

MD - DOCTOR OF MEDICINE

for the Doctor of Medicine in Medicine - Carle Illinois College of Medicine

The University of Illinois Urbana-Champaign Doctor of Medicine (MD) program is conducted on the Urbana Campus in the Carle Illinois College of Medicine. The college offers a professional, four-year MD degree program that integrates engineering concepts with the traditional pillars of medicine, namely the basic health sciences and clinical training, and prepares students for postgraduate medical education programs. This curriculum produces students who are trained and equipped to incorporate analytical and quantitative techniques, modeling and computation, innovation, and human systems approaches to advancing and delivering high quality healthcare. The curriculum emphasizes professional, compassionate, and ethical care and the utilization of team-based approaches to transform healthcare delivery and improve healthcare outcomes through the continuum of care: preventive medicine through acute care. In addition to required courses, elective rotations provide opportunities for students to explore specialized areas of interest. The educational program spans four (4) years. Students are exposed to extensive clinical training, professional development and scientific and engineering education through a case-driven active learning curriculum.

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Code	Title	Hours
Phase 1		
BSE 601		0
BSE 612	Foundations: Molecules to Populations	13
BSE 631	Cardiovascular	4
BSE 632	Respiratory	3
BSE 633	Renal	3
BSE 634	Clinical Neuroscience	5
BSE 635	Musculoskeletal and Integumentary System	4
BSE 636	Digestion, Nutrition, & Metabolism (taken over 2 semesters)	5
BSE 638	Endocrine, Genitourinary, & Women's Health (taken over 2 semesters)	10
BSE 642	Hematology, Oncology, Infection, and Immunity	6
BSE 644	Multisystem Conditions	4
BSE 645	Synthesis & Summary	6
BSE 666	Academic Progress I (Longitudinal) (taken over 4 semesters)	0
CLE 613	Introduction to Clinical Practice (Longitudinal) (taken over 4 semesters)	12
CLE 640	Family Medicine Clerkship (taken over 2 semesters)	10
Code Title Hours		
Phase 2		
CLE 645	Internal Medicine Clerkship	10

CLE 650	Neurology Clerkship	5
CLE 655	Psychiatry Clerkship	5
CLE 660	Obstetrics & Gynecology Clerkship	5
CLE 665	Pediatrics Clerkship	5
CLE 670	Surgery Clerkship	10
CLE 680	Family Medicine Continuity Clinic (taken over 4 semesters)	8
BSE 680	Innovation, Design, Engineering and Analysis Projects (Longitudinal) (taken over 4 semesters)	8
Clinical or non-clinical elective		4

Code	Title	Hours
Phase 3		
Clinical and Non-clinical Carle Illinois electives		36
Sub-Internship		4
CLE 694	Career Boot Camp	5
Medicine - Project Course: Students choose one of the following		12
BSE 685	Medicine - Capstone Project (Longitudinal) (taken over 4 semesters)	
BSE 686	Medicine - Data Science Project (Longitudinal) (taken over 4 semesters)	

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The Education Program Objectives (EPO) are the principle guiding document for the development of the curriculum. The curriculum structure was designed as a logical sequence to allow students to achieve the education program objectives as each phase progressively builds on the previous content. The development of each individual course and clerkship is guided primarily by the education program objectives. The initial development of the course and clerkship learning objectives was completed after the education program objectives were finalized.

CI MED's EPOs are guided by the AAMC (American Association of Medical Colleges) and GME (Graduate Medical Education) requirements for competencies of medical students and residents. We have 6 outcomes, each with several sub-outcomes that are more measurable.

1. **Outcome 1:** Altruism - the practice of selfless concern for the well-being of others.
 - a. Describe the theories and principles that govern ethical decision making in medicine, particularly those decisions that arise at the beginning and end of life.
 - b. Demonstrate compassionate treatment of patients, and respect for their privacy and dignity.
 - c. Demonstrate honesty and integrity in all interactions with patients, their families, colleagues, and others with whom physicians must interact in their professional lives.
 - d. Demonstrate an understanding of, and respect for, the roles of other health care professionals, and of the need to work in collaborative healthcare teams in caring for individual patients and in promoting the health of defined populations.
 - e. Advocate for the interests of one's patients over one's own interests, at all times.

- f. Exhibit an understanding of the threats to medical professionalism posed by the conflicts of interest inherent in the practice of medicine.
 - g. Recognize and accept limitations in one's knowledge, skills, attitudes, and behaviors, and continuously improve these attributes.
2. **Outcome 2:** Medical Knowledge - the knowledge necessary for medical practice and skills to expand understanding.
- a. Describe the normal structure and function of the body (as a whole) and of each of its major organ systems.
 - b. Describe the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.
 - c. Describe the various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of disease conditions and the ways in which they operate on the body.
 - d. Describe the altered structure and function (pathology and pathophysiology) of the body and its major organ systems that are seen in various diseases and conditions.
 - e. Demonstrate an understanding of the power of the scientific method in basic, translational, clinical, and engineering research.
 - f. Demonstrate an interest in and commitment to lifelong learning to stay abreast of relevant scientific advances.
3. **Outcome 3:** Skill - the ability to perform skills needed for medical practice, analyze results of tests, solve clinical problems, and communicate solutions to multiple audiences.
- a. Obtain an accurate and complete medical history.
 - b. Perform complete and organ-system specific examinations, including a mental status examination.
 - c. Perform routine clinical procedures.
 - d. Recommend and interpret the results of commonly used diagnostic procedures and tests.
 - e. Describe the most frequent clinical, laboratory, imaging, and pathologic manifestations of common disease states.
 - f. Reason deductively in solving clinical problems.
 - g. Design and explain the basis for appropriate management strategies (preventive, diagnostic and therapeutic) for common acute and chronic conditions.
 - h. Recognize patients with immediately life-threatening or serious conditions requiring critical care and institute appropriate initial therapy.
 - i. Demonstrate knowledge of pain management.
 - j. Communicate effectively, orally and in writing, with patients, their families, and professionals in health and other fields with whom physicians must exchange information in carrying out their responsibilities.
4. **Outcome 4:** Duty - a holistic view of healthcare system and understanding of population health.
- a. Demonstrate knowledge of the important non-biological determinants of poor health and of the socioeconomic, behavioral, psychological, and cultural factors that contribute to the development and/or continuation of health and disease.
 - b. Demonstrate knowledge of the epidemiology of health and disease within a defined population, and the systematic approaches useful in reducing the incidence and prevalence of those diseases.
 - c. Identify risk factors for disease or injury, select appropriate tests for detecting patients at risk for or in the early stage of specific diseases, and determine strategies for responding appropriately including prevention strategies.
- d. Retrieve biomedical information from appropriate resources and manage and utilize it within a quantitative and statistical framework to solve clinical problems and make decisions.
- e. Demonstrate knowledge of the organization, financing, and delivery of health care.
- f. Demonstrate cultural competency and a commitment to overcome health disparities by providing care to all patients and advocating for access to health care for underserved populations.
5. **Outcome 5:** Innovation - the ability to identify opportunities in societal and technical spaces, create solutions, and have a positive impact on health care delivery.
- a. Identify unexpected opportunities to provide extraordinary value for patients, populations, and health systems.
 - b. Apply systems-based and creative thinking to complex, uncertain diagnoses or other healthcare problems.
 - c. Evaluate the feasibility of innovative healthcare solutions to address patient, societal, population, and global health needs.
6. **Outcome 6:** Engineering - Skills necessary to create technical solutions and make technology-related decisions to improve healthcare.
- a. Integrate information from many sources to gain insight into patient care.
 - b. Identify, formulate, and solve healthcare problems by applying principles of engineering, science, medicine, and mathematics.
 - c. Apply analysis and synthesis to the engineering design process, resulting in designs that address identified healthcare challenges.
 - d. Conduct relevant healthcare and engineering research and apply quantitative skills and medical judgment to implement solutions.
 - e. Communicate data-based costs, risks, and benefits of engineering solutions to healthcare teams, health systems, medical device manufacturers, and other health industry stakeholders.

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Admissions

The college selects applicants with the best combination of academic and extracurricular achievement, maturity, integrity, and motivation. Selection of students is based on an assessment of all available data and an evaluation of skills and aptitude. The quality of work in all subject areas is considered, with an emphasis on quantitative methods, breadth of education, and experiences that demonstrate initiative, creativity and interest in compassionate patient care.

For more information about the University of Illinois Urbana-Champaign MD program, including Admissions, Financial Aid, and the Curriculum, please consult the college website (<https://medicine.illinois.edu/>).

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Carle Illinois College of Medicine website (<http://catalog.illinois.edu/undergraduate/preprofessional/rotc/#airforcerequirementstext>)

Carle Illinois College of Medicine Faculty (<https://medicine.illinois.edu/about/directory/faculty/>)

BSE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BSE/>)

Biomedical Sciences Engr Courses

BSE 600 Global One Health credit: 3 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/600/>)

Same as VCM 547. See VCM 547.

BSE 602 Public Health Clinical Applications credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/602/>)

The Public Health Clinical Applications rotation was developed in 2006 for veterinary students. However, this rotation is applicable for medical students with an interest in public health that want to expand on concepts of study design, surveillance, sampling, sample handling, field epidemiology and biostatistics. The rotation will integrate medical and veterinary medical students around epidemiology to understand components affecting health from food safety and production to obesity to water systems at the interface of human, animal and ecosystem health. Additionally, students will work in close contact with local and state health departments, gain an understanding of the scope of activities in which local and state health departments are involved, study major and current health threats to humans, animals and the ecosystem and consider policy initiatives to address those threats. Day long field trips and one overnight trip within the state are possible. 4 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 8 hours. Prerequisite: Students must be professional student in the Carle Illinois College of Medicine.

BSE 603 Architecture and Medicine credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/603/>)

Same as ARCH 523. See ARCH 523.

BSE 612 Foundations credit: 1 to 11 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/612/>)

This course is designed with the larger goal of enabling incoming students to achieve similar baseline levels of understanding of the fundamentals of the major topic areas, Foundational concepts for the following disciplines will be covered: genetics, behavioral health, biochemistry, molecular biology, cellular biology and histology, physiology, microbiology, immunology, pathology, pharmacology, anatomy and embryology and epidemiology/biostatistics. For each of these areas, there is integration of relevant clinical contexts to prepare students for their subsequent organ-system based courses. 1 TO 11 professional hours. Approved for S/U grading only. May be repeated in separate terms to a maximum of 13 professional credits. Prerequisite: Restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

BSE 631 Cardiovascular credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/631/>)

Topics include ischemic heart Dx, cardiomyopathy/CHF, aortic stenosis, atrial fibrillation, peripheral vascular disease, pediatric ASD. 4 professional hours. Approved for S/U grading only. May be repeated in separate semesters for a total of 12 credit hours with approval from the Student Progress and Promotions Committee. Prerequisite: Restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

BSE 632 Respiratory credit: 3 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/632/>)

Topics include Asthma, Chronic Obstructive Pulmonary Disease (COPD), Pulmonary Fibrosis, Respiratory Failure, and Pulmonary Vasculitis. 3 professional hours. Approved for S/U grading only. May be repeated in separate semesters for a total of 9 credit hours with approval from the Student Progress and Promotions Committee. Prerequisite: Restricted to students enrolled in the MD or MD/PhD program at Carle Illinois College of Medicine.

BSE 633 Renal credit: 3 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/633/>)

Topics include Urinary Tract Infection (UTI) with Pyelonephritis, Urinary Obstruction-Benign Prostatic Hyperplasia (BPH), Acute Renal Failure - toxic, Chronic Renal Failure - Diabetes Mellitus (DM), and Polycystic Renal Disease- pediatrics. 3 professional hours. Approved for S/U grading only. May be repeated in separate semesters for a total of 9 credit hours with approval from the Student Progress and Promotions Committee. Prerequisite: Restricted to students enrolled in the MD or MD/PhD program at Carle Illinois College of Medicine.

BSE 634 Clinical Neuroscience credit: 5 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/634/>)

Topics include neurovascular disorders, seizures, brain injury, dementia, tumors of the brain, disorders involving neuroinflammation, psychotic disorders, affective disorders, anxiety disorders, as well as disorders of the peripheral nervous system and neuromuscular junction. 5 professional hours. Approved for S/U grading only. May be repeated in separate semesters, for a total of 15 credit hours with approval from the Student Progress and Promotions Committee. Prerequisite: Restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

BSE 635 Musculoskeletal and Integumentary System credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/635/>)

Topics include primary inflammatory diseases such as rheumatoid arthritis, lupus, polymyalgia rheumatica and associated disorders, degenerative diseases of the joints such as osteoarthritis, primary diseases of muscle, primary diseases of bone such as osteoporosis and osteogenesis imperfecta as well as mechanical trauma to bone leading to fracture. The course will also cover disorders of the integumentary system. 4 professional hours. Approved for S/U grading only. May be repeated in separate semesters for a total of 12 credit hours with approval from the Student Progress and Promotions Committee. Prerequisite: Restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

BSE 636 Digestion, Nutrition, & Metabolism credit: 1 to 5 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/636/>)

Topics include malabsorption syndrome, vitamin D deficiency, G6PD deficiency, TPN, obesity, GERD with stricture/Barretts, Crohn's disease, peptic ulcer disease with hemorrhage, chronic diarrhea, pyloric stenosis – peds hepatitis C, and colonic polyposis. 1 to 5 professional hours. Approved for S/U grading only. May be repeated in separate semesters for a total of 15 credit hours with approval from the Student Progress and Promotions Committee. Available for honors grade. Prerequisite: Participation in ongoing study of the digestive system. Restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

BSE 638 Endocrine, Genitourinary, & Women's Health credit: 1 to 10 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/638/>)

Topics include diabetes – type II, ketoacidosis, hypothyroidism, hyperthyroidism, adrenal insufficiency, Cushing's syndrome, diabetes insipidus, hypogonadism, erectile dysfunction, testicular torsion, infertility, sexual orientation, BPH, dysmenorrhea, menorrhagia, polycystic ovarian disease, cervical dysplasia, menopause – vasomotor, pelvic pain, normal delivery, breach, multiple gestation, medical illness of pregnancy – diabetes, and placenta previa. 1 to 10 professional hours. Approved for S/U grading only. May be repeated in separate semesters for a total of 30 credit hours with approval from the Student Progress and Promotions Committee. Available for honors grade. Prerequisite: Restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

BSE 642 Hematology, Oncology, Infection, and Immunity credit: 1 to 6 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/642/>)

Topics include lung cancer, colon cancer, breast cancer, renal cancer, prostate cancer, pancreatic cancer, iron deficiency anemia, sickle cell anemia, lymphoma- non-Hodgkin, acute myelocytic leukemia, chronic lymphocytic leukemia, idiopathic thrombocytopenia, pneumonia, sepsis UTI – pyelonephritis, cellulitis, HIV anaphylaxis, allergic dermatitis, and myocarditis encephalitis. 1 to 6 professional hours. Approved for S/U grading only. May be repeated in separate semesters for a total of 24 credit hours with approval from the Student Progress and Promotions Committee. Available for honors grade. Prerequisite: Restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

BSE 644 Multisystem Conditions credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/644/>)

The Multisystem Conditions course is a required course for students in Phase 1 of the Carle Illinois College of Medicine Curriculum. In this course, students work in small groups to approach complex diseases and conditions they may see in the clinical environment. 4 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 12 hours. Prerequisite: Restricted to students enrolled in Phase 1 of the Carle Illinois College of Medicine curriculum.

BSE 645 Synthesis & Summary credit: 6 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/645/>)

This course will review critical concepts in the areas of Behavioral Science, Biochemistry, Cells and Tissues, Human Development and Genetics, Microbiology, Immunology, Pathology, and Pharmacology, Population Health. The course will be organized around the major organ systems: Blood and Lymphoreticular System, Cardiovascular, Endocrine, Gastrointestinal, Hematology and Oncology, Musculoskeletal, Neurology, Psychiatry, Renal, Reproductive, Respiratory, Skin and Subcutaneous Tissue. 6 professional hours. Approved for S/U grading only. Prerequisite: This course is restricted to Carle Illinois College of Medicine Students.

BSE 655 Research Elective credit: 1 to 16 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/655/>)

The goal of this course is to introduce the students to the foundations of selected multi-disciplinary research in medical/engineering field. Students will learn about the purpose for research; identifying researchable issues; finding, evaluating, and using sources effectively; recognizing methods associated with different types of data and disciplines; and writing a literature review. 1 to 16 professional hours. Approved for S/U grading only. May be repeated up to 16 hours in the same semester, to a maximum of 64 hours in separate semesters. Prerequisite: This course is restricted to Carle Illinois College of Medicine students.

BSE 660 Self-Designed Study credit: 1 to 16 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/660/>)

Students will develop skills and gain experience working collaboratively with other professional through a self-designed study. Develop a self-guided study when students have an interest in an intellectual issue that is best studied through an integrative approach based in multiple academic disciplines. This course will introduce the student to a selected multi-disciplinary study or project in the medical/engineering field, addresses appropriate methodology, provides opportunities for advanced level research or other creative projects, and culminates in an integrative experience. It must be arranged between the student and an individual faculty member or external collaborator, and subsequently approved by the dean of Academic Affairs. 1 to 16 professional hours. Approved for S/U grading only. May be repeated up to 16 hours in the same semester to a maximum of 32 hours over separate semesters. Prerequisite: This course is restricted to Carle Illinois College of Medicine students.

BSE 666 Academic Progress I (Longitudinal) credit: 0 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/666/>)

Provides students with an opportunity to demonstrate core medical skills. The course includes assessment of students' understanding of clinical skills, professionalism, anatomy, and medical knowledge. Areas covered in the course include: cardiovascular, respiratory, renal, neurology, musculoskeletal, digestive, nutrition, metabolism, endocrine, genitourinary, oncology, hematology, infection, and immunity. 0 professional hours. Approved for S/U grading only. May be repeated in separate semesters. Prerequisite: Restricted to Carle Illinois College of Medicine students.

BSE 680 Innovation, Design, Engineering and Analysis Projects (Longitudinal) credit: 0 to 6 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/680/>)

Innovation, Design, Engineering and Analysis Projects (IDEA) is a required course for students in Phase 2 of the Carle Illinois College of Medicine curriculum. In this course, students work independently and in small groups to solve challenges they are presented with in the clinical environment. 0 to 6 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 15 hours. Available for honor grades. Prerequisite: Restricted to students enrolled in Phase 2 of the Carle Illinois College of Medicine curriculum.

BSE 685 Medicine - Capstone Project (Longitudinal) credit: 2 to 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/685/>)

Selecting one of the clinical challenges investigated during the Innovation, Design, Engineering and Analysis Projects (Longitudinal), students will work to potentially translate new approaches, technologies, and treatments in healthcare. 2 to 4 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 12 professional hours. Prerequisite: Restricted to students enrolled in Phase 3 of the Carle Illinois College of Medicine curriculum.

BSE 686 Medicine - Data Science Project (Longitudinal) credit: 2 to 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/686/>)

Develop skills in data science for health care through the Data Science Project. Identify an exciting data-driven question, find data sources to address the question, and access and utilize those data to improve clinical care. Students will interact with databases, utilize tools for analyzing clinical or molecular data, and learn about the immense potential of medical data science while familiarizing themselves with the issues of human subject's protection and privacy regulations around data. 2 to 4 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 12 hours. Prerequisite: Restricted to students enrolled in Phase 3 of the Carle Illinois College of Medicine curriculum.

BSE 700 Innovations in Problem Based Learning credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/700/>)

This elective will provide students multiple opportunities to identify compassionate innovation through problem-based learning facilitation. The students will learn how to facilitate a PBL session and how to identify moments in cases where compassionate innovation can be furthered. This will be done through creating additional probes or tasks in the cases to be used by future facilitators. Students will also have the opportunity to create notes and evaluations on first year students. These notes/evaluation will be reviewed by Carle Illinois facilitators. The overall goal of this is not only to improve cases for current PBL students, but to assist students participating in the elective in ideation and entrepreneurship. This will help students as they create IDEA projects in the clerkships as well as preparing them for Capstone and potentially Data Science projects. Based on student interest, certain areas of this elective may be emphasized to achieve student goals. 4 professional hours. Approved for S/U grading only. Prerequisite: Students must be in Phase 2 or Phase 3 of the curriculum. Restricted to students enrolled in the MD or MD/PhD program at Carle Illinois College of Medicine.

BSE 701 Introduction to Telemedicine credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/701/>)

This introduction to telemedicine will help students understand the role of telemedicine in various contexts such as in primary care, for underserved or rural patients, during times of crisis (disasters, pandemics) and more. Considerations include benefits & limitations, tools & technology, patient interactions & follow-up, insurance considerations, legal and regulatory issues, and research. Students will have an opportunity to research an area of telemedicine and present what they have learned. This could be new uses of telemedicine, new tools, policy/legal considerations, expanding the reach of telemedicine, or any other issue related to telemedicine. Outputs could include a literature review, program plan, roadmap, white paper or other presentation medium. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 702 Medical Spanish credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/702/>)

Carle Illinois College of Medicine strives to support physicians who want to serve diverse populations. To that end, students may enroll in a medical Spanish course. This hybrid online course allows students to increase their proficiency in Spanish, while also practicing with a standardized patient. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 703 Medical Informatics credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/703/>)

A detailed overview of biomedical and health informatics for medical students. The course provides up-to-date details on the informatics field, which includes: electronic health records, data standards and interoperability, clinical decision support, healthcare data analytics, population health, patient engagement, and telemedicine. It also describes and sets the context for new technologies, such as SMART on FHIR, machine learning, artificial intelligence, and wearables. 2 professional hours. Approved for S/U grading only. Available for honors grades. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 704 Medicine in Literature credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/704/>)

The medical encounter between patients and physicians has been represented in literary texts such as poems, short stories and novels for centuries. In this elective, students will be given the opportunity to reflect on the medical experience through an analysis of literary texts from various time periods and cultural contexts. Particular attention will be paid to the difference in perspective by patients, physicians and other actors in the healthcare setting. Our reading of literature will be complemented by texts from the field of narrative medicine, which uses the tools of literary analysis and close reading to understand patients' histories and fine-tunes awareness of the cultural and social determinants of health. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 705 Race in Medicine credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/705/>)

This elective provides an opportunity to explore the topics of unconscious bias, history of race in medicine and effects on systemic racism in medicine. The goal is to give time to grow in personal insight and development in this area to progress to become a compassionate and unbiased health care provider. Progress towards this goal will be made through the personal journey of completing a 21 day equity challenge and reflection paper, participation in online discussion boards, and group projects looking at the history and current state of racism and social determinants of health in medicine. 4 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois college of Medicine curriculum. The course is only available during the Discovery Learning timeframe.

BSE 706 Literature Reviews in Pathology credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/706/>)

Pathology is a multidisciplinary science that connects theory (basic sciences) with practice (clinical sciences). This elective provides students with opportunities to explore the role of pathology in medical education. This course might be of particular interest to those who are generally interested in medical education and/or pathology as a future specialty. 4 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 8 hours. Prerequisite: Restricted to students enrolled at the Carle Illinois College of Medicine.

BSE 707 Interreligious Perspectives on Health and Medicine credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/707/>)

Explores and develops an appreciation for the many ways in which religion and religious identities are present in, and absent from, medical spaces in the United States. This course is intended to support physicians-in-training develop the background, vocabulary, and experiences necessary to practice medicine thoughtfully and sensitively in a religiously diverse society. 4 professional hours. Approved for S/U grading only.

BSE 708 Social Medicine and the Normative Body credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/708/>)

Examines the intersection of intergenerational, socio-historical depictions, and articulations of the standardized human body or the normalized body and how its legitimization shaped the practice of medicine and public health. Particular attention will be placed on gendered, abled, racialized, cognitive, and/or socio-economic dichotomies that become attached to the normalized body and sifted through inequitable medical practices and socio-medical stigma. An examination of these histories and historiographies relative to contemporary society will help students better assess the processes by which medical inequities have been erroneously validated and constructed. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 709 Microbiomes Matter: The Path to Regenerative Systems of Farm, Food and Health in the Age of Climate credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/709/>)

Through this elective, students will expand their understanding of food systems, the production, processing, consumption, and disposal of food products. This will allow students to draw parallels between the microbiome in the human gut and soil and the impacts of these relationships on human health. Students will engage with a multidisciplinary team of professionals, to understand the connection between regenerative agriculture, food, nutrition, and human and planetary health through the microbiome. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 710 Computational Genomics credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/710/>)

The first week of this elective is an intensive course for scientists and clinicians covers the basics of computational genomics, while integrating the latest technologies and computational methodologies. University of Illinois faculty and Mayo Clinic scientists teach lectures and lead hands-on lab exercises in a variety of subject areas including genome sequencing and assembly, polymorphism and variant analysis, epigenomics, and systems biology. The second week is an in-depth independent study that focuses on a project using the skills from the first week. 2 professional hours. Approved for S/U grading only. Prerequisite: This course is restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 711 Climate Change, Planetary Health and Sustainability credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/711/>)

Medical students should learn how to practice medicine in the context of the current health impacts of climate change. Throughout the U.S. and globally, climate change contributes to increasing morbidity and mortality, including heat illness, respiratory and cardiovascular disease from air pollution, vector and water borne diseases, food and water insecurity, mental stress, and injuries. We highlight health threats, policies, and actions for physicians, engineering/medical researchers, and medical students. 2 professional hours. Approved for S/U grading only. Available for honor grades. Prerequisite: Restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

BSE 712 Artificial Intelligence in Health credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/712/>)

Artificial Intelligence (AI) has been proposed to address a variety of challenges in health, both within a clinical setting and beyond the direct patient-physician interaction. The goal of this course is to critically engage with readings on timely topics in AI and health. The strengths and weaknesses of each paper will be discussed both from an AI and evidence-based medicine perspective. Those constructive debates will inform the student's final project that will propose a computational intervention that is more likely to successfully improve health. 4 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled at Carle Illinois College of Medicine.

BSE 720 Advanced Anatomy credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/720/>)

Provides a focused concentration on gross anatomy via literature review and intensive cadaver dissection related to the student's specific clinical interest. Topics will emphasize clinical conditions that have clear anatomic correlates. Key topics will include the 3D relationships of gross anatomical structures, foundational anatomical knowledge required to interpret results of different imaging modalities, and the application of anatomical knowledge in carrying out surgical, diagnostic, or therapeutic clinical procedures. 4 professional hours. Approved for S/U grading only. Available for honors grades. Prerequisite: Restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

BSE 721 Neurocardiology credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/721/>)

Introduces students to the fields of scientific and clinical Neurocardiology. Involves a thorough overview of the interplays between the nervous and cardiovascular systems at the basic science and clinical levels. Course instruction will include lectures, invited research talks, and an extensive review and discussion of the medical/scientific literature in the field. Additionally, students will develop a research idea related to neurocardiology and receive formal training and guidance on how to write an NIH grant. The project will culminate with a completed modified F30 research proposal by the end of the elective. 4 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine.

BSE 730 Introduction to Deep Learning on Healthcare Data credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/730/>)

Covers deep learning methods, healthcare data and applications using deep learning methods. Includes activities such as online lectures or video lectures, programming labs, literature review, and individual or group presentations. The overall goal is to understand basic data science workflow for healthcare data such as electronic health records, clinical notes, and medical images, to learn basic deep learning models, and to learn the structure of data science projects. 2 professional hours. Approved for S/U grading only. Prerequisite: Experience with Python programming, basic machine learning, and Jupyter notebooks. Restricted to students enrolled in the Carle Illinois College of Medicine curriculum.

BSE 732 Healthcare Process Management credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/732/>)

In this elective we will apply principles and tools of operations management to explore improvement opportunities in the design, delivery, and management of the health care value chain. We will be examining the health care operation from the perspective of operations metrics such as: cost, quality, time (access), and variety/customization. 4 professional hours. Approved for S/U grading only. Prerequisite: Successful completion of the Carle Illinois College of Medicine Phase 1 curriculum. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

BSE 733 Introduction to Research credit: 1 Hour. (<https://courses.illinois.edu/schedule/terms/BSE/733/>)

This elective course offers a comprehensive understanding of research fundamentals at Carle Illinois and the University of Illinois. Students will learn study design, literature searches, hypothesis generation, and research methodologies. They will also gain skills in statistics, outcome assessment, budgeting, ethics, safety protocols, mentorship, collaboration, and securing funding. Upon completion, students will have a solid foundation and skills to excel academically and professionally in research. 1 professional hour. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 734 Medical Chinese credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/734/>)

Medical students with basic conversational Chinese skills will be provided opportunities to learn phrases commonly used in the patient interview as well as practice patient interviews in Mandarin. Students will also be introduced to basic concepts of Traditional Chinese Medicine in the context of patient interaction. The goal is to equip students with basic Medical Chinese needed to provide care and advocate for the Chinese community. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in Phase 3 of the Carle Illinois College of Medicine curriculum.

BSE 735 Leadership in PBL I credit: 1 Hour. (<https://courses.illinois.edu/schedule/terms/BSE/735/>)

Students will delve into the world of Project-Based Learning (PBL) from the perspective of a facilitator. Through training, participants will gain a comprehensive understanding of leadership characteristics and the correct implementation of PBL principles. The course aims to equip interested students with the necessary background and context to become student leaders in PBL sessions. Students may engage in the student leader role by enrolling in the second part of this two-part elective series. 1 professional hour. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in Carle Illinois College of Medicine.

BSE 736 Leadership in PBL II credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/736/>)

Students are expected to participate in PBL sessions as student leaders, equipping them with skills essential for leadership in whichever domain they choose including clinical, research, entrepreneurial, and engineering fields. The overall goal of this elective is to provide opportunities for leadership and near-peer PBL facilitation. 4 professional hours. Approved for S/U grading only. Prerequisite: Completion of all clerkships and Leadership in PBL I. Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 737 Exploring Anatomy through the Virtual Reality Lens credit: 1 Hour. (<https://courses.illinois.edu/schedule/terms/BSE/737/>)

In this immersive elective, students have the opportunity to better understand and visualize the 3D view of several complex anatomical areas and their related clinical/surgical applications. Integrating this technology into anatomy won't only allow students to practice hands-on dissection of a complex anatomical area of their choice, after consultation with the anatomy faculty, but also give them a chance to use VR to dive deeper and enhance their understanding of the human body. 1 professional hour. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in Carle Illinois College of Medicine.

BSE 738 Advanced Anatomy for Teaching credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/738/>)

Advanced Anatomy for Teaching is an elective course designed to enhance regional anatomy knowledge and teaching skills. Through one-on-one and small group lab instruction, students will learn best practices in anatomy education, reflect on their teaching principles, and create educational resources. Students will create either an educational resource to be used for teaching anatomy or an in-depth literature review of medical education pedagogy. 4 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled beyond Phase 1 of the Carle Illinois College of Medicine.

BSE 739 Medical Device Product Development credit: 1 to 16 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/739/>)

Covers the foundational principles for developing medical devices, clinical diagnostic systems, medical decision-making tools. The pathway from device innovation through clinical development to product approval will be the focus. Content for the course includes best practices in industry, regulation guidance for developing products, and case studies. 1 TO 16 professional hours. Approved for S/U grading only. Students may repeat the course in separate semesters up to 16 credit hours total. Prerequisite: Restricted to students enrolled in Carle Illinois College of Medicine.

BSE 740 Artificial Intelligence in Medicine credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/740/>)

This course offers a comprehensive exploration of AI's impact on healthcare. Healthcare professionals will gain a conceptual understanding of AI applications through medical case studies and machine learning models. The course empowers participants to confidently read AI literature, make data-driven decisions, identify AI tools, and actively participate in the selection and deployment of AI-based medical software. 4 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 741 Gamified Learning in Broadly Defined Medical Education credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/741/>)

This course surveys existing research on the design and evaluation of gamified learning strategies situated in the context of health sciences and medical education. Upon completing the course, students will be able to understand design principles and implications of gamified learning strategies in delivering pertinent knowledge, skills, and abilities to intended audience groups in broadly defined medical education contexts via formal and informal learning processes. 4 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in Carle Illinois College of Medicine.

BSE 742 Network Science for Health and Social Care credit: 1 Hour. (<https://courses.illinois.edu/schedule/terms/BSE/742/>)

Network science studies complex systems with networks, borrowing theories and methods from a wide range of disciplines, including mathematics, statistical mechanics, data mining, and information visualization. Network science impacts every domain of scientific inquiry, including domains that describe and explore structural and relational aspects important for the health and social care professional. The introductory course provides hands-on experiences with network construction, visualization and analysis using online lectures, visualization labs, student presentations and individual/group research projects. 1 professional hour. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in Carle Illinois College of Medicine.

BSE 743 Introduction to Health Systems Science credit: 1 Hour. (<https://courses.illinois.edu/schedule/terms/BSE/743/>)

Health Systems Science is a cornerstone for aspiring physician innovators. It equips students with the tools to navigate and improve healthcare systems, emphasizing the integration of health systems science with professional identity development. Through modules and reflective case studies, students become prepared to lead and innovate within the healthcare landscape by applying key concepts to real-world scenarios and enhancing their roles as system-aware physicians. 1 professional hour. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in Carle Illinois College of Medicine.

BSE 744 Simulation I credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/744/>)

Simulation I is an immersive, dynamic, two-week introduction to medical simulation activities, providing a gateway to a profound understanding of medical scenarios and their management through simulation techniques. Functioning as supervised participants, students will actively engage in diverse day-to-day simulation activities, collaborating with a team of educators and facilitators. This hands-on experience will culminate in a simulation experience with reports, and self-reflection of needs within the community/medical curriculum to drive the development of their simulation. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in Carle Illinois College of Medicine.

BSE 745 Medical Ethics at the Beginning and End of Life credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/745/>)

We will examine issues in medical ethics at the beginning and end of life, namely, those pertaining to abortion, the treatment of newborns, dementia, physician assisted suicide, and euthanasia. We will discuss, among other things, ethics-based versus policy-based arguments, different types of patient interests (short-term experiential interests vs. long-term critical interests), and various prima facie rights (the right to life, the right over one's body, and the right to die). 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 746 Medical Hindi credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/746/>)

Students will complete specific modules of readings and videos daily and practice medical vocabulary in Hindi/Urdu as a group virtually twice weekly. The group meeting will allow for reviewing module content and practicing patient interview skills in Hindi/Urdu with a focus on recognizing cultural differences that are specific to the South Asia healthcare system. The goal is to encourage medical students to provide more culturally sensitive care and advocate for the local Hindi-speaking patient population. 2 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 12 hours. Prerequisite: Restricted to students enrolled in Carle Illinois College of Medicine.

BSE 747 Survey of Health Systems Science credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/747/>)

Survey of Health Systems is a follow-up elective to Introduction to Health Systems Science. The goal is for students to shadow administrators at various healthcare practices to compare and contrast. The focus will be on understanding common threads and differences between types of practices and deepening understanding of practicing high-value care. 2 professional hours. Approved for S/U grading only. Due to the coordination of many faculty to arrange for this elective, at least 1 month is needed to arrange shadowing times before the elective starts and it is strongly encouraged to not drop the elective within 2 weeks of the start date. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 748 Residency-Ready: Writing A Review Paper on Medical Innovations in Your Chosen Specialty credit: 8 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/748/>)

Third- and fourth-year medical students will be empowered with the skills and knowledge necessary to become physician-innovators in their chosen clinical specialties as they prepare for residency. Participants will explore cutting-edge breakthroughs, refine critical thinking, and enhance scientific writing and problem-solving skills. By strengthening residency applications, this course positions students as standout candidates ready to make a meaningful impact in their future clinical field. 8 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students who completed the second year of the Carle Illinois College of Medicine program.

BSE 749 Comprehensive Immunology Course-Level 1 credit: 1 Hour. (<https://courses.illinois.edu/schedule/terms/BSE/749/>)

Immunology is a cornerstone of modern medicine, impacting all clinical specialties. The elective is designed to provide M2-M4 students, with an in-depth understanding of immunological principles, to address gaps in their M1 immunology education. It provides a detailed exploration of the immune system, reinforcing key concepts in both innate and adaptive immunity through focused, comprehensive content. 1 professional hour. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 12 hours. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 750 Clinical Pharmacology and Therapeutics credit: 1 Hour. (<https://courses.illinois.edu/schedule/terms/BSE/750/>)

This is self-directed learning in pharmacology, where students review drug classes, covering mechanisms of action, side effects, therapeutic uses, and contraindications. Weekly case-based sessions integrate pharmacological principles with clinical decision-making. 1 professional hour. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 12 hours. Prerequisite: Completion of the first year. Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 751 Contribution of Freestanding Clinics to Patient Care credit: 1 Hour. (<https://courses.illinois.edu/schedule/terms/BSE/751/>)

This will serve to facilitate medical student application of their knowledge of healthcare systems and resources to optimize high-quality care for patients, communities, and populations. The course will provide the opportunity to understand services standalone clinics provide, why patients choose to visit such clinics, and cost-benefit analyses between inpatient and outpatient clinics of hospital systems. 1 professional hour. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 12 hours. Prerequisite: Family Medicine Clerkship. Restricted to students enrolled in Carle Illinois College of Medicine.

BSE 752 Community Service Learning credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/752/>)

Students will, in partnership with a community service partner, and through cultural humility training provided by University Extension, understand and apply public and community health principles, bridging the gap between individual patient care and population health. Students will design or propose a community innovation to present to the community partner leadership and faculty at the end of the course. 2 professional hours. Approved for S/U grading only. Prerequisite: Completion of the first year. Restricted to students enrolled in Carle Illinois College of Medicine.

BSE 753 Essential Social, Emotional, Behavioral Skills for Medicine credit: 1 Hour. (<https://courses.illinois.edu/schedule/terms/BSE/753/>)

Social, emotional, and behavioral skills (SEB skills) help us to implement medical skills more effectively. This course provides opportunities to help understand and develop SEB skills through assessments, readings, and hands-on activities. We intend to cover techniques for improving interpersonal, leadership, teamwork, task management, emotion regulation, and innovation skills. Students will work with the instructor to identify areas they would like to enhance and then design a personalized or small group approach to training. 1 professional hour. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 770 Service Learning Elective credit: 1 to 16 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/770/>)

Service Learning offers educational experiences that involve students providing non-clinical service to the community in response to identified community needs. Through this course, Carle Illinois students have the opportunity to engage in service-learning activities, collaborate with diverse community members, and develop essential skills for independent and continuous learning throughout their lives. Students will reflect on the connections between their participation in these activities, their medical school curriculum, and their responsibilities as both citizens and future medical professionals. 1 TO 16 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

BSE 799 Advanced Non-Clinical Electives credit: 0 to 8 Hours. (<https://courses.illinois.edu/schedule/terms/BSE/799/>)

Third- and fourth-year students are eligible to participate in short-term elective opportunities that can enhance their medical education. The AAMC Visiting Student Learning Opportunities program enables eligible students to pursue these opportunities other than at their home institutions. They offer clinical, clinical and research, non-clinical, hybrid, and research experiences in the U.S. and globally at teaching hospitals, community clinics, and urban or rural sites. Eligibility and availability are determined by the host institution. 0 to 8 professional hours. Approved for S/U grading only. May be repeated up to 20 hours in the same semester if topics vary, and separate semesters to a maximum of 32 hours. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

CLE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CLE/>)

Clinical Sciences Engr Courses**CLE 610 Faith, Medicine, and End-of-Life Care credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/610/>)**

Helps students to develop their skills in taking a spiritual history and addressing issues relating to faith; skills in end-of-life care; and understanding of whole person care. 2 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 4 hours. Prerequisite: Restricted to students enrolled in the Carle Illinois Doctor of Medicine (MD) program.

CLE 613 Introduction to Clinical Practice (Longitudinal) credit: 0 to 5 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/613/>)

Examines and exposes to the fundamentals of clinical work including office support with basic history, vitals, understanding the team, communicating with patients, observing health care roles and processes. Additionally, this course addresses concepts of history and physical assessment, includes H&P, preoperative assessment, routine physicals. 0 to 5 professional hours. Approved for S/U grading only. May be repeated to a maximum of 15 credit hours across all semesters. SU (2), FA (5), SP (4), SU (2), FA (2) Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

CLE 614 Introduction to Clinical Practice – M2 credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/614/>)

This is a longitudinal course, spanning the beginning of the second year, which covers the fundamentals of medical science while incorporating the skills of history and physical assessments. Topics to be covered include performing comprehensive physical exams, conducting and H&P (History and Physical), routine physicals, and interviewing patients. 2 professional hours. Approved for S/U grading only. Prerequisite: CLE 613. Restricted to second year students enrolled in the Carle Illinois College of Medicine.

CLE 631 Clinical Elective credit: 1 to 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/631/>)

Exposes the students to a clinical specialty to learn more about treatment of disorders, lifestyle of the physicians and the experiences of the patients. Students will learn about interpersonal communication skills, gain a deeper understanding of the environment in which medical devices are used, observe therapeutic treatment in real time, and strengthen the clinical skills. 1 to 4 professional hours. Approved for S/U grading only. May be repeated up to 16 hours in the same semester to a maximum of 40 hours over separate semesters. Prerequisite: This course is restricted to Carle Illinois College of Medicine students.

CLE 640 Family Medicine Clerkship credit: 1 to 10 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/640/>)

This longitudinal clerkship provides an exciting opportunity for students to have clinical experiences within their own student clinic, as well as ambulatory practices in disciplines such as psychiatry, pediatrics, and family medicine. Students will learn the core skills and knowledge essential to the practice of primary care: diagnosis and treatment of common outpatient complaints, management of chronic medical conditions, and strategies for health promotion and disease prevention. 1 to 10 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 10 hours. Available for honors grade. Prerequisite: This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 645 Internal Medicine Clerkship credit: 10 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/645/>)

The medicine clerkship is a ten-week rotation. This clerkship emphasizes the integration and application of pathophysiology to the diagnosis and management of patients in addition to the skills of history-taking, physical examination, and case presentation. The course is an apprenticeship focusing on the bedside care of patients. Students work closely with house staff members and ward attendings making daily rounds, admitting new patients, and caring for them with the team. 10 professional hours. Approved for S/U grading only. Available for honor grades. Prerequisite: This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 650 Neurology Clerkship credit: 5 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/650/>)

The neurology clerkship is a four-week introduction to clinical neurology, the specialty of medicine devoted to patients with diseases of the nervous system. The clerkship emphasizes the basic clinical methods of bedside neurology. Based on the history and examination, students develop skills at neuroanatomical localization and clinical reasoning. Students learn to interpret clinical findings, develop a differential diagnosis, and formulate a plan of evaluation. 5 professional hours. Approved for S/U grading only. Available for honor grades. Prerequisite: This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 655 Psychiatry Clerkship credit: 5 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/655/>)

The Psychiatry Clerkship is a four week rotation. All students evaluate and follow patients on inpatient and outpatient services, participating in their patients' care with close attending and resident supervision. The acquisition of clinical skills is emphasized: conducting an interview to obtain a psychiatric history and mental status examination; organizing, recording, and presenting the findings to generate a differential diagnosis; and formulating a treatment plan in accordance with the biopsychosocial model. 5 professional hours. Approved for S/U grading only. Available for honor grades. Prerequisite: This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 660 Obstetrics & Gynecology Clerkship credit: 5 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/660/>)

The obstetrics and gynecology clerkship is a five-week rotation. The main objective is to familiarize students with the signs and symptoms of normal and abnormal reproductive function and to teach the basic examinations in obstetrics and gynecology. The course will emphasize and reinforce skills for taking an appropriate history, performing a physical and pelvic examination, formulating a differential diagnosis as well as a treatment plan, and properly managing patients. 5 professional hours. Approved for S/U grading only. Available for honor grades. Prerequisite: This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 665 Pediatrics Clerkship credit: 5 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/665/>)

The Pediatrics Clerkship is a five week rotation. The rotation is divided between inpatient and outpatient experiences. The emphasis is on learning to care for children and families in a variety of patient care settings and developing the clinical skills, diagnostic reasoning, and basic management strategies core to the practice of pediatrics. Attending physicians emphasize normal child development as well as the role illness plays in the lives of children and families. 5 professional hours. Approved for S/U grading only. Available for honor grades. Prerequisite: This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 670 Surgery Clerkship credit: 10 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/670/>)

The Surgery Clerkship is a ten-week rotation. The clerkship is designed to provide clinical experience that improves skills in overall patient care as students apply their knowledge of the basic sciences and expand their knowledge base through exposure to the wide variety of patients and procedures that fall into the realm of general surgery. Students become a valued member of the team as they assume responsibility for the overall care of their patients preoperatively and postoperatively and assist in the operating room. 10 professional hours. Approved for S/U grading only. Available for honor grades. Prerequisite: This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 675 Adult Reconstruction - Hip and Knee credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/675/>)

The student will be involved in the daily activities of caring for patients with hip and knee degenerative conditions, as well as potential hip or knee injuries such as hip fractures or periprosthetic fracture. The student will work 1:1 with primary faculty in both clinic and the OR. In clinic, the student will have increasing autonomy to perform history and physical exams on this adult population as appropriate. This begins with shadowing and builds to independent H&P taking with evaluation of pertinent studies. The OR experience begins with scrubbing and shadowing, but will go on to include patient positioning, assisting with draping, application of dressings, and other activities the faculty feels appropriate based on the student knowledge and performance. 4 professional hours. Approved for S/U grading only. May be repeated in separate terms up to a maximum 8 hours. Prerequisite: Completion of Phase 1 and OR Orientation class. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 680 Family Medicine Continuity Clinic credit: 1 to 3 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/680/>)

The Family Medicine Clinic is a required course for students in Phase 2 of the Carle Illinois College of Medicine curriculum. The Family Medicine Clinic is structured to prioritize longitudinal relationships for continuous management of chronic disease. With graduated responsibility, medical students perform the functions of a primary care physician for their patient panel. Students are assigned to the clinic one evening per week. 1 to 3 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 8 hours. Prerequisite: Family Medicine Clerkship. Restricted to students enrolled in Phase 2 of the Carle Illinois College of Medicine curriculum.

CLE 681 General Surgery Sub-Internship credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/681/>)

Carle Illinois students are required to complete at least one Sub-Internship rotation during their fourth year. In the General Surgery Sub-Internship, students will work with faculty in advanced clinical application of their medical knowledge gained from their core surgery clerkship. 4 professional hours. Approved for S/U grading only. May be repeated to a maximum of 8 hours. Prerequisite: Successful completion of the Carle Illinois core clinical clerkships. Restricted to students enrolled in Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 683 Pediatrics Sub-Internship credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/683/>)

The four-week sub-internship in Pediatrics provides Phase 3 students supervised responsibility for patient care in general pediatric inpatient, pediatric intensive care, and neonatal intensive care. Each sub-intern will gain an awareness of the advanced knowledge, skills, values and attitudes the hospitalists/intensivists and ER physicians strive to acquire and maintain throughout their professional lives. 4 professional hours. Approved for S/U grading only. May be repeated for a maximum of 8 hours. Prerequisite: Completion of Carle Illinois core clerkships. Restricted to students enrolled in Phase 2 or 3 of the Carle Illinois College of Medicine curriculum.

CLE 684 Internal Medicine Sub-Internship credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/684/>)

Carle Illinois students are required to complete at least one Sub-Internship rotation during their fourth year. In the Internal Medicine Sub-Internship, students will work with faculty in advanced clinical application of their medical knowledge gained from their core Medicine clerkship. 4 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 8 hours. Prerequisite: Restricted to students enrolled in Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 685 Anesthesiology Sub-Internship credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/685/>)

Provides a more in-depth experience and preparation for the knowledge and procedures performed when working with patients who require sedation anesthesia and pain management for various reasons. Anesthesia fellowships typically encompass experiences in perioperative/periprocedural locations. This experience will thus aim to provide the student with exposure to these areas where anesthesiologists typically work. It will be an opportunity to build trust with providers over the four weeks so that they may possibly recommend the student for future work in this field. The experience will teach the student how to interact with patients undergoing anesthesia, allowing practice in communicating treatment plans, and discussing concerns with the patients undergoing such procedures. Additionally, it will be a chance for the student to gain more experience in some of the more advanced skill sets required for work in these fields. 4 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 8 hours. Prerequisite: Successful complete of all Carle Illinois Core Clerkships. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine.

CLE 686 Neurology Sub-Internship credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/686/>)

Illustrates the advanced responsibilities and activities that students are expected to demonstrate and participate as an integral member of a neurology team during this advanced clinical rotation. The overall goal for the Neurology Sub-Internship is to give further depth exposure to neurology, with the goal of treating the student on this rotation as more like a resident. Students will conduct further, in depth on EEGs, imaging interpretation, and differential diagnosis. This experience is to provide students with advanced clinical skills necessary for their future role as a resident and be exposed to activities that continue their development according to the Core Entrustable Professional Activities (EPAs) for entering Residency related to Neurology. 4 professional hours. Approved for S/U grading only. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 687 Obstetrics and Gynecology Sub-Internship credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/687/>)

The overall goal for the Obstetrics and Gynecology Sub-Internship is to give further in-depth exposure to obstetrics, with the goal of treating the student on this rotation as more of a resident, carrying more patients. This rotation will give further in-depth exposure to obstetrics and gynecology, with the goal of students performing as acting interns. Students will increase their ability to assess patients, develop differential diagnoses and treatment options. They will also increase their exposure to procedural cases. This experience is to provide students with advanced clinical skills necessary for their future role as a resident and be exposed to activities that continue their development according to the Core Entrustable Professional Activities (EPAs) for entering Residency related to Obstetrics and Gynecology. 4 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 8 hours. Prerequisite: Completion of all core Carle Illinois College of Medicine clerkships. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 688 Urology Sub-Internship credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/688/>)

This sub-internship in urology provides students supervised responsibility of patient care. This rotation provides an opportunity to function at the level of an intern with close one-on-one attending supervision and support staff interaction. Sub interns will gain a more in depth understanding of principle urologic domains of knowledge as well as working competence in ambulatory evaluation and surgical treatment of the urologic patient. The sub intern will be exposed to all major disciplines in urology, including but not limited to, open and minimally invasive oncology, trauma/reconstructive procedures, voiding dysfunction, infertility and erectile dysfunction, robotic and minimally invasive procedures, and stones. Sub-interns will be involved in all aspects of urologic patient care: from initial presentation and work-up to discharge planning and follow-up. The sub intern will participate in operative cases under the direct supervision of an attending. Participation levels will vary depending on the procedure, the patient's clinical condition, and the experience level of the student. 4 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 8 hours. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum. Prerequisite: All Carle Illinois College of Medicine core clerkships; the 1-week urology elective during the surgery rotation or CLE 786 Introduction to Urology elective.

CLE 689 Family Medicine Sub-Internship credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/689/>)

An advanced clinical rotation offered in the final phase of medical school. It aims to provide students with advanced training in the knowledge, skills, and attitudes that are foundational to family medicine. By the end of the sub-i, students should be ready to assume the role of a family medicine intern. Emphasis is placed on the learner's experience of, "the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community." Experiences in multiple different areas will be completed during this sub-i, including obstetrical, gynecologic procedures, inpatient services, minor procedures (if available) including skin biopsies, cyst removals, incision and drainage, joint injections, implantable birth control insertion and removal, colposcopies, and outpatient care. 4 professional hours. Approved for S/U grading only. Prerequisite: All Carle Illinois core clerkships. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine.

CLE 690 Clinical Research credit: 1 to 8 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/690/>)

Carle Illinois students are encouraged to participate in research in order to enhance their scientific reasoning, and fulfill the college's mission of developing "Physician Innovators". This course will allow students to engage in a broad spectrum of research experiences. Students will work closely with a research mentor at the University of Illinois at Urbana-Champaign to develop their ideas and generate a list of research outcomes. 1 to 8 professional hours. Approved for S/U grading only. May be repeated in separate terms to a maximum of 16 hours. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

CLE 692 Advanced Clinical and Professional Identity credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/692/>)

Provide students and clinicians a chance to meet, in a non-classroom environment, to discuss in topics that impact clinical practice. Examples of these topics include: Domestic Violence, Burnout, Cultural Competence, and Legal Issues in Medicine. Students will be given readings, websites, and videos prior to each session. In addition, students will write brief essays on these topics based on their experience during their clerkships and other electives. Each session, over a dinner, will last approximately two hours. 2 professional hours. Approved for S/U grading only. Prerequisite: Students must be in Phase 2 of the curriculum. This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 693 Self-designed Clinical Elective credit: 1 to 16 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/693/>)

This elective will allow students to develop clinical skills and gain clinical experience under close supervision of clinical faculty through modifying a standing clinical elective to better match their interests or customize a clinical experience. It must be arranged between the student and an individual faculty member or external collaborator, and subsequently approved by the Assistant Dean for Curriculum. 1 to 16 professional hours. Approved for S/U grading only. May be repeated up to 16 hours in the same semester to a maximum of 32 hours over separate semesters. Prerequisite: This course is restricted to Carle Illinois College of Medicine students.

CLE 694 Career Boot Camp credit: 5 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/694/>)

A preparatory course which helps prepare graduating students to transition to residency. The course utilizes a series of interactive lectures, hands-on workshops, a variety of simulation methods for skills training in procedures and clinical scenarios. Besides topics that span the practice of medicine and caring for patients, there will also be an emphasis on career planning and life outside of work. 5 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 10 hours. Prerequisite: Completion of Phase 2. Restricted to students enrolled in Phase 3 of the Carle Illinois College of Medicine.

CLE 695 Inpatient Psychiatry Sub-Internship credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/695/>)

A medical student will act in the role of a sub-intern, or acting intern, for approximately 40 hours per week as part of an interdisciplinary inpatient team. The student will be responsible for a patient panel commensurate with a sub-intern status and follow them throughout their hospital stay. The sub-intern will interview patients, present on rounds, write admission psychiatry evaluations, perform physicals as appropriate, write daily progress notes, and be exposed to the discharge summary process. In addition, the sub-intern will work with consulting services to provide handoffs, collect collateral information, and coordinate after-care. The student will be required to participate in one full weekend call. 4 professional hours. Approved for S/U grading only. Prerequisite: Carle Illinois core clerkships. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine.

CLE 696 Psychiatry Consult and Liaison Sub-Internship credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/696/>)

This sub-internship/acting internship provides advanced medical students with hands-on experience in the consult and liaison psychiatric setting. Students will learn to conduct psychiatric evaluations and provide treatment for medically ill patients in a hospital setting. They will gain proficiency in ruling out primary medical diagnoses, managing co-morbid medical conditions, and synthesizing the knowledge and skills acquired during the Psychiatry Clerkship. 4 professional hours. Approved for S/U grading only. Prerequisite: Successful completion of all core clerkships within the Carle Illinois College of Medicine curriculum. Restricted to students enrolled in Phase 2 or 3 at Carle Illinois College of Medicine.

CLE 697 Current Concepts in Obesity and Metabolic Syndrome credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/697/>)

This elective provides exposure to the challenges of obesity and overweight, as major contributors to poor health outcomes. Over the two weeks, students will gain experience in investigating better measures of obesity, strategies to counter stigma and mismanagement, best practices for intervention, alternatives of chronic weight management, and the inequity of care. This elective involves attendance at an outpatient clinic and community events related to obesity or obesity-related comorbidities. 2 professional hours. Approved for S/U grading only. Prerequisite: Successful completion of the Family Medicine Clerkship. Restricted to students in Carle Illinois College of Medicine.

CLE 698 Advanced Clinical Medical Spanish II credit: 2 to 5 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/698/>)

The course will increase medical student comfort with Spanish-language interviews, examinations, and patient education with Standardized Patient (SP) and interactions with community members. It will provide ample experience in live and simulated SP interviews, supervision of interview styles and Spanish-language skills, discussion of common diagnosis, procedural consent, treatment plans, and patient education in Spanish to empower medical students to practice medicine with the nationally growing monolingual Spanish-speaking patient population. 2 TO 5 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

CLE 702 Anesthesiology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/702/>)

The student will be introduced to various anesthesia techniques, including management of the patient's airway. The student will gain experience in administration of anesthetic drugs, management of critical life functions such as hemodynamics monitoring, blood and fluid therapy and acute pain management (both postoperatively and in Obstetrics). A pre-test will be given to assess student's existing knowledge of anesthesia and other clinical material. This will help the student understand the scope of study during the rotation. 2 professional hours. Approved for S/U grading only. Prerequisite: Surgery Clerkship. Restricted to students enrolled in the MD program at Carle Illinois College of Medicine. Students must be in Phase 2 or Phase 3 of the curriculum.

CLE 704 Dermatology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/704/>)

The student is exposed to the private and clinical practice of general dermatology and is instructed in diagnosis and treatment. Emphasis is placed on the care of the patient and the student is expected to function as a member of the office team. 2 professional hours. Approved for S/U grading only. Prerequisite: Completion of the Carle Illinois Internal Medicine Clerkship. Restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 705 Spiritual Integration in Healthcare credit: 1 Hour. (<https://courses.illinois.edu/schedule/terms/CLE/705/>)

Students will research the relationship between patient satisfaction and spiritual care. Students will explore their own understanding of spirituality. They will examine how their spiritual traditions may impact their care. Students will examine how patients utilize their faith to guide their healthcare decisions. Students will observe the Interdisciplinary Team connections of chaplains, specifically with hospice and social work. They will participate in Spiritual Screenings and observe the role of chaplains in traumas. 1 professional hour. Approved for S/U grading only. May be repeated in separate terms up to 2 professional hours. Prerequisite: Completion of years 1 and 2. Restricted to students enrolled in the Carle Illinois College of Medicine.

CLE 706 Emergency Medicine credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/706/>)

This elective is to provide exposure to the specialty of emergency medicine. The student will gain experience through the process of assessing a patient by history taking, physical exam and diagnostics. By the end of the 4 week elective the student should be able to obtain a complaint based history with review of system, complete a physical exam and start to formulate a differential diagnosis based upon the chief complaint. Stress will be placed on the development of the differential diagnosis. The experience will include learning appropriate laboratory and radiographic testing as well as treatment options for illnesses/disease that most commonly present to the emergency department. The student will commonly get exposure to patients with chest pain, abdominal pain, neurological disorders, undifferentiated malaise, early pregnancy complaints, STI, sepsis and trauma. 4 professional hours. Approved for S/U grading only. Prerequisite: Internal Medicine or Surgery Clerkship. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois Curriculum.

CLE 707 Emergency Medical Services credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/707/>)

Students will participate in EMS ride alongs with EMS units (e.g. ground transport and air transport) or with the EMS Medical Director in their dedicated Physician Response vehicle. Students will have the opportunity to join fire simulations, regional drills, training courses, tactical calls, and sporting events with Illini Emergency Medical Services. First-hand experience with paramedics and dispatchers will teach students about critical patient management in the pre-hospital setting in both the field and the dispatching center. A portion of this course may be tailored to the student's interests in EMS in areas such as event medicine, mass gatherings, medical simulation, and wilderness medicine. 2 professional hours. Approved for S/U grading only. Prerequisite: Completion of all Carle Illinois core clerkships. Completion of CLE 706 is strongly encouraged. Restricted to students enrolled in Phase 3 of the Carle Illinois College of Medicine.

CLE 708 Advanced Cardiovascular Life Support Simulation and Clinical Immersion credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/708/>)

Students will attain their Advanced Cardiovascular Life Support (ACLS) certification and observe/participate in codes during this elective. ACLS certification and simulations will provide a foundation for students to understand what happens during codes in the hospital environment. Students will be expected to participate when asked but will not lead codes. Typical involvement includes providing compressions. Students will be assigned to ICU codes or the rapid response team. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

CLE 710 Advanced Gynecology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/710/>)

This elective is for the student interested in a career in women's health. It will provide in-depth exposure to office gynecology, office gynecologic procedures, and gynecologic related surgeries in the operating room. Clinical exposure will include healthcare across the lifespan with appropriate screenings. Additional clinical exposure will be provided and include contraceptive counseling and infertility counseling. 2 professional hours. Approved for S/U grading only. Prerequisite: Successful completion of the Carle Illinois Obstetrics and Gynecology Clerkship. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 713 Palliative Care – Introduction credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/713/>)

Healthcare providers must be able to provide compassionate patient-centered care that optimizes well-being and alleviates suffering. Students will gain experiences caring for patients with advanced, chronic, and progressive illness that may be facing high symptom burden, complex treatment decisions, or may be near the end of life. The student will gain experience in the sub-specialty of Palliative Care through seeing patients on the inpatient consult services, outpatient primary palliative care clinic, embedded sub-specialty clinics, nursing home visits, and home visits. Student will participate in interdisciplinary rounds and work in a multidisciplinary team to optimize patient care. 2 professional hours. Approved for S/U grading only. Prerequisite: Internal Medicine Clerkship. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois curriculum.

CLE 714 Ambulatory Cardiology credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/714/>)

The student will be exposed to the outpatient management of common cardiovascular disorders including coronary artery disease, valvular heart disease, vascular disease, heart failure, and atrial fibrillation as well as to the work-up of common referrals in an ambulatory setting such as chest pain, shortness of breath, edema, palpitations, dizziness, syncope, abnormal ECG, and preoperative risk assessment. The student will also learn basic ECG interpretation and have the opportunity to observe stress testing, nuclear imaging, and echocardiography. The goal is that the student develops his or her history taking and physical exam skills as it relates to the cardiovascular system by integrating the basic sciences with the art of medicine. 4 professional hours. Approved for S/U grading only. Prerequisite: Restricted Carle Illinois students in Phase 2 or Phase 3 of the curriculum.

CLE 715 Adult Intensive Care credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/715/>)

The goal of this elective is to expand the student's knowledge and understanding of intensive care issues affecting hospitalized patients, primarily focusing on appropriate diagnostic and therapeutic interventions and to provide the opportunity for the student to assume a more primary role in the responsibility of directing care of a patient in a team setting. Inherent in this experience is an opportunity for in-depth learning in the areas of professionalism and systems-based practice. The elective will encompass the learning of integrative skills, procedures and how to handle basic clinical scenarios including codes. The student will partner with their attending to develop the diagnostic and therapeutic plans for his or her patients, the student will engage in a formative experience designed to prepare him/her for the future care of patients in critical care. 4 professional hours. Approved for S/U grading only. Prerequisite: Internal Medicine Clerkship, General Surgery Clerkship, or Neurology Clerkship. Restricted to students enrolled in Carle Illinois College of Medicine. Students must be in Phase 2 or Phase 3 of the curriculum.

CLE 716 Hematology/Oncology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/716/>)

The goal of this elective to serve as an introduction to the internal medicine subspecialty of hematology and oncology. In the outpatient setting, the students will be exposed to various hematological and oncological conditions which are managed primarily as an outpatient and exposure to infusion center etc. where chemotherapy is administered. They will be asked to attend tumor board conferences whenever possible to understand the multidisciplinary management of an oncological problem. They will also get some inpatient experience where they will be introduced to management of oncological complications when patients present to the hospital. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in Phase 2 or 3 of the Carle Illinois College of Medicine curriculum.

CLE 717 Infectious Disease credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/717/>)

The goal of this elective is to give students exposure to the field of infectious disease, including differential diagnosis, treatment options, and management strategies. Students should be able to manage 1-2 patients and independently devise plans for new consults. 2 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 12 hours. Prerequisite: Carle Illinois Internal Medicine core clerkship. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine.

CLE 718 Introduction to the HIV Epidemic: A Clinical and Social Medicine Elective credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/718/>)

Will provide students with a brief introduction to the HIV epidemic and will cover modes of transmission, the virus life cycle, prevention/education, and treatment strategies. We will also discuss the social history of the early epidemic, within the US and on a global scale, and will cover current and continued social issues. 2 professional hours. Approved for S/U grading only. Prerequisite: Carle Illinois College of Medicine Internal Medicine Clerkship. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine.

CLE 719 Inpatient Cardiology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/719/>)

This clinical elective is designed to expose students to a broad range of cardiovascular diseases in an inpatient setting. This includes, but is not limited to, acute coronary disease, heart failures, arrhythmias and valvular disease. Students will also gain knowledge in echocardiography (ECG), stress testing, electrophysiology, and catheterization. 2 professional hours. Approved for S/U grading only. Prerequisite: Completion of the Carle Illinois College of Medicine Internal Medicine Clerkship. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine.

CLE 720 Gastroenterology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/720/>)

Students will attend procedures, perform consultations, and review cases with attending Gastroenterologists. Students will be given library and learning assignments related to patient cases presented in the office and hospital. Students will be an active participant in clinic seeing patients under direct physician supervision. 2 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 4 credit hours. Prerequisite: Successful completion of the Carle Illinois Internal Medicine Clerkship. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 721 Introduction to Ambulatory Cardiology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/721/>)

Students will be exposed to the outpatient management of common cardiovascular disorders including coronary artery disease, hypertension, valvular heart disease, heart failure, and atrial fibrillation. Additionally, the work-up of common referrals in an ambulatory setting such as chest pain, shortness of breath, edema, palpitations, coronary calcification, syncope, abnormal ECG, and preoperative risk assessment can be expected. 2 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 4 credit hours. Prerequisite: Successful completion of Phase 1 of the Carle Illinois College of Medicine curriculum.

CLE 730 Clinical Genetics credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/730/>)

This elective course introduces medical students to the diverse practice of clinical genetics. The focus is on basic and applied genetics, genetic risk assessment, and genetic counseling as they relate to prevention, diagnosis, treatment, and management of disease. The course will serve as the basis for the healthcare professional to holistically integrate genetic/genomics, epigenetics, and scientific concepts into personalized health care. 2 professional hours. Approved for S/U grading only. May be repeated for a maximum of 4 hours. Prerequisite: Completion of Internal Medicine Clerkship, Pediatric Clerkship, or Family Medicine Clerkship. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 731 Health Systems Leadership credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/731/>)

In this elective, students will be embedded with senior, operational, and academic leaders throughout Carle and Carle Illinois to understand the challenges that are presented to leadership. Students will use their relationships and knowledge to work on a real-world challenge and present an I.D.E.A.-like report. Students will build relationships to help them understand the nature of Health Systems and leadership skills. 4 professional hours. Approved for S/U grading only. Prerequisite: Successful completion of all Carle Illinois core clerkships. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 732 Neurosurgery I credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/732/>)

Designed to provide an introduction into different subspecialties of neurosurgery. It forms the basis for a strong foundation of knowledge of neurological diseases and how they are managed both surgically and non-surgically. Students will be immersed in day-to-day service, functioning essentially as a supervised intern, while working closely with our cohesive group of mid-level providers and attendings in the inpatient, outpatient and operating room settings. The goal of this neurosurgery elective is designed to familiarize students with the essential elements of neurosurgical evaluation and care so that they are able to provide exceptional frontline management. 2 professional hours. Approved for S/U grading only. Available for honors grades. Prerequisite: Restricted to students enrolled in the MD program at Carle Illinois College of Medicine who are in Phase 2 or 3 of the curriculum.

CLE 733 Neurosurgery II credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/733/>)

Designed to provide an in-depth experience into different subspecialties of neurosurgery. It builds on the the foundation of knowledge of neurological diseases and how they are managed both surgically and non-surgically from CLE 732. Students will be immersed in day-to-day service, functioning essentially as a supervised intern, while working closely with our cohesive group of mid-level providers and attendings in the inpatient, outpatient and operating room settings. Students will be responsible for composing an oral presentation on a patient encountered during their elective and research assignment assigned by faculty of neurosurgery. 4 professional hours. Approved for S/U grading only. Available for honors grades. Prerequisite: CLE 732: Neurosurgery I. Restricted to students enrolled in the MD program at Carle Illinois College of Medicine who are in Phase 2 or 3 of the curriculum.

CLE 736 Urogynecology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/736/>)

This elective is for students interested in pursuing the field of obstetrics and gynecology who seek deeper knowledge and responsibility in the field of urogynecology. This will provide students a more complete experience in the clinical practice of urogynecology, surgery, urodynamics and clinical assessment of pelvic floor disorders. 2 professional hours. Approved for S/U grading only. May be repeated to a maximum of 12 hours.

CLE 737 Gynecologic Oncology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/737/>)

This elective is for students interested in the field of Obstetrics and Gynecology and/or medical surgical oncology. The experience is for students who seek deeper knowledge and responsibility in the field of gynecologic oncology. The rotation will provide the student with a complete exposure to the clinical practice of gynecologic oncology. Students will perform initial workup and evaluation and staging of patients presenting with malignancy. Working with a provider, they will determine candidacy for surgery and assist with surgical procedures. Students will also follow patients during recovery and surveillance. 2 professional hours. Approved for S/U grading only. Prerequisite: Successful completion of CLE 660. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 738 Reproductive Medicine credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/738/>)

This rotation is designed for the Phase 3 medical student who is well versed in Obstetrics and Gynecology and is possibly interested in pursuing a residency in OB/GYN. Activities will revolve around the workup of the infertile couple and the monitoring and management and treatment of reproductive problems. Time will be spent in the office setting, with office ultrasounds, consultations as well as management of ovulation induction cycles and monitoring of ovarian hyperstimulation for IVF. Observation of IVF procedures and assisting in other surgeries would be expected. Additional time in the andrology and IVF labs observing may be available. 2 professional hours. Approved for S/U grading only. Prerequisite: Successful completion of Phase 2 clerkships. Restricted to students enrolled in Phase 2 or 3 of the Carle Illinois College of Medicine.

CLE 739 Advanced Obstetrics credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/739/>)

This rotation is designed for the Phase 3 medical student who is well versed in Obstetrics and Gynecology and is possibly interested in pursuing a residency in OB/GYN. Activities will revolve around the work up of pregnancy and pregnancy-related complications. Time will be spent on Labor and Delivery, Antepartum, the Outpatient Maternal Fetal Medicine clinic, and the Outpatient Midwifery Clinic. 4 professional hours. Approved for S/U grading only. Prerequisite: Successful completion of all Phase 2 clerkships. Restricted to students enrolled in Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 740 Introduction to Ophthalmology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/740/>)

This course is an introduction in which students will gain a better understanding of the structure and function of the human eye, including an introduction to tools and testing for proper diagnosis and treatments. Students will also learn about various ocular diseases including co-management of ocular and systemic diseases. This will include an understanding of when and why to refer to other specialties. 2 professional hours. Approved for S/U grading only. Students may repeat this course up to 4 hours in separate semesters. Prerequisite: Restricted to students enrolled in Carle Illinois College of Medicine.

CLE 741 Advanced Ophthalmology credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/741/>)

This 4-week course gives students a deep dive into the field of Ophthalmology. This includes a deeper understanding of the structure and function of the human eye including both common and uncommon disease states. Students will be instructed on how to use tools for diagnosing common diseases. After diagnosis, students will create and propose a treatment plan, including possible referrals, to their preceptor. 4 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students who have completed the Family Medicine and Surgery Clerkships in the Carle Illinois College of Medicine.

CLE 742 Plastic and Reconstructive Surgery credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/742/>)

Each four-week rotation will consist of familiarization with general plastic and reconstructive surgery. Emphasis will depend upon the current office and surgical case load. The student will assist in all facets of the practice and have an opportunity to view a wide range of cosmetic plastic surgery. The clinical and surgical experience will provide a solid foundation for innovative ideas in plastic and reconstructive surgery. 4 professional hours. Approved for S/U grading only. Prerequisite: Surgery Clerkship. Restricted to students in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 743 Orthopedic Trauma credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/743/>)

An advanced clinical elective focusing on the management of patients sustaining major orthopedic injuries and their sequelae. Students will be involved in all aspects of the continuum of care, including initial emergency management, non-operative and surgical treatment of injuries, inpatient care, and the outpatient management of patients sustaining fractures and dislocations of the extremities and pelvis. Students will work with faculty daily and are expected to have direct participation in all activities. The application of basic science foundations in anatomy, cell biology/systems physiology, and fundamental biomechanical principles will be emphasized as they relate to the treatment of fractures and optimizing fracture healing. Students may, with approval of faculty director, create a proposed innovated solution to an orthopedic trauma situation. 4 professional hours. Approved for S/U grading only. Prerequisite: Surgery Core Clerkship. Restricted to students enrolled in Phase 2 or 3 of the Carle Illinois College of Medicine.

CLE 744 Oral & Maxillofacial Surgery I credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/744/>)

Provides exposure to the field of Oral & Maxillofacial surgery. Students will gain experience in the full scope of this surgical specialty including traditional outpatient ambulatory surgery, craniomaxillofacial trauma, orthognathic/reconstructive surgery, cleft lip and palate surgery, and maxillofacial oncology. The student will gain experience in head and neck surgical anatomy, imaging, and principles of management of these subspecialty areas. Additionally, students will gain exposure in the application of technology to these clinical problems such as the role virtual surgical planning. 2 professional hours. Approved for S/U grading only. Available for honors grading. Prerequisite: CLE 670: Surgery Clerkship. Restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 745 Oral & Maxillofacial Surgery II credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/745/>)

Provides exposure to the field of Oral & Maxillofacial surgery. Students will gain experience in the full scope of this surgical specialty including traditional outpatient ambulatory surgery, craniomaxillofacial trauma, orthognathic/reconstructive surgery, cleft lip and palate surgery, and maxillofacial oncology. The student will gain experience in head and neck surgical anatomy, imaging, and principles of management of these subspecialty areas. This advanced course will allow for increased involvement in the day to day management of patients in the clinic, emergency room, in-patient setting, and the operating room. 4 professional hours. Approved for S/U grading only. Available for honors grading. Prerequisite: CLE 670: Surgery Clerkship. Restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 746 Otolaryngology - ENT credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/746/>)

This elective is designed for the student seriously considering a career in otolaryngology or seeking a deeper knowledge of ENT. Emphasis on diagnosis and treatment of common head and neck disorders. Students will experience ENT patients in ambulatory, surgery, and in-patient settings. 2 professional hours. Approved for S/U grading only. Prerequisite: Family Med and OR Orientation. Restricted to students enrolled in the MD program at Carle Illinois College of Medicine in Phase 2 or Phase 3 of the curriculum.

CLE 748 Surgical Pathophysiology credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/748/>)

Underlying modern diagnosis and treatment of complex surgical disease is a fascinating and complex pathophysiology. In the context of current practitioner training, it has become challenging to address these fundamental concepts in detail that is sufficient to initiate long-term interest in the scientific underpinnings of surgical science. This rotation allows student a 'deep dive' into the underlying physiology and medical history of modern diagnosis and treatment. Students will meet surgical patients, whose disease will initiate investigations of the historical and basic science underpinnings of modern surgical care. Potential areas of investigation may include classic medical physiology such as the treatment of hyperkalemia in a surgical patient with particular attention to the associated cellular processes and electrophysiology, the mechanisms of non-cytotoxic systemic cancer therapy such as immunotherapy and gene or protein directed therapy or the physiology of systemic inflammatory response and the (largely failed) attempts to intervene in that pathologic process on the cellular level. 4 professional hours. Approved for S/U grading only. Prerequisite: Students must be in Phase 2 or Phase 3 of the curriculum. This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 750 Developmental Pediatrics credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/750/>)

This clinical rotation is designed to provide a student with a comprehensive preview of the commonplace developmental and behavioral problems experienced by up to 15% of children in our community. 2 professional hours. Approved for S/U grading only. Prerequisite: Students must be in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum. This course is restricted to Carle Illinois College of Medicine students.

CLE 751 Neonatal Intensive Care credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/751/>)

The student enrolled in this elective will be exposed to caring for neonates in the Carle Neonatal Intensive Care Unit (NICU). Students will participate and present in daily rounds, attend deliveries, and assist with procedures. Students will learn basic principles of neonatal care, as well as the diagnosis and management of common neonatal pathology. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 752 Pediatric Pulmonology & Sleep Medicine credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/752/>)

The goals of the Pediatric Pulmonology & Pediatric Sleep Medicine elective rotation are to delve into common pediatric pulmonary and sleep diagnoses (asthma, cystic fibrosis, insomnia, snoring) and become familiar with less common conditions. Students will learn to further develop the differential diagnosis and use it to generate a plan of care. In addition, pharmacology, physiology, radiographic imaging, pulmonary function testing, and polysomnography will be discussed as they relate to the various pulmonary and sleep diagnoses. 4 professional hours. Approved for S/U grading only. May be repeated in separate terms up to a maximum 8 hours. Prerequisite: Restricted to students enrolled in Phase 2 or 3 or the Carle Illinois Curriculum.

CLE 753 Pediatric Hematology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/753/>)

Many of the important problems in Pediatric Hematology are encountered in an outpatient setting. The major goals of this elective are to gain exposure to diagnostic challenges, the evaluation of anemia, easy bruising and bleeding abnormalities, lymphadenopathy, neutropenia, thrombocytopenia, autoimmune, and other immunologic disorders. Additionally, students will gain exposure to patients with sickle cell disease, bleeding disorders, and clotting disorders. Finally, management of families facing major challenges, with attention to medical and psychosocial factors and provision of care in a multi-disciplinary team setting will be presented. 2 professional hours. Approved for S/U grading only. Prerequisite: Completion of the Carle Illinois Pediatrics Clerkship. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine.

CLE 764 Physical Medicine and Rehabilitation credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/764/>)

Provide students with an introduction to in-patient physical medicine and rehabilitation. Students will consult with patients in the hospital for possible admission, admit the patient, perform a history and physical, and round daily with attending physicians. Student will learn about different types of care provided through the physical medicine and rehabilitation service including: Rehabilitation, electrodiagnosis, general outpatient and musculoskeletal rehabilitation, and non-healing wound care rehab. Students will have an opportunity to work with a physician, to determine the goals and objectives of patient rehabilitation. Students will have the opportunity to observe and interact with other rehabilitation team members including physical and occupational therapists, speech-language pathologists, rehabilitation social work, case management, nutrition, and psychology. Outpatients are seen for musculoskeletal problems. 2 professional hours. Approved for S/U grading only. Prerequisite: Family Medicine. This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 765 Orthopedic Sports Medicine credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/765/>)

The student participating in this elective will gain initial exposure to Orthopedic Sports Medicine both in the clinic setting and in the operating room. The student will work one-on-one with the faculty in the operating room and clinic in the care of orthopedic sports medicine patients. This elective can be tailored to the individual student's needs, interest, and educational level. 2 professional hours. Approved for S/U grading only.

CLE 767 Internal Medicine – Interprofessional Practice credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/767/>)

This is a supervised rotation for advanced medical students, to hone their skills with efficient, coordinated, safe and high-value patient-centered care. It is delivered in small work groups recognized as having a collective identity and shared responsibility for a patient or group of patients (e.g., treatment team, rapid response team, palliative care team, and therapy team). In inpatient and ambulatory settings, students will be practicing members of the non-physician healthcare provider team. 4 professional hours. Approved for S/U grading only. Prerequisite: Completion of Carle Illinois Internal Medicine Clerkship and Neurology Clerkship. Restricted to students enrolled in Carle Illinois College of Medicine.

CLE 770 Service Learning Clinical Elective credit: 1 to 16 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/770/>)

Service Learning is a set of educational experiences that involve service to the community in activities that respond to community-identified concerns, student preparation, and student reflection on the relationships among their participation in the activity, their medical school curriculum, and their roles as citizens and medical professionals. Carle Illinois students are eligible to participate in service-learning opportunities to work with a variety of patients and community members and to develop skills for self-directed, life-long learning. 1 TO 16 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

CLE 771 Addiction Medicine credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/771/>)

This unique elective offers students direct access to the rapidly developing field of addiction medicine. Students will take part in direct patient care at an outpatient addiction specialty clinic with a multidisciplinary team of providers. They will also have the opportunity to attend a drug court in Champaign County and participate in a needle exchange program through the Champaign County Public Health Department. On satisfactory completion, students will have gained a better understanding of the evidence-based treatment options of individuals living with substance use disorders. They will also have firsthand experience combating one of the greatest challenges facing modern medicine - the opioid epidemic. 2 professional hours. Approved for S/U grading only. Prerequisite: This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 772 Outpatient Psychiatry credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/772/>)

Students interested in pursuing a Psychiatry residency will manage both adult outpatient psychiatric care and child/adolescent outpatient psychiatric care in this elective. Students will learn in-depth evaluation, diagnosis, and safe management of psychiatric patients in an ambulatory setting. Students will work one-on-one with an attending psychiatrist or supervisor to achieve these goals. In addition, students will attend relevant departmental meetings, professional development sessions, and didactics. The student may also participate in care coordination meetings. 2 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 4 hours. Prerequisite: Successful completion of the Carle Illinois College of Medicine Psychiatry Clerkship. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 773 Radiation Oncology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/773/>)

Radiotherapy is an integral part modern multidisciplinary cancer care. This clinical elective is designed to introduce students to the field of Radiation Oncology and use of radiotherapy. We will provide direct experience with evaluation and management of patients with malignant disease, as well as occasional benign conditions regarding radiotherapy. Students will learn epidemiology, pathophysiology, and staging of cancer patients, and then utilize evidence-based approaches for their treatment. This will include opportunities to learn basic information about radiobiology and physics to inform their understanding of radiotherapy planning and treatment delivery. Students will augment direct patient care interactions with attendance of multidisciplinary tumor conferences with other oncologic specialties, as well as departmental quality assurance rounds. 2 professional hours. Approved for S/U grading only. Prerequisite: Medicine Core Clerkship. Restricted to students enrolled in Phase 2 or 3 of Carle Illinois College of Medicine.

CLE 774 Simulated Clinical Ultrasound credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/774/>)

The Simulated Ultrasound elective enables students to develop skills related to clinical ultrasound. Utilizing a SonoSim and the associated online modules, students will have the opportunity to enhance their understanding of this imaging tool, and prepare for clinical environments that could benefit from point-of-care ultrasound. Students will learn ultrasound principles and acquisition skills through an online self-paced module. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

CLE 775 Point of Care Ultrasound credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/775/>)

The Clinical Ultrasound elective enables students to explore specialties where point-of-care ultrasound can be utilized. Students will learn ultrasound principles and acquisition skills through an online self-paced module. Students will further learn through observing sonographers, providing students with opportunity to refine their skills through observation and questions. Students will work with attending providers (up to four) in different inpatient specialties to assess and care for patients, identifying cases where ultrasound imaging may be useful. 4 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students in Phase 2 or Phase 3 of the Carle Illinois curriculum.

CLE 776 Diagnostic Radiology and Non-Cardiac Nuclear Medicine credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/776/>)

Students will observe both acquisition and interpretation of diagnostic exams. These will include, but are not limited to, plain film, fluoroscopy, computerized axial tomography and magnetic resonance imaging. In addition, the student will observe both ultrasonography and nuclear medicine procedures including ultrasound of thyroid and abdominal structures. Nuclear Medicine interpretations will include bone scans, thyroid scans, PET/CT. Students will review films correlated to their clinical experiences and future residency plans, read assigned material dealing with basic diagnostic and fundamental radiology, and attend conferences related to the imaging service. Students will observe invasive diagnostic procedures occurring in the Imaging Department. 2 professional hours. Approved for S/U grading only. Prerequisite: Student must be in Phase 2 or Phase 3 of the curriculum. This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 777 Vascular and Interventional Radiology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/777/>)

Students will observe and work with the Vascular and Interventional radiology team at Carle foundation Hospital. Students will observe and participate in clinical management of patient with a disease and pathophysiology involving the entire human body and all organ systems. Student will learn basic imaging principles and how they are applied to the management and treatment of disease with special attention to minimally invasive, imaging guided techniques. 2 professional hours. Approved for S/U grading only. Prerequisite: Students must be in Phase 2 or Phase 3 of the curriculum. This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 778 Imaging in Critical Care credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/778/>)

This elective focuses on remote learning of imaging in the ICU. The primary focus will be interpretation of chest x-ray and chest CT. This starting point will allow students to pursue individual learning goals regarding critical care such as infectious disease, pulmonology, cardiology, and physics. Students will be given a chance to "follow" the patients through their time in the ICU by viewing their images and all other records. This will allow students to become facile with the electronic medical record system. 2 professional hours. Approved for S/U grading only. Prerequisite: Family Medicine Clerkship. Restricted to students in Phase 2 or Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 779 Bariatric Surgery credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/779/>)

The goal of this rotation is to recognize the importance of obesity as a disease and the strong impact it has in patients' health, also to describe the management of obesity and understand the pathophysiology of obesity. It will mainly focus on the pre-op assessment of bariatric patients by a multidisciplinary team, surgical procedures to treat obesity as well as the postoperative care of bariatric patients. 4 professional hours. Approved for S/U grading only. Prerequisite: Students must be in Phase 2 or Phase 3 of the curriculum. This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 780 Hand Surgery credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/780/>)

The student participating in this elective will gain initial exposure to Orthopedic Hand Surgery both in the clinic setting and in the operating room. The student will work 1:1 with the faculty in the operating room and clinic in the care of Hand Surgery patients. This elective can be tailored to the individual student's needs, interest, and educational level. 2 professional hours. Approved for S/U grading only. Prerequisite: Surgery Clerkship. Student must be in Phase 2 or Phase 3 of the curriculum. This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 781 Vascular Surgery credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/781/>)

This rotation seeks to expose the medical student to the specifics of evaluation and diagnosis of surgical vascular disease, and surgical interventions for vascular disease. Students will be involved and evaluate patients in both the inpatient and outpatient settings. Emphasis will be placed on history, physical and diagnostic results, a rich discussion of noninvasive vascular studies including venous duplex, arterial doppler, and arterial duplex, as well as advanced imaging results. The student will participate in the operating room and scrub into cases to assist with the surgical team. This rotation is designed to expose and educate medical students about the breath of vascular surgery interventions and develop an understanding of a global assessment of a patient with vascular disease. 4 professional hours. Approved for S/U grading only. Prerequisite: General Surgery Clerkship. Students must be in Phase 2 or Phase 3 of the curriculum. This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 782 Rural Surgery credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/782/>)

The rotation in Rural surgery is designed to provide the student with exposure to the practice of general surgery in a rural setting at a smaller community hospital. The practice includes the evaluation and management of common general surgical conditions as well as significant exposure to flexible endoscopy – both EGD and colonoscopy. The students will be responsible for seeing new consults, writing a history and physical note, and presenting them to the preceptor. They will round on our patients daily. They will assist in all procedures. Additionally, the student will be exposed to the unique environment of a small community hospital, including the decision-making process regarding types of procedures which can be effectively completed versus those which require transfer. During this rotation, student will work one-on-one with the faculty preceptor and be provided with graded responsibility. 4 professional hours. Approved for S/U grading only. Prerequisite: Successful completion of the Carle Illinois Surgery Clerkship. Restricted to students in Phase 2 or Phase 3 in the Carle Illinois curriculum.

CLE 783 Colon and Rectal Surgery credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/783/>)

This is an advanced surgical elective focused on surgical disorders of the lower gastrointestinal tract. Students will become part of our team as we care for inpatients and outpatients with colon, rectal, and anal disorders. The student will have the opportunity to evaluate patients in the hospital, office, endoscopy suite, operating theater, and participate in several multidisciplinary conferences. 4 professional hours. Approved for S/U grading only. Prerequisite: Successful completion of the Carle Illinois Surgery Clerkship. Restricted to students in Phase 2 or Phase 3 in the Carle Illinois curriculum.

CLE 784 Pediatric Surgery credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/784/>)

Pediatric surgeons care for children (birth to age 18) with surgical concerns. These can be either congenital problems (birth defects such as anorectal malformations, Hirschsprungs disease, intestinal atresias, etc) or acquired conditions that present during childhood (pyloric stenosis, hernias, appendicitis). Care is provided in both the inpatient and outpatient settings and involves both planned and emergent procedures. The student will participate in the operating room, scrubbing into cases to assist with the surgical team. Students will be active participants in both inpatient and outpatient care and will also have 1 on 1 lectures to learn about surgical care and common pediatric surgical conditions. 2 professional hours. Approved for S/U grading only. Prerequisite: Successful completion of the Carle Illinois Surgery Clerkship. Restricted to Carle Illinois College of Medicine students. Students must be in Phase 2 or Phase 3 of the curriculum.

CLE 786 Introduction to Urology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/786/>)

Participation in the outpatient and inpatient management of urological problems. These include urological neoplasms (prostate, bladder, renal, and testicular), urinary calculi, and management of urinary incontinence. The student will actively examine patients in the office and assist with surgery. 2 professional hours. Approved for S/U grading only. Prerequisite: Students must be in Phase 2 or Phase 3 of the curriculum. This course is restricted to students enrolled in the MD program at Carle Illinois College of Medicine.

CLE 788 Introduction to Anatomic Pathology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/788/>)

This two-week elective is designed to introduce the student to the venue of anatomic pathology and its role in patient care. Areas that may be covered in Anatomic Pathology include gastrointestinal, gynecologic, genitourinary, pulmonary, head and neck, endocrine, neuropathology, and cytopathology. 2 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 12 hours. Prerequisite: Completion of Phase 1. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine.

CLE 789 Introduction to Clinical Pathology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/789/>)

This two-week elective is designed to introduce the student to the various sections of the clinical laboratory and its role in patient care. The goal of this two-week educational experience is to gain basic knowledge of laboratory organization, workflow, specimen adequacy, testing methodology and test interpretation. Students will rotate through the four major disciplines in Clinical Pathology: Blood Bank/Transfusion Medicine, Clinical Chemistry, Hematology, and Microbiology. After a review of the general processes in each discipline, the pathologist in charge of the section will discuss a particular patient event or situation with the student and examine the clinical relevance of the testing in progress. 2 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 12 hours. Prerequisite: Completion of Phase 1. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine.

CLE 790 Advanced Focus in Clinical Pathology credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/790/>)

This two-week elective is designed to offer the student a more in-depth experience in a specific section of clinical pathology and its role in patient care. Areas that can be covered in Advanced Focus in Clinical Pathology include clinical chemistry, hematology, microbiology, and transfusion medicine. 2 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 12 hours. Prerequisite: Completion of Phase 1. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine.

CLE 793 Quality Improvement & Patient Safety credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/793/>)

In this elective, students will gain experience with the various aspects of health care quality and patient safety. This could include participation in continuous quality improvement plans (CQI), literature reviews to inform hospital practice, policy and protocol development, and collaborating with health care administrators to respond to community health issues. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.

CLE 794 Values in the Physician-Patient Relationship credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/794/>)

Constant changes in healthcare settings, coupled with rapid advancements in technology, lead to increasingly complicated ethical dilemmas: Who decides what—patients, doctors, or family members—and on what basis? Should patients' autonomy always be respected, or can physicians act paternalistically towards their patients? What are the ends and norms of the medical profession and how are they determined? Can physicians deviate from these ends and norms and refuse to provide treatment, for example, for conscientious reasons? In this course, we will attempt to answer these (and other) pressing normative questions. In doing so, we will attain an understanding of the complicated network of values at play in the physician-patient relationship. 2 professional hours. Approved for S/U grading only. Prerequisite: Restricted to students enrolled in Phase 2 or 3 of the Carle Illinois College of Medicine.

CLE 795 Consultation-Liaison Psychiatry credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/795/>)

Students will perform consultation-liaison psychiatry as well as manage patients in the outpatient setting as part of the Bridge Clinic. Students will work one-on-one with an attending psychiatrist to learn in-depth evaluation, diagnosis, and safe management of patients in consultation-liaison psychiatry and outpatient settings. In addition, student will attend relevant departmental meetings and professional development sessions. 2 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 4 hours. Prerequisite: Successful completion of the Carle Illinois College of Medicine Psychiatry Clerkship course. Restricted to students enrolled in Phase 3 of the Carle Illinois College of Medicine curriculum.

CLE 796 Consultation-Liaison with Outpatient Psychiatry credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/796/>)

In this elective, students will perform consultation and liaison psychiatry as well as manage patients in the outpatient setting. The goal of this rotation is to learn in-depth evaluation, diagnosis, and safe management of patients in C-L and outpatient settings. Student will work one-on-one with an attending psychiatrist, other physicians, and non-physician mentors to achieve these goals. 2 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 4 hours. Prerequisite: Successful completion of the Carle Illinois College of Medicine Psychiatry Clerkship course. Restricted to students enrolled in Phase 2 or Phase 3 of the Carle Illinois College of Medicine.

CLE 797 Inpatient Psychiatry credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/797/>)

This is a two-week elective in which the student will perform in-depth inpatient psychiatry. The goal of this rotation is to learn in-depth evaluation, diagnosis, and safe management of patients in the inpatient setting. The student will work one-on-one with an attending psychiatrist to achieve these goals. In addition, the student will attend relevant didactics, departmental meetings, and professional development sessions. 2 professional hours. Approved for S/U grading only. May be repeated in separate semesters to a maximum of 4 hours. Prerequisite: Successful completion of the Carle Illinois College of Medicine Psychiatry Clerkship. Restricted to students enrolled in Phase 2 or 3 at Carle Illinois College of Medicine.

CLE 798 Family Medicine Continuity Clinic Course – Beginning credit: 2 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/798/>)

This will serve as the initiation to CLE 680. The clinic, located at Carle Champaign on Curtis, is structured to prioritize longitudinal patient-physician relationships for continuous management of chronic disease and acute care needs. Students will maintain involvement in the clinic and under direct supervision perform the functions of a primary care physician for a combined patient panel to build their clinical skills before they enroll in the immersion clerkships. 2 professional hours. Approved for S/U grading only. Prerequisite: Completion of CLE 613.

CLE 799 Advanced Clinical Electives credit: 0 to 8 Hours. (<https://courses.illinois.edu/schedule/terms/CLE/799/>)

Phase 2 and Phase 3 students are eligible to participate in short-term elective opportunities that can enhance their medical education. These electives include clinical opportunities, away rotations, away electives, clinical rotations, and visiting opportunities. Each elective is offered by participating host institutions in the U.S. and around the world. Elective opportunities are available in teaching hospitals, community clinics, and urban or rural sites and are open to clinical or final-year students, as determined by the host institution. 0 to 8 professional hours. Approved for S/U grading only. May be repeated up to 20 hours in the same semester if topics vary, and separate semesters to a maximum of 32 hours. Prerequisite: Restricted to students enrolled in the Carle Illinois College of Medicine.