 hours; clinic, 27 hours. Prereq: CDS 815, RSD 812, or with approval of the course director.

RSD 823 PRECLINICAL RESTORATIVE DENTISTRY II. (1)
This is a didactic course with emphasis on the basic knowledge required for tooth preparation and indirect single tooth dental restoration. The materials science and correct manipulation of dental stones, alloys and luting agents are emphasized. Prereq: RSD 812, RSD 810, RSD 814, RSD 816, or consent of instructor.

RSD 824 PRECLINICAL RESTORATIVE DENTISTRY II. (2)
This preclinical course places emphasis on dental hard tissue surgery and on their restoration to meet the biological needs of the patient. Tooth preparation and extracoronal restorations are performed on manikins and extracted teeth. The materials science and correct manipulation of investments, alloys and cements used to make case restorations are emphasized. Knowledge gained in dental morphology and occlusion is applied in the course. Laboratory: 54 hours. Prereq: RSD 812, RSD 814, RSD 818; coreq: RSD 823, or consent of instructor.

RSD 825 PRECLINICAL RESTORATIVE DENTISTRY II. (1)
This course is a continuation of RSD 823 with emphasis on single tooth indirect intracoronal restorations and restorations of the endodontically treated tooth. Prereq: RSD 823.

RSD 826 PRECLINICAL DENTISTRY II LABORATORY. (2)
This is a preclinical course with emphasis on dental hard tissue surgery and restorative procedures for single tooth indirect restorations. Clinical simulation procedures are performed on manikins and extracted teeth. Prereq: RSD 823, RSD 824, or consent of course instructor. Coreq: RSD 825.
<table>
<thead>
<tr>
<th>RSO</th>
<th>Rural Sociology</th>
</tr>
</thead>
</table>

^RSO 102 THE DYNAMICS OF RURAL SOCIAL LIFE. (3)
Introduces major concepts of sociology by exploring social, political and cultural issues confronting rural society and American agriculture, such as: population change, industrialization, energy developments, agricultural change. Student may not receive credit for both this course and SOC 101.