

# MEDICAL SCIENCES (MDS)

## School of Medicine

### MDS 099 – Special Study in Medicine for Undergraduates (1-5 units)

*Course Description:* Participate in research projects relating to medicine with faculty in the School of Medicine.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Independent Study 3-15 hour(s).

*Grade Mode:* Pass/No Pass only.

### MDS 192 – Medical Education Internship for Advanced Undergraduates (1-12 units)

*Course Description:* Participate in projects related to curriculum development in support of curriculum for M.D. degree. Gain work experience and appreciation for innovative approaches to learning in basic and clinical sciences of medical education.

*Prerequisite(s):* Consent of instructor; competency with computers.

*Learning Activities:* Internship 3-36 hour(s).

*Enrollment Restriction(s):* Enrollment dependent on availability of intern positions.

*Repeat Credit:* May be repeated 12 unit(s).

*Grade Mode:* Pass/No Pass only.

### MDS 400 – Summer Pre-Matriculation Program (2 units)

*Course Description:* Two-week program provides students from diverse backgrounds an early introduction to learning skills that will facilitate success in medical school.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* PE Activity 7 hour(s), Independent Study 15 hour(s), Lecture 14 hour(s).

*Grade Mode:* Pass/Fail only.

### MDS 401 – Applications of Computers to Medical Practice (2 units)

*Course Description:* Proficiency in computer applications relative to practice of medicine, with emphasis on email, literature searching, file transfer, and hospital information services. Given online, at home or in lab; time and place determined by student.

*Prerequisite(s):* Enrollment in medical school.

*Learning Activities:* Auto Tutorial 2 hour(s).

*Grade Mode:* Honors/Pass/Fail.

### MDS 402 – Clinical & Cultural Spanish (1-6 units)

*Course Description:* Fluent Spanish-speaking medical students, nursing students and physician assistants students learn a comprehensive set of medical vocabulary and cultural aspects related to the treatment of Spanish speaking patients.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 1 hour(s), Practice 1 hour(s), Independent Study 4 hour(s).

*Grade Mode:* Pass/Fail only.

### MDS 403 – Science & Practice of Mindfulness & Compassion (1 unit)

*Course Description:* Examines current scientific evidence for the effects of different mindfulness and compassion meditation practices in both healthy and clinical samples.

*Learning Activities:* Lecture/Discussion 10 hour(s), Independent Study 20 hour(s).

*Grade Mode:* Pass/Fail only.

### MDS 406 – Endocrinology, Nutrition, Reproduction & Genetics (9.5 units)

*Course Description:* Basic and pathophysiologic processes involved in human reproductive and endocrine control systems, nutritional regulation, and foundational genetics across the lifespan. Integrate information across these systems and use clinical reasoning process to identify and understand relevant perturbations and diseases.

*Prerequisite(s):* BCM 410A; HPH 400; consent of instructor.

*Learning Activities:* Lecture 3.80 hour(s), Discussion/Laboratory 2.80 hour(s).

*Enrollment Restriction(s):* Restricted to Medical students only.

*Repeat Credit:* May be repeated 3 time(s).

*Grade Mode:* Pass/Fail only.

### MDS 410 – Advancing Student-Run Clinics at UC Davis (1 unit)

*Course Description:* Introduction to resources, applied clinical skills, and program-building for medical students who volunteer at student-run free clinics, with the goal to improve care for the patients served. Introduce and review application of basic clinical skills needed to care for common diseases. Connect students to resources from state and national organizations. Create sustainability of student-run clinics through program-building and training.

*Learning Activities:* Seminar.

*Grade Mode:* Pass/Fail only.

### MDS 411 – Doctoring 1 (7 units)

*Course Description:* Small group training in patient communication, interviewing techniques, physical exam and clinical identification. Outpatient clinical experiences and didactic presentations also included.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Discussion 1 hour(s), Clinical Activity 1 hour(s), Lecture 1 hour(s).

*Grade Mode:* Pass/Fail only.

### MDS 411B – Doctoring 1 (5 units)

*Course Description:* Small, case-based learning groups with training in patient communication and interviewing techniques, clinical identification and problem solving, applications of social, psychological, cultural, bioethical, and basic science concepts to patient case scenarios, outpatient clinical experiences and didactic presentations.

*Learning Activities:* Discussion 1.50 hour(s), Clinical Activity 1.50 hour(s), Lecture/Discussion 1.80 hour(s).

*Enrollment Restriction(s):* Medical students only.

*Grade Mode:* Pass/Fail only.

**MDS 411KA – ACE-PC Program Doctoring 1 (8 units)**

*Course Description:* Small case-based learning groups with training in patient communication and interviewing techniques clinical identification and problem solving applications of social psychological cultural bioethical and basic science concepts to patient case scenarios outpatient clinical experiences and didactic presentations.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 5 hour(s), Lecture/Discussion 6 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 411KB – ACE-PC Program Doctoring 1 (5 units)**

*Course Description:* Application of multidisciplinary basic, social and clinical science to clinical cases in small groups. History, physical examination with preceptors. Didactics in epidemiology, ethics, sexuality and clinical reasoning. Evaluation of professional competencies, attitudes and skills needed in the practice of medicine.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 4 hour(s), Lecture/Discussion 1 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 412 – ACE-PC Clinical Skills Foundation (6-12 units)**

*Course Description:* Application of multidisciplinary basic, social and clinical science to clinical cases in small groups. History, physical examination with preceptors. Didactics in epidemiology, ethics, sexuality and clinical reasoning. Evaluation of professional competencies, attitudes and skills needed in the practice of medicine. Includes small case-based learning groups with training in patient communication and interviewing techniques.

*Learning Activities:* Variable.

*Grade Mode:* Pass/Fail only.

**MDS 415A – Population Health & Evidence-Based Medicine (2 units)**

*Course Description:* Introduces the fundamental concepts and tools of population health, evidence-based medicine, and system science.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 12 hour(s), Discussion 4 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 415B – Critical Appraisal of Topics in Population Health (0.5 units)**

*Course Description:* Apply foundational skills to explore critical issues in 21st-century public health, including tobacco control, firearm violence, and obesity. In a series of small-group discussions “interpreting the medical literature,” key concepts from epidemiology and biostatistics are reinforced while students are armed with specific strategies for addressing high-risk behaviors in the context of population health.

*Learning Activities:* Discussion 6 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 415C – Population Health & System Science (1.5 units)**

*Course Description:* Addresses the social, economic, cultural, policy-related, and environmental factors that affect the health of populations and individuals, and the role of health care systems (locally, regionally, nationally, and globally) in moderating the effects of these factors.

Content builds on MDS 415A & MDS 415B, the TeamPEACE (Teamwork for Professionalism, Ethics, and Cultural Enrichment) curriculum in Doctoring 1, and students’ lived experience in UC Davis free clinics.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 4 hour(s), Discussion 6 hour(s), Fieldwork 3 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 416 – ACE-PC Advanced Clinical Skills (1-6 units)**

*Course Description:* Longitudinal clinic component of the second year of the ACE-PC Program. Start with a four-week immersion experience and then 12 additional half-days over the course of the year, working one-on-one with a primary care preceptor.

*Learning Activities:* Variable.

*Grade Mode:* Pass/Fail only.

**MDS 416A – Clinical Skills (7 units)**

*Course Description:* First in a series of courses that span across the pre-clerkship curriculum designed to integrate the clinical teaching within the pre-clerkship curriculum at the UC Davis School of Medicine. In year 1, students acquire the foundational knowledge, skills, and attitudes to succeed in medical training, including: history taking, physical exam, and interpersonal communication skills.

*Learning Activities:* Lecture/Discussion 1 hour(s), Clinical Activity 1 hour(s), Discussion 1 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 416B – Clinical Skills B (7 units)**

*Course Description:* Second in a series of courses designed to integrate the clinical teaching within the pre-clerkship curriculum at the UC Davis School of Medicine. In year 2, students build upon the foundation in clinical skills and professional behavior set out in year 1. The year 2 clinical skills course involves applying clinical skills to the caring for patients who present with active medical issues requiring further diagnostic investigation and therapeutic management.

*Learning Activities:* Discussion 1 hour(s), Lecture 1 hour(s), Clinical Activity 1 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 417A – Clinical Experiences A (1 unit)**

*Course Description:* Clinical Experiences longitudinal thread is designed to provide continued clinical exposure throughout the pre-clerkship curriculum at the UC Davis School of Medicine. In Year 1, students apply the basic physical exam and history taking skills to real-life patients in outpatient clinical settings.

*Learning Activities:* Clinical Activity 0.50 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 417B – Clinical Experiences B (1.5 units)**

*Course Description:* Clinical Experiences longitudinal thread is designed to provide continued clinical exposure throughout the pre-clerkship curriculum at the UC Davis School of Medicine. In year 2, students use their growing knowledge and skill set to complete supervised encounters with real patients in the inpatient setting. In addition to practicing their physical exam and history taking skills, students apply their presentation and counseling skills in real-life encounters.

*Learning Activities:* Clinical Activity 0.50 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 418A – Health & Humanity A (2 units)**

*Course Description:* Health and Humanity longitudinal thread is designed to integrate wellness, professionalism, and the behavioral sciences within the pre-clerkship curriculum at the UC Davis School of Medicine. Throughout Year 1, students acquire the foundational knowledge surrounding the social determinants of health, implicit bias, and cultural humility.

*Learning Activities:* Lecture/Discussion 1 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 420 – Multisystem Clinical Presentations (0.5 units)**

*Course Description:* Capstone course integrates coursework, knowledge, skills and experiential learning to enable the student to demonstrate a broad mastery of learning across the curriculum.

*Prerequisite(s):* Consent of instructor; completion of Pathophysiology Block.

*Learning Activities:* Extensive Problem Solving 15 hour(s), Independent Study 6 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 421A – Doctoring 2 (6 units)**

*Course Description:* Application of multidisciplinary basic, social and clinical science to clinical cases in small groups. History, physical examination with preceptors. Didactics in epidemiology, ethics, sexuality and clinical reasoning. Evaluation of professional competencies, attitudes and skills needed in the practice of medicine.

*Prerequisite(s):* Approval by the School of Medicine Committee on Student Progress; medical students only.

*Learning Activities:* Discussion 1 hour(s), Lecture/Discussion 1 hour(s), Internship 0.50 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 421B – Doctoring 2 (6 units)**

*Course Description:* Application of multidisciplinary basic, social & clinical science concepts to cases in small groups. History, physical examination with preceptors. Didactics in epidemiology, ethics, sexuality, and clinical reasoning. Evaluation of professional competencies, attitudes and skills needed in the practice of medicine.

*Prerequisite(s):* Approval by the School of Medicine on Student Progress; medical students only.

*Learning Activities:* Discussion 1 hour(s), Lecture/Discussion 1 hour(s), Internship 0.50 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 421C – Doctoring 2 (6 units)**

*Course Description:* Application of multidisciplinary basic, social and clinical science concepts to clinical cases in small group discussions facilitated by medical school faculty. Evaluation of professional competencies, attitudes and skills needed in the practice of clinical medicine.

*Prerequisite(s):* Approval by the School of Medicine Committee on Student Progress; medical students only.

*Learning Activities:* Discussion 1 hour(s), Lecture/Discussion 1 hour(s), Internship 0.50 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 421KA – ACE-PC Program Doctoring 2 (6 units)**

*Course Description:* MDS 421KA-C are a year-long series of courses. Objectives and assessments have been accelerated to accommodate the students enrolled in the ACEPC Program. Participate in all aspects of Doctoring 2, other than what was done in MDS 411KA & MDS 411KB.

*Prerequisite(s):* MDS 411KA; MDS 411KB; admission into ACE-PC.

*Learning Activities:* Discussion 1 hour(s), Lecture/Discussion 1 hour(s), Internship 0.50 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 421KB – ACE-PC Program Doctoring 2 (6 units)**

*Course Description:* MDS 421KA-C are a year-long series of courses. Objectives and assessments have been accelerated to accommodate the students enrolled in the ACEPC Program. Participate in all aspects of Doctoring 2, other than what was done in MDS 411KA & MDS 411KB.

*Prerequisite(s):* Approval by the School of Medicine on Student Progress; medical students only.

*Learning Activities:* Discussion 1 hour(s), Lecture/Discussion 1 hour(s), Internship 0.50 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 421KC – ACE--PC Program Doctoring 2 (6 units)**

*Course Description:* MDS 421KA-C are a year-long series of courses. Objectives and assessments have been accelerated to accommodate the students enrolled in the ACEPC Program. Participate in all aspects of Doctoring 2, other than what was done in MDS 411KA & MDS 411KB.

*Prerequisite(s):* Approval by the School of Medicine Committee on Student Progress; medical students only.

*Learning Activities:* Discussion 1 hour(s), Lecture/Discussion 1 hour(s), Internship 0.50 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 428 – Foundations of Bioethics (1 unit)**

*Course Description:* Exposure to core content in bioethics and the law and introduce a framework for ethical decision-making, while emphasizing relationships between bioethics and clinical care.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Discussion 3 hour(s), Lecture/Discussion 3 hour(s), Independent Study 16.50 hour(s), Web Virtual Lecture 1 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 429 – Transition to Clerkships (1-6 units)**

*Course Description:* Incoming third-year medical students participate in a variety of educational experiences designed to prepare them to begin their clerkship curriculum. Content disseminated in large and small group settings.

*Learning Activities:* Discussion/Laboratory 12 hour(s), Workshop 13 hour(s), Discussion 7 hour(s), Independent Study 2 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 430 – Introduction to Doctoring 3 (1 unit)**

*Course Description:* Application of multidisciplinary basic, social and clinical science concepts to clinical cases in small group discussions facilitated by medical school faculty. Evaluation of professional competencies, attitudes and skills needed in the practice of clinical medicine.

*Prerequisite(s):* Approval by SOM Committee on Student Progress.

*Learning Activities:* Discussion/Laboratory 2 hour(s).

*Enrollment Restriction(s):* Restricted to Medical students only.

*Grade Mode:* Honors/Pass/Fail.

**MDS 430A – Doctoring 3 (1 unit)**

*Course Description:* Application of multidisciplinary basic, social and clinical science concepts to clinical cases in small group discussions facilitated by medical school faculty. Evaluation of professional competencies, attitudes and skills needed in the practice of clinical medicine.

*Prerequisite(s):* Approval by SOM Committee on Student Progress.

*Learning Activities:* Discussion 3 hour(s).

*Enrollment Restriction(s):* Restricted to Medical students only.

*Grade Mode:* Honors/Pass/Fail.

**MDS 430B – Doctoring 3 (1 unit)**

*Course Description:* Application of multidisciplinary basic, social & clinical science concepts to clinical cases in small group discussions facilitated by medical school faculty. Evaluation of professional competencies, attitudes and skills needed in the practice of clinical medicine.

*Prerequisite(s):* Approval by SOM Committee on Student Progress.

*Learning Activities:* Discussion 2 hour(s).

*Enrollment Restriction(s):* Restricted to Medical students only.

*Grade Mode:* Honors/Pass/Fail.

**MDS 430C – Doctoring 3 (1 unit)**

*Course Description:* Application of multidisciplinary basic, social & clinical science concepts to clinical cases in small group discussions facilitated by medical school faculty. Evaluation of professional competencies, attitudes and skills needed in the practice of clinical medicine.

*Prerequisite(s):* Approval by SOM Committee on Student Progress.

*Learning Activities:* Discussion 2 hour(s).

*Enrollment Restriction(s):* Restricted to Medical students only.

*Grade Mode:* Honors/Pass/Fail.

**MDS 430D – Doctoring 3 (1 unit)**

*Course Description:* Application of multidisciplinary basic, social & clinical science concepts to clinical cases in small group discussions facilitated by medical school faculty. Evaluation of professional competencies, attitudes and skills needed in the practice of clinical medicine.

*Prerequisite(s):* Approval by SOM Committee on Student Progress.

*Learning Activities:* Discussion 2 hour(s).

*Enrollment Restriction(s):* Restricted to Medical students only.

*Grade Mode:* Honors/Pass/Fail.

**MDS 431 – Specialties in Support of Adult Primary Care (3-9 units)**

*Course Description:* Selectives grouping in the clerkship phase targeted toward students interested in pursuing a primary care field. Obtain early exposure to common specialties often referred by primary care. Allows further educational customization and clinical experiences in medical school by selecting three two-week rotations as part of a large, continuously offered six-week course grouping.

*Learning Activities:* Clinical Activity.

*Grade Mode:* Pass/Fail only.

**MDS 435KA – ACE-PC Longitudinal Integrated Clerkship A (18 units)**

*Course Description:* Longitudinal Clerkship will combine the Internal Medicine, OBGYN, Pediatrics, Psychiatry and Surgery Clerkships for the ACE-PC Program.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 45 hour(s), Independent Study 6 hour(s), Discussion 4 hour(s).

*Grade Mode:* Honors/Pass/Fail.

**MDS 435KB – ACE-PC Longitudinal Integrated Clerkship B (18-21 units)**

*Course Description:* Longitudinal Clerkship will combine the Internal Medicine, OBGYN, Pediatrics, Psychiatry and Surgery Clerkships for the ACE-PC Program.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 45 hour(s), Independent Study 6 hour(s), Discussion 4 hour(s).

*Grade Mode:* Honors/Pass/Fail.

**MDS 435KC – ACE-PC Longitudinal Integrated Clerkship C (18 units)**

*Course Description:* Longitudinal Clerkship will combine the Internal Medicine, OBGYN, Pediatrics, Psychiatry and Surgery Clerkships for the ACE-PC Program.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 45 hour(s), Independent Study 6 hour(s), Discussion 4 hour(s).

*Grade Mode:* Honors/Pass/Fail.

**MDS 440 – Doctoring 4 Teaching Fellowship (3-6 units)**

*Course Description:* Instruction on teaching methodology and pedagogy. Mentored teaching of junior medical students in seminar, lecture, and bedside.

*Prerequisite(s):* MDS 430A; MDS 430B; MDS 430C; MDS 430D; consent of instructor.

*Learning Activities:* Discussion 0.50 hour(s), Seminar 0.25 hour(s).

*Enrollment Restriction(s):* Restricted to Medical students only.

*Grade Mode:* Pass/Fail only.



### **MDS 441 – Combined Ophthalmology & Otolaryngology Clerkship (6 units)**

*Course Description:* Fundamental knowledge of ophthalmology and otolaryngology for the treatment of eye, ear, nose and throat problems at a level of training of general physicians, including when to refer patients to a specialist.

*Prerequisite(s):* Approval by Committee on Student Promotion and Evaluation.

*Learning Activities:* Clinical Activity 4 hour(s).

*Grade Mode:* Honors/Pass/Fail.

### **MDS 442 – Enhancing Quality Improvement & Patient Safety ASC (3-6 units)**

*Course Description:* Participate in a project contributing to healthcare improvement by partnering with a faculty member to identify, design, implement, and evaluate a quality improvement/patient safety initiative or synthesizing and interpreting existing evidence in quality improvement/patient safety by preparing a narrative review of the literature, commentary, or perspective paper. Share work at the UC Davis Health Quality Forum, or as a publication.

*Learning Activities:* Variable.

*Grade Mode:* Pass/Fail only.

### **MDS 443 – Global Health ASC (3-6 units)**

*Course Description:* Aimed at furthering student experience with global health. An important step toward addressing global health is to drive learning toward consistent One Health core competencies in medical education and other health sciences.

*Learning Activities:* Variable.

*Grade Mode:* Pass/Fail only.

### **MDS 445 – Race & Health in the United States (3-6 units)**

*Course Description:* Interprofessional course facilitates the professional and personal development of medical students and other health professions students who think they would like to be leaders in securing equity in population health and work environments.

*Learning Activities:* Discussion 4 hour(s).

*Grade Mode:* Pass/Fail only.

### **MDS 446 – Medical Education ASC (3-6 units)**

*Course Description:* Acquire advanced knowledge in Medical Education through understanding of psychological safety, and effective learning and teaching strategies.

*Learning Activities:* Variable.

*Grade Mode:* Pass/Fail only.

### **MDS 447 – Health Policy & Advocacy ASC (3-6 units)**

*Course Description:* Develop, implement, and evaluate a scholarly project contributing to Health Policy & Advocacy under the guidance of faculty knowledgeable in the field.

*Learning Activities:* Variable.

*Grade Mode:* Pass/Fail only.

### **MDS 448 – Research ASC (3-6 units)**

*Course Description:* Acquire advanced knowledge in research methodology and be able to demonstrate advanced knowledge in research methodology. Culminates in the creation of a manuscript for publication based on research under the guidance of faculty knowledgeable in the field.

*Learning Activities:* Variable.

*Grade Mode:* Pass/Fail only.

### **MDS 449 – Transition to Residency (3-6 units)**

*Course Description:* Transition to Residency program addresses the graduating medical students need to improve clinical skills necessary for the first six months of residency and unmet graduation competencies in our competency-based curriculum.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity.

*Grade Mode:* Pass/Fail only.

### **MDS 450 – Introduction to UC Davis Medical Center (1 unit)**

*Course Description:* Designed to assist medical student in transition from classroom to hospital setting.

*Prerequisite(s):* Second-year medical student.

*Learning Activities:* Seminar.

*Grade Mode:* Honors/Pass/Fail.

### **MDS 455 – Student Run Clinics (1-12 units)**

*Course Description:* Learn counseling, diagnosis and treatment of patients with chronic and acute disease under supervision of physician. Meet all requirements and prerequisites of the particular clinic within which they work.

*Learning Activities:* Clinical Activity 3-9 hour(s).

*Enrollment Restriction(s):* Open to medical students in good standing.

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/Fail only.

### **MDS 459 – Entry to ARC-MD (2 units)**

*Course Description:* Designed to orient ARC-MD and PSTP students to research opportunities at UC Davis, provide a structure for group engagement, expose them to hearing and asking critical research questions, and provide a foundation for the five-year research experience linked to the SOM curriculum.

*Learning Activities:* Lecture/Discussion 4 hour(s), Laboratory 25 hour(s).

*Grade Mode:* Pass/Fail only.

### **MDS 460CR – Introduction to Clinical Research (2 units)**

*Course Description:* Introduction to the CRGG program and overview of major clinical research topics. Overview of basic clinical skills needed to accomplish CRGG mentored research project.

*Learning Activities:* Lecture 2 hour(s), Independent Study 3 hour(s).

*Enrollment Restriction(s):* Restricted to completion of M.D., D.D.S., D.M.D., O.D., N.D., Pharm.D., D.V.M., Ph.D., or D.N.S. in nursing; application and acceptance into the Clinical Research Graduate Group, K30 program.

*Grade Mode:* Pass/Fail only.

**MDS 461CR – Strategies for Grant Writing (2 units)**

*Course Description:* Practical skills and strategies to create successful grant proposals in the NIH style and format. Generating ideas, identifying and accessing research resources, grant components, specific aims, background and significance, preliminary studies, budgets, and bios. Matriculation through UC system, and resubmissions.

*Learning Activities:* Lecture 2 hour(s).

*Enrollment Restriction(s):* Restricted to completion of M.D., D.D.S., D.M.D., O.D., N.D., Pharm.D., D.V.M., Ph.D., or D.N.S. in nursing; application and acceptance into the Clinical Research Graduate Group, K30 program.

*Grade Mode:* Satisfactory/Unsatisfactory only.

**MDS 462CR – Introduction to Clinical Epidemiology & Study Design (3 units)**

*Course Description:* Anatomy and physiology of conducting clinical epidemiologic research. Familiarity with three basic study designs (cross-sectional, case-control, and cohort). Discussion of principles of measurements in clinical epidemiological studies, basic methods for analyzing data, and ethical issues involved in conducting research.

*Learning Activities:* Lecture 25 hour(s), Discussion 10 hour(s).

*Enrollment Restriction(s):* Restricted to completion of M.D., D.D.S., D.M.D., O.D., N.D., Pharm.D., D.V.M., Ph.D., or D.N.S. in nursing; application and acceptance into the Clinical Research Graduate Group, K30 program.

*Grade Mode:* Satisfactory/Unsatisfactory only.

**MDS 463CR – Methods in Clinical Research (5 units)**

*Course Description:* Overview of major approaches to clinical research, including health services research techniques, informatics, the GCRC, and preclinical methodologies to enhance clinical projects. Overview of UC Davis clinical research support infrastructure. Methodologies applicable to clinical research and its multi-disciplinary perspective.

*Learning Activities:* Lecture 3 hour(s), Discussion 2 hour(s).

*Enrollment Restriction(s):* Restricted to completion of M.D., D.D.S., D.M.D., O.D., N.D., Pharm.D., D.V.M., Ph.D., or D.N.S. in nursing; application and acceptance into the Clinical Research Graduate Group, K30 program.

*Grade Mode:* Satisfactory/Unsatisfactory only.

**MDS 464CR – Responsible Conduct of Research (3 units)**

*Course Description:* The nine NIH-mandated modules: Data Acquisition and Reporting, Mentor Training, Publication Practices and Authorship, Peer Review/Grant Process, Collaborative Science, Human Subjects, Research with Animals, Conflict of Interest, Research Misconduct, and Entrepreneurship/Industry Collaborations/Intellectual Property/Technology Transfer.

*Learning Activities:* Lecture 3 hour(s).

*Enrollment Restriction(s):* Restricted to completion of M.D., D.D.S., D.M.D., O.D., N.D., Pharm.D., D.V.M., Ph.D., or D.N.S. in nursing; application and acceptance into the Clinical Research Graduate Group, K30 program.

*Grade Mode:* Satisfactory/Unsatisfactory only.

**MDS 465CR – Introduction to Medical Statistics (4 units)**

*Course Description:* Biomedical applications of statistical methods in clinical, laboratory and population medicine. Graphical/tabular data presentation, probability, binomial, Poisson, normal, t-, F-, and Chi-square distributions, elementary nonparametric methods, simple linear regression/correlation, life tables. Microcomputer applications of statistical procedures in population medicine.

*Learning Activities:* Lecture 3 hour(s), Laboratory 2 hour(s).

*Enrollment Restriction(s):* Restricted to completion of M.D., D.D.S., D.M.D., O.D., N.D., Pharm.D., D.V.M., Ph.D., or D.N.S. in nursing; application and acceptance into the Clinical Research Graduate Group, K30 program.

*Grade Mode:* Satisfactory/Unsatisfactory only.

**MDS 468C – International Clinical Preceptorship (1-12 units)**

*Course Description:* Multidisciplinary preceptorship in a foreign country. Clinical credit will be awarded using this course, once approval has been received from the appropriate governing committee.

*Prerequisite(s):* Consent of instructor; medical students.

*Learning Activities:* Clinical Activity 30 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Honors/Pass/Fail.

**MDS 468D – International Elective (1-12 units)**

*Course Description:* Multidisciplinary preceptorship in a foreign country. Used to award non-clinical credit for international experiences which have been approved by the appropriate governing committee.

*Prerequisite(s):* Consent of instructor; medical students.

*Learning Activities:* Independent Study 20 hour(s), Clinical Activity 10 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Honors/Pass/Fail.

**MDS 469 – Rx One Health SSM (6 units)**

*Course Description:* Field course in epidemiology and public health leadership.

*Learning Activities:* Clinical Activity 30 hour(s), Independent Study 8 hour(s), Lecture 10 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 470 – Transition to Medical School (1.5 units)**

*Course Description:* T2MS is the first course in the Medical School Curriculum (1-week). Formalizes existing T2MS content to ensure a more robust learner experience with clear goals and objectives for all sessions and an assessment strategy.

*Learning Activities:* Lecture/Discussion 8 hour(s), Workshop 6 hour(s), Extensive Writing 2 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 471 – Human Architecture & Function (12 units)**

*Course Description:* First course of the pre-clerkship phase curriculum of the I-EXPLORE; runs eight weeks from August-September. Disciplines include gross anatomy, microscopic anatomy (normal histology), clinical history & physical examination skills, and health systems science.

*Learning Activities:* Lecture.

*Grade Mode:* Pass/Fail only.

**MDS 472 – Molecular & Cellular Medicine (12 units)**

*Course Description:* Second course of the pre-clerkship phase curriculum of the I-EXPLORE. Run six weeks from late September to early November.

*Learning Activities:* Clinical Activity.

*Grade Mode:* Pass/Fail only.

**MDS 473 – Pathogens & Host Defense (7.5 units)**

*Course Description:* Third course of the pre-clerkship phase curriculum of the I-EXPLORE. Runs five weeks from November-December.

*Learning Activities:* Clinical Activity.

*Grade Mode:* Pass/Fail only.

**MDS 474 – Cardiovascular, Pulmonary, & Renal Systems (15 units)**

*Course Description:* Fourth course of the pre-clerkship phase curriculum of the I-EXPLORE. Runs 19 weeks from January-May.

*Learning Activities:* Clinical Activity.

*Grade Mode:* Pass/Fail only.

**MDS 475 – Endocrinology, Reproduction, & Gastrointestinal Systems (12 units)**

*Course Description:* Endocrinology, Gastroenterology, & Reproduction is the fifth course of the pre-clerkship phase of the I-EXPLORE curriculum and will run 16 weeks from July through November.

*Learning Activities:* Clinical Activity.

*Grade Mode:* Pass/Fail only.

**MDS 476 – Dermatology & Musculoskeletal Systems (4.5 units)**

*Course Description:* Sixth course of the pre-clerkship phase of the I-EXPLORE curriculum. Runs three weeks from November through December.

*Learning Activities:* Discussion 28 hour(s), Clinical Activity 8 hour(s), Web Virtual Lecture 20 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 477 – Brain & Behavior (12 units)**

*Course Description:* Seventh course of the pre-clerkship phase of the I-EXPLORE curriculum. Run eight weeks from January through February.

*Learning Activities:* Discussion 60 hour(s), Clinical Activity 30 hour(s), Web Virtual Lecture 61 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 478 – I-RESTORE (Pre-Clerkship Intercession) (12 units)**

This version has ended; see updated course, below.

*Course Description:* Presents additional integration of the biomedical, clinical and health systems sciences, support for professional identity formation and wellness. Held longitudinally throughout the pre-clerkship phase.

*Learning Activities:* Seminar.

*Grade Mode:* Pass/Fail only.

**MDS 478 – I-FOSTER (Pre-Clerkship Intercession) (12 units)**

*Course Description:* Presents additional integration of the biomedical, clinical and health systems sciences, support for professional identity formation and wellness. Held longitudinally throughout the pre-clerkship phase.

*Learning Activities:* Seminar.

*Grade Mode:* Pass/Fail only.

This course version is effective from, and including: Spring Quarter 2026.

**MDS 478B – I-RESTORE (Pre-Clerkship Intercession) (12 units)**

This version has ended; see updated course, below.

*Course Description:* Presents additional integration of the biomedical, clinical and health systems sciences, support for professional identity formation and wellness. Held longitudinally throughout the pre-clerkship phase.

*Learning Activities:* Seminar.

*Grade Mode:* Pass/Fail only.

**MDS 478B – I-FOSTER (Pre-Clerkship Intercession) (12 units)**

*Course Description:* Presents additional integration of the biomedical, clinical and health systems sciences, support for professional identity formation and wellness. Held longitudinally throughout the pre-clerkship phase.

*Learning Activities:* Seminar.

*Grade Mode:* Pass/Fail only.

This course version is effective from, and including: Spring Quarter 2026.

**MDS 479 – Clerkship Intercession Course (1.5-4 units)**

*Course Description:* Longitudinal experience to supplement and support the clerkships in their efforts to facilitate students' acquisition of the graduation competencies; to ensure biomedical science and health systems science are taught and learned in the context of the clinical science-focused clerkship year; to support students' professional identity formation and wellness, and provide time for enrichment activities and scholarly work.

*Learning Activities:* Clinical Activity 18 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 480 – Insights in Clinical Research (1 unit)**

*Course Description:* Seminars on research presented by Medical School faculty; overview of pertinent issues, including medical ethics, human subjects protocols, case control methods, etc.

*Prerequisite(s):* Medical student in good standing.

*Learning Activities:* Lecture 1 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/Fail only.

**MDS 481 – Insights into Clinical Specialties (1 unit)**

*Course Description:* Exposure to various medical specialties, their residency programs and ways in which medical students can prepare for and improve their candidacy for such programs.

*Prerequisite(s):* Medical student in good standing.

*Learning Activities:* Lecture/Discussion 1 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Honors/Pass/Fail.

**MDS 482 – Lecture Series in Reproductive Health (1 unit)**

*Course Description:* Psychosocial and public health aspects of providing quality reproductive health care and application in student-run free clinics and in 3rd year clerkships.

*Learning Activities:* Lecture 1 hour(s).

*Credit Limitation(s):* Only medical students may enroll for credit; undergraduates may audit the course.

*Repeat Credit:* May be repeated 2 time(s).

*Grade Mode:* Pass/Fail only.

### **MDS 483 – Insights in Political, Legal & Business Aspects of Medicine (1 unit)**

*Course Description:* Practical aspects of a medical career.

*Prerequisite(s):* Medical students in good standing.

*Learning Activities:* Lecture 1 hour(s).

*Enrollment Restriction(s):* Restricted to Medical student only.

*Repeat Credit:* May be repeated 2 time(s).

*Grade Mode:* Pass/Fail only.

### **MDS 484 – First Aid for Health Policy (1 unit)**

*Course Description:* Introduces the fundamental concepts and tools of health policy which are becoming necessary for students and physicians to become invested and active participants in healthcare. Focuses on the basic principles of health policy—the structure of government, how a bill becomes a law, the role of legislative visits, the role of healthcare foundations in California, the role of non-profits in California, our current healthcare system after the Affordable Care Act.

*Learning Activities:* Lecture.

*Grade Mode:* Pass/Fail only.

### **MDS 485 – Health Policy Lecture Series (1 unit)**

*Course Description:* Lecture series provides an overview of local, state, national and international health policy. The current challenges health care reform implementation is facing provides how medical students can successfully advocate for changes in health policy.

*Learning Activities:* Lecture 1 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/Fail only.

### **MDS 486 – Topics in Health Care Improvement (0.5 units)**

*Course Description:* Lecture series will cover major topics in health care improvement, presented by guest speakers who are leaders in the field.

*Learning Activities:* Lecture/Discussion 15 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/Fail only.

### **MDS 487 – History & Ethics of Medicine (1 unit)**

*Course Description:* Introduction to ethical problems and events in health care in both modern and historical contexts. Eight one-hour and fifteen-minute interactive sessions designed to introduce students to historical topics in medicine and medical ethics.

*Learning Activities:* Lecture 1.25 hour(s).

*Grade Mode:* Pass/Fail only.

### **MDS 488 – Community Health Scholars ASC (3-6 units)**

*Course Description:* Regularly present work-in-progress and receive peer and faculty feedback throughout medical school, with a final capstone project presentation at the end of their fourth year prior to graduation. Submit a final written summary of their project and outcomes prior to graduation.

*Learning Activities:* Discussion 5 hour(s), Clinical Activity, Project.

*Grade Mode:* Pass/Fail only.

### **MDS 489 – Directed Studies (1-9 units)**

*Course Description:* Independent studies to accommodate modified curriculums, prepare for taking USMLE exams and for remediation course work directed by the Committee on Student Progress.

*Prerequisite(s):* Consent of instructor; individual directed studies in extended preparation for modified curriculum, USMLE exams, and/or as required by Committee on Student Progress.

*Learning Activities:* Variable.

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/Fail only.

### **MDS 489C – Clinical Reintroduction Experience (1-9 units)**

*Course Description:* Learn and practice basic clinical skills in a supervised clinical setting. Skills include patient interviewing, history, physical examination, diagnostic and clinical reasoning, case presentation, and medical records documentation. Direct observation and individual feedback on clinical skills development is provided.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 20 hour(s).

*Grade Mode:* Pass/Fail only.

### **MDS 489R – USMLE Directed Remedial Studies (1-9 units)**

*Course Description:* Independent studies to accommodate remediation for taking USMLE exams directed by the Committee on Student Progress.

*Prerequisite(s):* Recommendation by Committee on Student Progress.

*Learning Activities:* Independent Study 20 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/Fail only.

### **MDS 490 – Reimagining Education to Advance Central California Health (REACH) Selective (3-9 units)**

*Course Description:* Third-year REACH students participate in the clinical care of patients at Kaiser Central Valley and associated partners in Central California within specialties of internal medicine, family medicine, pediatrics, surgery, or obstetrics/gynecology. Rotate through outpatient clinics, inpatient wards, and consult services, and may be introduced organizations that provide health education, patient navigation services, and other resources who care for the same people.

*Learning Activities:* Clinical Activity 12-24 hour(s).

*Grade Mode:* Pass/Fail only.

### **MDS 490A – Community Health Scholars Seminar A (1 unit)**

*Course Description:* Longitudinal year-long course starting on July 1 and concluding at the end of Block 2. Focuses on immersing students in their respective communities to understand the strengths and challenges they face in relation to health.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 1 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/Fail only.



### **MDS 490B – Community Health Scholars Seminar B (0.5 units)**

*Course Description:* Longitudinal year-long course starting on July 1 and concluding at the end of Block 2. Focuses on immersing students in their respective communities to understand the strengths and challenges they face in relation to health.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 1 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/Fail only.

### **MDS 490C – Community Health Scholars Seminar C (0.5 units)**

*Course Description:* Longitudinal year-long course starting on July 1 and concluding at the end of Block 2. Focuses on immersing students in their respective communities to understand the strengths and challenges they face in relation to health.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 1 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/Fail only.

### **MDS 490D – Community Health Scholars Seminar D (0.5 units)**

*Course Description:* Longitudinal year-long course starting on July 1 and concluding at the end of Block 2. Focuses on immersing students in their respective communities to understand the strengths and challenges they face in relation to health.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 1 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/Fail only.

### **MDS 491 – TEACH-MS Pediatric Advocacy & Community Health Elective (3 units)**

*Course Description:* Through this elective, third- or fourth- year students gain understanding in the importance of community partnerships by directly engaging with community organizations that provide health education, patient navigation services, and other resources that they may refer their patients to. Students who complete this elective will develop key skills necessary for educating the public and lobbying key decision-makers in government.

*Learning Activities:* Clinical Activity, Web Virtual Lecture.

*Grade Mode:* Pass/Fail only.

### **MDS 492 – Interpretive Electrophysiology & Applied Cardiology–SSM (6 units)**

*Course Description:* Four-week special study module teaches and provides a basis for systemic interpretation of the EKG as well as cardiology management with the underserved populations in the Central Valley. Addresses underlying normal cardiac structure/function and cardiac abnormalities as reflected in the EKG and tie in the underlying basic science principles of cardiac electrophysiology.

*Learning Activities:* Lecture/Discussion 12 hour(s), Clinical Activity 20 hour(s).

*Grade Mode:* Pass/Fail only.

### **MDS 493 – Post-Clerkship Research (3-12 units)**

*Course Description:* Student developed alternative to the SSM/SPO Requirement.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Variable 20 hour(s).

*Enrollment Restriction(s):* FYOC approval required.

*Grade Mode:* Honors/Pass/Fail.

### **MDS 493A – International & Comparative Health Care: SSM (6 units)**

*Course Description:* Through a series of lectures, seminars and clinical experiences, all occurring in other nations, students will research how health care systems address critical health issues. SSM Component.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Discussion 20 hour(s), Lecture 10 hour(s).

*Enrollment Restriction(s):* Restricted to UC Davis School of Medicine students only.

*Grade Mode:* Honors/Pass/Fail.

### **MDS 493B – International & Comparative Health Care: Clinical (3-9 units)**

*Course Description:* Through a series of lectures, seminars and clinical experiences, all occurring in other nations, students will research how health care systems address critical health issues. Clinical Component.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 30 hour(s).

*Enrollment Restriction(s):* Restricted to UC Davis School of Medicine students only.

*Grade Mode:* Honors/Pass/Fail.

### **MDS 493D – Teaching the Basic Sciences SSM (6 units)**

*Course Description:* Special Studies Module, a yearlong in progress court to teach lecture and discussion education technique and theory.

*Prerequisite(s):* MDS 440 required concurrently; consent of instructor.

*Learning Activities:* Lecture 6 hour(s), Lecture/Lab 8 hour(s), Laboratory 30 hour(s), Tutorial 10 hour(s).

*Enrollment Restriction(s):* Restricted to UC Davis School of Medicine students only.

*Grade Mode:* Honors/Pass/Fail.

### **MDS 493Q – Improving Quality in Health Care (6 units)**

*Course Description:* Working in interdisciplinary teams, will explore the theory and practical methods being employed to make improvement in health care systems while providing an opportunity for interprofessional educational experience.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 8 hour(s), Discussion/Laboratory 10 hour(s), Project 10 hour(s).

*Grade Mode:* Honors/Pass/Fail.

### **MDS 493QA – Improving Quality in Health Care (3 units)**

*Course Description:* Working in interdisciplinary teams, will explore the theory and practical methods being employed to make improvement in health care systems while providing an opportunity for interprofessional educational experience.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 8 hour(s), Discussion/Laboratory 10 hour(s), Project 10 hour(s).

*Grade Mode:* Honors/Pass/Fail.

**MDS 493QB – Improving Quality in Health Care (3 units)**

*Course Description:* Working in interdisciplinary teams, will explore the theory and practical methods being employed to make improvement in health care systems while providing an opportunity for interprofessional educational experience.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 8 hour(s), Discussion/Laboratory 10 hour(s), Project 10 hour(s).

*Grade Mode:* Honors/Pass/Fail.

**MDS 493QC – Enhancing Patient Safety in Health Care (6 units)**

*Course Description:* Inter-professional module is designed to explore the theory and practical methods being employed to improve patient safety in health care while providing an opportunity for interprofessional educational experience.

*Prerequisite(s):* Consent of instructor; fourth-year Medical student.

*Learning Activities:* Seminar 6 hour(s), Clinical Activity 8 hour(s), Discussion 6 hour(s).

*Grade Mode:* Honors/Pass/Fail.

**MDS 494 – Non-Clinical Medical Student Externship (3-9 units)**

*Course Description:* Generic course for awarding externship credit for medical student rotations that are not primarily focused on patient care.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Independent Study 20 hour(s), Clinical Activity 10 hour(s).

*Enrollment Restriction(s):* Restricted to students with approval of credit by the Fourth Year Oversight Committee.

*Repeat Credit:* May be repeated.

*Grade Mode:* Honors/Pass/Fail.

**MDS 495 – Medicine Literature Review (1-9 units)**

*Course Description:* Independent study: topics for selection include, but are not restricted to, medical ethics, economics and jurisprudence, culture and medicine, ethnicity and medicine, gender and medicine, history of medicine, health manpower, and medical education. A prepared paper on the selected topic will be required.

*Prerequisite(s):* Medical student in good academic standing and permission of the Associate Dean of Curricular Affairs.

*Learning Activities:* Discussion 3-27 hour(s).

*Grade Mode:* Pass/Fail only.

**MDS 496 – California Oregon Medical Partnership to Address Disparities in Rural Education & Health (COMPADRE) (3-6 units)**

*Course Description:* Third- or fourth-year students enrolled in COMPADRE participate in the clinical care of patients from rural, underserved, or indigenous communities. Students may rotate through outpatient clinics, inpatient wards, and consult services, and may also be introduced to local community organizations that provide health education, patient navigation services, and other resources that they may refer their patients to.

*Learning Activities:* Variable.

*Grade Mode:* Pass/Fail only.

**MDS 497 – Scholarly Project (6 units)**

*Course Description:* Develop a research project on a focused topic area, implements the research, writes a publishable paper, and presents an oral summary of the project.

*Prerequisite(s):* Consent of instructor; project proposal must be accepted by the Scholarly Project Executive Committee (SPEC).

*Learning Activities:* Seminar 0.25 hour(s), Independent Study 0.50 hour(s).

*Enrollment Restriction(s):* Restricted to 4th year medical school students only.

*Grade Mode:* Honors/Pass/Fail.

**MDS 498 – Scholarly Project Selective (1-12 units)**

*Course Description:* Individual, scholarly project, approved by mentor. Includes scientific inquiry, development of a testable hypothesis or clinical research and concludes with written report and public, oral, presentation, taking place during Clerkship curriculum phase.

*Learning Activities:* Variable, Clinical Activity.

*Grade Mode:* Pass/Fail only.

**MDS 499 – Medical Student Research Fellowship (1-9 units)**

*Course Description:* Independent research project as part of the Medical Student Research Fellowship.

*Prerequisite(s):* Medical students in good standing; competency with computers.

*Learning Activities:* Independent Study 10-36 hour(s).

*Grade Mode:* Honors/Pass/Fail.