

The Creighton Medical Curriculum

2009-2010

Creighton
UNIVERSITY
School of Medicine

Approved by the MEMT July 2, 2008
Approved by the EPC August 14, 2008

CREIGHTON UNIVERSITY

School of Medicine

Mission Statement

In the Catholic, Jesuit tradition of Creighton University, the mission of the School of Medicine is to improve the human condition through excellence in educating students, physicians and the public, advancing knowledge, and providing comprehensive patient care.

Vision Statement

We will be a School of Medicine respected by our peers for excellence in teaching, research, and clinical care. We will be distinguished for preparing graduates who achieve excellence in their chosen fields and who demonstrate extraordinary compassion and commitment to the service of others.

Curriculum Goals and Objectives

Goals

The goals of the curriculum are to:

- develop self-directed learners who will continuously develop as caring physicians during graduate training and practice.
- enable students to acquire a strong foundation in the basic and clinical sciences and in those aspects of the humanities, social and behavioral sciences that are relevant to medicine.
- foster in students the development of the skills necessary for the competent practice of medicine throughout their professional career.
- help students appreciate and understand the diverse values that are brought by health care professionals, patients, family, and society to the practice of medicine.
- be flexible in meeting the needs of the individual student, by using a variety of learning strategies and formats.
- nurture the values that encourage medical professionalism and to provide ethical reasoning skills and the commitment to service that is required for the successful practice of medicine. (see appendix 1 for details).

Objectives

To attain the Doctor of Medicine degree, the Creighton graduate must:

- demonstrate knowledge of the principles of basic biologic processes that operate in health and disease.
- demonstrate knowledge of the pathophysiology of common and important health problems.
- demonstrate the ability to use scientific principles in the diagnosis and management of disease.

Objectives (cont.)

- demonstrate knowledge of therapeutic principles for common health problems including drug therapy, rehabilitation, and community support services.
- demonstrate the knowledge and skills needed to identify persons at risk for common and important health problems.
- demonstrate core clinical skills (see appendix 2 for complete list), including:
 - conduct a medical interview and obtain a medical history
 - carry out an appropriate physical examination
 - develop a differential diagnosis
 - use appropriate diagnostic and laboratory procedures to confirm the diagnosis
 - develop a treatment plan
 - apply selected technical skills
 - record information in a concise and organized manner
- demonstrate the ability to recognize and initially manage the life-threatening conditions for which immediate intervention is necessary for the well-being of the patient.
- discuss the importance of preventive medicine in improving the health status of society and reducing health care costs. Encourage a healthy lifestyle by word and example.
- identify and propose solutions to moral, ethical, and legal problems of medical practice.
- demonstrate an ability to communicate with patients and family members in a clear and sensitive manner recognizing the consequences of illness as a process that unfolds within a societal and cultural context.
- function as a competent member of the health care team, demonstrating cooperation, initiative, and appropriate leadership skills.
- demonstrate skills of lifelong learning and practice self-education by selecting appropriate learning resources to enhance his or her personal progress and performance.
- demonstrate the ability to critically assess the medical literature and the research methods used to investigate the management of health problems.
- demonstrate effective use and management of information to include the ability to use computers for data analysis and information retrieval.
- demonstrate the effective use of educational principles to educate patients, families, and fellow health professionals about health care problems.

The School of Medicine requires successful completion of all components of each of four years of study before the Doctor of Medicine is awarded. The curriculum of these four years is continually updated based on student and faculty input; however, the basic concept of developing outstanding practitioners remains stable.

The Curriculum

The educational program is divided into four components. Components I and 2 are the foundation of the educational program and present basic science information in a clinically relevant context. Initial discipline-based courses are followed by a series of organ system-based courses. Component Three consists of core clerkships emphasizing basic medical principles, primary care, and preventive medicine. Component Four provides students with additional responsibilities for patient care including critical care medicine, neurology, and elective opportunities. Clinical experience is a prominent part of the curriculum in all components, beginning with physical diagnosis instruction in the first year and with the students assigned to a longitudinal primary care clinic in the second year. The curriculum integrates ethical and societal issues into all four components.

Component I - First Year

The goal of the first year is to provide a strong foundation in basic biomedical science to prepare students for detailed basic science content that occurs within the clinically oriented system courses that begin later in the second year. Students are also introduced to ethical and behavioral science principles in Ethical and Legal Topics in Clinical Medicine and Human Development in Medicine courses and learn the fundamentals of physical assessment and interviewing techniques. An additional (non-curricular) requirement of advancement to Component II is the completion of certification in basic cardiac life support. Below are brief descriptions of the Component I courses.

Table 1. Required M1 Courses.

Course Number	Description	Hrs.	Wks of Instruct.	Lecture Hrs.	Small Group	Labs	Other	Exam Hrs.	Total Hours
IDC 101	Molecular and Cell Biology	9	16	110	20	9	0	6.5	145.50
IDC 103	Anatomy	6	16	69	0	111	0	12	192
IDC 105	Principles of Pharmacology	1	1	13	4	0	0	2	19
IDC 107	Principles of Microbiology	1	6	23	0	0	0	3	26
IDC 109	Host Defense	3	6	41	0	0	0	3	44
IDC 111	Neuroscience	7	8	87	12	2	0	9	110
IDC 135	Ethical and Legal Topics in Clinical Medicine	3	14	36	9	0	0	2	47
IDC 136	Interviewing & Physical Exam	4	32	18	38	0	8	5	69
IDC 138	Evidence Based Medicine	1	4	9	1	0	0	2	12
IDC 140	Behavioral Medicine I	3	3	42	4	0	12	2	60
TOTAL		38	35	448	88	122	20	46.5	724.5

IDC 101/102 Molecular and Cell Biology (9 credit hours)

The Molecular and Cell Biology course covers cellular processes at the foundation of medicine in five broad areas: Cells and Tissues, Flow of Genetic Information and Cell Biology, Metabolism, Principles of Human Genetics and Developmental Biology, and Cells and Their Response to Disease. An interdisciplinary team of faculty from the departments of Biomedical Science and Pathology teach the courses in Molecular and Cell Biology. The topics of cellular and basic tissue elements of histology, cellular physiology, molecular biology, nucleic acids and proteins, the cell biology of membranes and organelles, human genetics, developmental biology, and cellular pathology are included. The course use a mixture of lectures, student presentations, assigned readings, and interactive learning strategies.

IDC 103 Anatomy (6 credit hours)

The Anatomy course introduces medical students to anatomic and medical terminology, and to

basic information on form, structure, and function that is fundamental to consideration of physical diagnosis, trauma, and disease in the ensuing curriculum. This course is presented in the fall semester of the first year. Each student receives a CT scan of his/her cadaver. The course uses didactic lectures with an emphasis on clinical examples, cadaver dissection, assigned readings and radiological principles.

IDC 105 Principles of Pharmacology (1 credit hour)

The goal of Principles of Pharmacology is to introduce students to the principles of pharmacokinetics, pharmacodynamics, drug metabolism, factors that influence drug response, and principles in the development/evaluation/control of therapeutic agents. This course provides the foundations for a more detailed discussion of individual drugs during the individual systems courses. The course is presented using large group presentations and small group discussion sessions.

IDC 107 Principles of Microbiology (1 credit hour)

The goal of Principles of Microbiology is to introduce students to the world of microbes and to prepare them for a lifetime of learning microbiology in relation to medicine and infectious disease. This course presents the basics of: 1) Microbial cell structure and function, 2) Bacterial genetics and regulation, 3) Viral structure, genetics, and multiplication and 4) Pathogenesis. This is accomplished by a mixture of lectures, assigned readings and computer-aided instruction.

IDC 109 Host Defense (3 credit hours)

The overall goal of this course is to introduce students to the exciting and rapidly developing field of immunology and prepare them for a lifetime of learning in this discipline. For physicians, the body's defense systems are particularly relevant and this course emphasizes the relationship to human disease as well as the remarkable biologic mechanisms utilized by the immune system. This course presents the basics of subject areas including antigen recognition, development of B&T cells, constitutive host defenses, immunopathology, inflammation, transplantation, allergy and tumor immunology. This is accomplished using a mixture of lecture presentations, assigned readings, and interactive learning strategies.

IDC 111 Neuroscience (7 credit hours)

The Neuroscience course integrates the clinical areas of neuroanatomy, neurophysiology, neuropharmacology, neuropathology, and clinical neurology into one coherent experience focusing on the patient. The course uses didactic lectures, small group case discussions, laboratories, audio-visual aids, including patients, and patient videos and required participation in clinical Grand Rounds at Creighton University Medical Center. In addition a series of Multi-disciplinary Conferences are presented on selected Friday mornings to tie together recently covered basic science concepts.

IDC 135 Ethical and Legal Topics in Clinical Medicine (3 credit hours)

This course introduces students to the basic constraints and methods of ethical analysis and moral reasoning, with emphasis on their application to key ethical issues in health care practice and policy. Special attention is given to the role of the physician and the opportunities and challenges to the ethical practice of medicine in today's society.

IDC 136 Interviewing & Physical Exam (4 credit hours)

This course uses a mixture of lectures, assigned readings, demonstration labs and small group sessions. The student is introduced to the major components of interviewing and taking a medical and social history, how to distinguish between symptoms and signs, the concept and descriptors of a chief complaint, patterns of pain radiation and patient information regarding

medications, allergies, past medical history, and personal, social and family history. In addition, the students work in small groups to underscore principles of the history and physical examination. The course is extended over two semesters.

IDC 138 Evidence Based Medicine (1 credit hour)

This course uses a series of lectures, practice exercises and a small group experience to instill the fundamental principles of evidence based medicine (EBM). The course is divided into five parts. In part one the students learn the role of EBM in the practice of medicine, the basic steps of EBM, what research designs are used in medical research and the importance and value of internal and external validity. In part two students are introduced to the difference between descriptive and inferential statistics and how confidence intervals are used in medical journals. Part three teaches students the meaning of “testing” models, and the importance of statistical significance and confidence intervals. Part four instructs students on the evidence based medicine approach to the assessment of medical publications for therapy. Lastly, part five introduces the classical clinical diagnostic testing model and underscores the EBM approach to diagnostic testing.

IDC 140 Behavioral Medicine I (3 credit hours)

The Behavioral Medicine I course focuses on four broad areas. The first is the normal developmental milestones from birth through adolescence, and a description of the developmental processes of growth and changes during adulthood and aging. The second is common behavioral concerns and disorders of childhood and adolescence. The third is violence, child abuse and neglect. The fourth is common concerns of family and adulthood including stress, family discord, memory disorders, and end of life issues. The instructional methods include lectures, small group discussions, visitor panels, films, and community visits. The primary objective of Behavioral Medicine I is to enable students to understand the biological, psychological, social, and cultural contexts that influence the onset, course, and presentations of the diseases and illnesses they will treat as physicians.

IDC 183 Healer’s Art (Elective) (1 credit hour)

The Healer’s Art Course is a medical school curriculum designed by Rachel Remen, M.D. The course’s innovative educational strategy is based on a discovery model. The Healer’s Art Course addresses one of the hidden crises in medicine: the growing loss of meaning and commitment experienced by physicians nationwide under the stress of today’s healthcare system. The course consists of five three hour evening sessions spaced two weeks apart, each divided into large-group and small group experiences.

IDC 797 Directed Independent Research (Elective) (1 credit hour)

Students work with a faculty research mentor during the spring semester to develop a research proposal that is typically carried out during the summer before Component II.

Component II - Second Year

In the second year, students continue learning basic science along with clinical medicine. The second year is organized as a series of organ system-based courses, each presented by a multidisciplinary team of faculty members. Within each course, normal physiology and histology of the system are presented along with the pathology of common diseases, and the medical and pharmacologic approaches to diagnosis and treatment. Each course uses a variety of formats, including case presentations, lectures, small group discussions, laboratory sessions, computer-aided instruction, and independent study. In addition, year-long courses develop clinical skills and address the psychosocial aspects of medicine. In Applied Clinical Skills, students use small group discussions to learn clinical reasoning and are assigned to a clinic for two half days per month to reinforce history and physical examination skills. The Psychological and Social Dimensions of Medical Practice courses provide learning experiences in interviewing skills, psychiatry, health policy, public health, cultural competency and behavioral science issues.

Table 2. Required M2 Courses.

Course #	Name	Cr Hrs	Wks	Lecture	Sm Grp	Labs	Other*	Clinical	Exam	Total Hours
IDC 201	Cardiovascular	4	5	72	0	7	5	0	4	88
IDC 203	Respiratory	3	3	37	0	3	1	0	3	44
IDC 205	Renal	3	3	41	0	6	3	0	3	53
IDC 207	Hem/Onc	3	3	49	0	8	3	0	3	63
IDC 209	GI	3	3	47	0	3	1	0	3	54
IDC 211	MSI	2	2	28	0	1	1	0	2	32
IDC 216	Endo/Repro	4	4	61	0	4	3	2	4	74
IDC 233	Infectious Disease	4	4	57	8	10	0	0	3	78
IDC 243	Behavior Medicine II	3	2	38	7	0	2	0	3	50
IDC 244	Behavior Medicine III	3	3	54	2	4	0	0	3	63
IDC 279	Case Studies Medicine*	2	29	1	32	0	0	0	0	33
IDC 290	Applied Clinical Skills	3	29	11	18	0	0	45	0	74
TOTAL		37	33	496	67	46	19	47	31	706

*includes multidisciplinary conferences, review and Q&A sessions

IDC 201 Cardiovascular System (4 credit hours)

This interdisciplinary course surveys normal and abnormal function of the cardiovascular system. In conjunction with a discussion of the embryology, histology, and physiology of the cardiovascular system, students learn the pathophysiology and pathology of the common disorders of the heart and vascular structures. Students also study the pharmacology and therapeutic principles of the common agents used in cardiovascular medicine. Clinical skill instruction includes interpretation of electrocardiograms, echocardiograms, and auscultation of the heart.

IDC 203 Respiratory System (3 credit hours)

This interdisciplinary course surveys normal and abnormal function of the respiratory system. In conjunction with a discussion of the embryology, histology, and pulmonary physiology of the upper and lower respiratory tract, students learn pathology and pathophysiology of common

disorders of the respiratory system, including allergy, environmental respiratory diseases, obstructive and restrictive pulmonary diseases, and pulmonary oncology. Students also study the pharmacology and therapeutic principles of the common agents used in pulmonary medicine. Clinical skill instruction includes administration and interpretation of pulmonary function tests.

IDC 205 Renal-Urinary System (3 credit hours)

This interdisciplinary course surveys normal and abnormal function of the kidney and urinary bladder. Students learn normal renal structure and function, including embryological development of the kidney, renal histology, and renal physiology. Building on these fundamentals, the course is then devoted to the discussion of diseases of the kidney, systemic diseases that affect the kidney, and therapy for these conditions. Finally, the course also covers the structure, function, and diseases of the urinary bladder and urogenital tract. Clinical skill instruction includes urinalysis interpretation.

IDC 207 Hematology-Oncology (3 credit hours)

This multidisciplinary course covers the basic science and clinical aspects of the hematopoietic system. This includes anatomy, physiology, pathology, and benign and malignant disorders of the blood cells, bone marrow, lymph nodes, spleen, thymus, and other lymphoid tissues. Students also study the etiology, pathogenesis/pathology, clinical features, diagnosis, and pharmacological and non-pharmacological treatment of anemia, clonal hematopoietic and thrombotic disorders as well as the coagulation system are also covered. The course also provides a general introduction to blood banking/transfusion medicine and oncology. Clinical skill instruction includes venipuncture and culture of blood cells.

IDC 209 Gastrointestinal System (3 credit hours)

This interdisciplinary course surveys normal and abnormal function of the gastrointestinal system. It begins with embryology and progresses from the oral cavity distally through the gastrointestinal tract, combining basic sciences with relevant clinical material. The course is team taught, with participation of faculty from the Departments of Internal Medicine, Surgery, Pathology, Pediatrics, Pharmacology and Biomedical Sciences.

IDC 211 Musculoskeletal-Integument System (2 credit hours)

This course covers the basic histology, physiology, pathology, and pharmacology of integument and skeletal muscle and introduces the clinical disciplines of dermatology and musculoskeletal medicine. Instruction is provided by faculty from the Departments of Biomedical Sciences, Pharmacology and the Divisions of Dermatology, Rheumatology, and Orthopedic Surgery of the Department of Medicine.

IDC 216 Endocrine-Reproductive Systems (4 credit hours)

This interdisciplinary course surveys normal and abnormal function of the endocrine and reproductive systems. Basic science and clinical faculty from the departments of Biomedical Sciences, Pharmacology, Internal Medicine, Obstetrics and Gynecology, Surgery, Pediatrics and Pathology all contribute. Each endocrine or reproductive topic includes basic science coverage that is integrated with pathology, pathophysiology, and clinical approach. Clinical skill instruction includes interpretation of a basic metabolic panel, female pelvic examination and a demonstration of ultrasound fetal imaging.

IDC 243 Behavioral Medicine II (3 credit hours)

The topic of understanding psychopathology is central in the Behavioral Medicine II course. Instructors utilize the biopsychosocial paradigm to present the neurobiological, psychological and social factors that contribute to the onset and development of psychiatric disorders.

Abnormal psychiatric symptoms, disorders in which they occur and the biopsychosocial basis of their treatment are covered. Students gain knowledge and skills necessary to assess and diagnose persons with psychiatric illness, common childhood psychiatric illnesses and neuropsychiatric-neurodegenerative disorders. Skills taught include mental status examination as well as interviewing suicidal patients. Instructional methods include lectures, small group case analysis, films, and interviewing practice

IDC 244 Behavioral Medicine III (3 Credit Hours)

The Behavioral Medicine III course focuses on three broad areas. The first is the interaction of socially marginalized patients with the health care system. The second area is multisystem health challenges whose effects can be ameliorated by behavioral change, including sleep disorders, sedentary lifestyle, and exposure to toxins, including alcohol. The third focus of the course is aging and chronic illness. The instructional methods include lectures, small group discussions, visitor panels, films, and community visits.

IDC 233 Infectious Diseases (4 credit hours)

The Infectious Diseases course offers instruction in the principles of pathogenesis, epidemiology, diagnosis, treatment and prevention of infectious diseases. Drawing on the expertise of a multidisciplinary faculty, the course complements and provides clinical context to the first year instruction in microbial pathogenesis, genetics, and immunology. Clinical skill instruction includes microscopy and culture of microorganisms from a throat swab.

IDC 279 Case Studies in Medicine (2 credit hours)

Case Studies in Medicine is a series of small group case exercises and multidisciplinary conferences that runs concurrently with the M2 organ systems. Students study a series of clinical cases, gaining some experience developing a differential diagnosis and management plan. The content is integrated with and evaluated in the systems courses. Problem solving is reinforced by active learning in small group sessions. Within the Case Studies in Medicine course, there is ongoing formative and summative assessment of communication skills, clinical reasoning, and participation.

IDC 290 Applied Clinical Skills (3 credit hours)

The Applied Clinical Skills course reinforces the knowledge base needed to make clinical decisions and provides an opportunity to use clinical skills through interaction with experienced clinicians. At the conclusion of this course, students are expected to be proficient in the basic components of clinical reasoning and decision-making. The course runs continuously during the second the year and makes use of four learning environments:

1. Clinical Reasoning Small Group Sessions, which are coordinated with the organ system courses
2. Simulated Patient encounters in the Clinical Assessment Center
3. Clinical Skills lectures and practical sessions integrated into the organ system courses
4. Development of interviewing skills in small group and multimedia activities
5. Longitudinal Clinic, which introduces the student to a working clinic setting and facilitates, through a faculty preceptor, the development of history-taking and physical exam skills, assessment and plan formulation, and the documentation of these skills in an acceptable format. Students are sent to Internal Medicine, Family Medicine, and Pediatric sites.

Component III - Third Year

The third year comprises the core clinical clerkships. Students are scheduled into one of six groups that rotate through clerkships in:

- IDC 301 Ambulatory Primary Care (8 weeks), an integrated clerkship that includes experiences in the departments of Family Medicine and Internal Medicine.
- MED 301 Inpatient Medicine (8 weeks)
- PBS 301 Psychiatry (8 weeks)
- SUR 301 Surgery (8 weeks)
- PDT 301 Pediatrics (8 weeks)
- OBG 301 Obstetrics and Gynecology (8 Weeks)

Students must also satisfy the following additional requirements:

- attend all Junior orientation sessions
- attend the Dimensions of Clinical Medicine course (DCM 301), which covers various clinically important topics (e.g., evidence-based medicine, sexuality, cultural competence, professionalism, alternative medicine, clinical skills and medical ethics) and is presented on the fourth Friday of each clerkship.
- be certified in Advanced Cardiac Life Support during Component III

Take the Junior Clinical Competency Examination. Those students who do not pass the Junior Clinical Competency Examination must take and pass Advanced Physical Diagnosis (IDC 480) in their senior year to satisfy this requirement and to be eligible to take the USMLE Step 2 CS.

Component IV - Fourth Year

The fourth year prepares students for residency and provides a chance to explore their own interests in specialized areas of medical practice. In the fourth year, each student selects at least 36 weeks of courses which must include;

- 1 surgical selective (4 weeks)
- 1 critical care selective (4 weeks)
- 1 primary care selective or 2nd critical care selective (4 weeks)
- an additional 14 weeks of clinical electives
- an additional 10 weeks of clinical or non-clinical electives

During the fourth year a student must take Step 2CK and Step 2CS of the USMLE prior to graduation.

Assessment of Student Performance

Students are assessed in cognitive, affective, and psychomotor domains in all courses with an emphasis on formative evaluation throughout the course providing frequent feedback to the student. Examinations and quizzes are coordinated in all components. Honors/Satisfactory/Unsatisfactory grading is used in all courses; written and narrative assessment of students is provided where appropriate. Students are evaluated individually against curriculum standards and are not ranked. The United States Medical License Examination (USMLE) Step 1 must be passed before promotion into Component III. Taking both parts of the USMLE Step 2 is required to complete Component IV.

Evaluation of the Curriculum

Ongoing evaluation of all elements of the curriculum is essential to maintain continuous improvement of the curriculum. Evaluation of the curriculum is performed by students, faculty and staff. The process is coordinated by the staff of the Office of Medical Education and is performed by the Evaluation Committee. The Evaluation Committee (five faculty and two students) is responsible for the assessment of all required courses and clerkships. The Evaluation Committee reports to the Educational Policy Committee, which has overall responsibility for management of the curriculum. The Evaluation Committee conducts continuous assessment of preclinical courses (Components I and II) and clerkships (Component III).

For each course and clerkship students complete an evaluation of the course/clerkship, and for Component I and II assessment of faculty is also done. These data are provided to course faculty, course/clerkship directors, and department chairs.

The Evaluation Committee meets monthly. The committee determines which courses or clerkships to evaluate and what data are needed, including but not limited to;

- course or clerkship syllabus and handbook materials
- student evaluations of a course or clerkship
- evaluation and grading methods
- student performance in a course or clerkship
- interviews with faculty and staff involved with the course/clerkship
- annual course/clerkship report (The course/clerkship director must submit a response to a series of course assessment questions within 2 months of the end of the course).

The final report is distributed to the course director and to the Educational Policy Committee at its regular monthly meeting. The Committee accepts the findings and recommendations of the Evaluation Committee or asks for a response from the course/clerkship director. After resolution of all outstanding issues, the amended report is approved by the EPC and sent to the course director for implementation of the recommendations.

The Educational Policy Committee monitors the curriculum by examining course, clerkship and component assessments provided by the Evaluation Committee. The Evaluation Committee performs program evaluation using data from the AAMC Graduation Questionnaire and surveys of first year residency program directors. Program evaluation is also aided by examination of USMLE Step I and II scores. Clinical skills are measured throughout the yearly components. Clinical skill measurement culminates in a comprehensive assessment at the end of Component III. Those students failing this comprehensive clinical assessment are required to enroll in the Component IV Advanced Physical Diagnosis Course to assure clinical competence.

Appendix 1.

Medical Professionalism at Creighton University School of Medicine

Preamble

Medical education and patient care at Creighton University are critically dependent on the commitment of students and faculty to professional values that are anchored in the Catholic and Jesuit tradition of being women and men for others. These professional values include altruism, accountability, excellence, duty, honor and integrity, respect, compassion, and a special emphasis on social justice.

Beginning with the admissions process, our medical education environment fosters a lifelong commitment to professionalism by stimulating critical and creative thinking and by providing ethical perspectives for an increasingly complex world.

THE COMPONENTS OF MEDICAL PROFESSIONALISM

Altruism lies at the core of professionalism and entails putting the interests of others before one's own. The interests of the patient must be paramount. Serving the poor and disenfranchised is the hallmark of altruism in the Jesuit tradition.

Accountability means that medical professionals are responsible to their patients, colleagues, and society. Medical students are accountable to fellow students and teachers by preparing for and participating actively in their educational activities. In addition, students are responsible for maintaining and improving the quality of teaching by constructively evaluating the curriculum to ensure the best possible education for current and future students. Upholding the ethical standards of the profession includes being prepared to report the professional misconduct of others.

Excellence is a conscientious commitment to life-long learning and to honest self-assessment to assure the highest quality of medicine. For the medical professional, it means continuing to gain and share knowledge of clinical medicine and biomedical research to improve the welfare of patients and the public's health. For the student, the pursuit of excellence begins with the first day of medical school and includes a commitment to innovative, integrated and values-centered learning, research, and patient care.

Duty is the commitment of oneself to both the service of others and to one's own personal development. For the medical professional and the student, it means advocating for and being responsive to patients and others in need, particularly those whom society marginalizes by reason of their economic and social status, age, mental or physical impairment, and/or ethnic, racial religious, sexual, or gender status. It also means being involved in professional organizations and community programs and not participating in activities that compromise objectivity and the well-being of patients and society. In addition, duty entails paying attention to one's spiritual, mental, and physical well-being. It also involves an appreciation of the importance of maintaining a balance among personal, family, and professional areas as a way to remain healthy and to maintain a proper perspective.

Honor and integrity constitute the highest moral standards of behavior and adherence to personal and professional ethical codes. The standards include truthfulness, fairness, and fidelity to one's words and commitments. The medical professional must avoid all conflicts of interest. For students, honesty demands genuine representation of themselves and their credentials, meticulous adherence to the student honor code, and the rejection of any actions that compromise the welfare and development of their colleagues.

Respect for others first and foremost demands recognition and reverence for the human dignity of patients and their families. For both the medical professional and the student, it means

adhering to the canons of medical ethics. This includes patient involvement in decision-making, confidentiality, fully informing the patient, never abusing power, and acting always for the best interests of the patient. Additionally, the medical professional and student must show sensitivity to gender, age, culture, religion and other aspects of diversity among patients, families, and colleagues.

Compassion means having empathy for and bringing reassurance and care to patients and their families. For medical professionals and the student it is an indispensable element of professionalism and an integral element of healing. Caring and emotional support are necessary especially for patients with incurable illness.

Appendix 2. Clinical Skills and Behaviors Assessed in the Creighton Medical Curriculum																
Component		I		II				III						IV		
Core Clinical Skills		Interview and Physical Examination	M1 Organ system courses	M2 Organ System Courses	Psychiatric and Social Dimension of Medical Practice	Longitudinal Clinic and OSCE	Ambulatory Primary Care	Inpatient Medicine	Obstetrics and Gynecology	Pediatrics	Psychiatry	Surgery	Dimensions of Clinical Medicine	Clinical Competency Exam	ACLS Certification	Neurology
Interviewing		✓			✓	✓				✓	✓			✓		
Interpersonal History		✓			✓	✓				✓	✓	✓		✓		
	HPI	✓			✓	✓	✓			✓	✓			✓		
	PMH	✓			✓	✓	✓			✓	✓			✓		
	FH	✓			✓	✓	✓			✓	✓			✓		
	Health Issues	✓			✓	✓	✓			✓	✓			✓		
	Psychosocial History	✓			✓	✓	✓			✓	✓			✓		
	ROS	✓				✓	✓			✓				✓		
	Pediatric Hx	✓								✓						
Physical Examination	Vital Signs	✓				✓	✓	✓		✓		✓		✓	✓	
	Head, Ears, Nose and Throat	✓				✓	✓	✓		✓						
	Neck and Shoulders	✓				✓		✓		✓		✓				
	Upper/lower extremities	✓				✓		✓		✓		✓		✓		
	Thyroid/trachea	✓				✓		✓		✓		✓				
	Chest: Lungs	✓				✓		✓		✓		✓		✓		
	Chest: Heart	✓				✓		✓		✓		✓		✓		
	Breast	✓				✓			✓	✓		✓				
	Abdomen	✓				✓		✓		✓		✓		✓		
	Vascular	✓				✓		✓		✓		✓		✓		
	Cranial Nerves	✓	✓			✓		✓		✓				✓		✓
	Neurologic	✓	✓			✓		✓		✓				✓		✓
	Mental Status	✓			✓	✓		✓			✓			✓		✓
	Rectal - Male	✓										✓				
	Pelvic/rectal - Female	✓		✓					✓	✓						
	Male Genitourinary	✓								✓		✓				
	Pediatric PE									✓						

Component		I		II				III						IV		
		Interview and Physical Examination	M1 Organ system courses	M2 Organ System Courses	Psychiatric and Social Dimension of Medical Practice	Longitudinal Clinic and OSCE	Ambulatory Primary Care	Inpatient Medicine	Obstetrics and Gynecology	Pediatrics	Psychiatry	Surgery	Dimensions of Clinical Medicine	Clinical Competency Exam	ACLS Certification	Neurology
Core Clinical Skills	Technical Skills															
	Venipuncture/ blood cultures			✓												
	CPR														✓	
	Mask/Bag/ Ventilation														✓	
	Ventilator Management										✓					
	Intubation														✓	
	Hemodynamic Monitoring			✓							✓					
	ECG Interpretation			✓		✓		✓							✓	
	Pap smear & Cultures															
	Wound Closure/ Suture /Knot tying											✓				
	Suture Removal											✓				
	Dressing Changes											✓				
	Foley Catheter Insertion (♂ and ♀)											✓				
	Wet Mount Interpretation															
	Unanalysis interpretation			✓					✓	✓	✓					
	Chest X-Ray Interpretation			✓		✓									✓	
	Abdominal X-Ray Interpretation														✓	
Communication: Written	Hx/PE	✓				✓	✓	✓	✓	✓	✓		✓		✓	
	Progress/ notes	✓				✓	✓	✓	✓	✓	✓		✓		✓	
Communication: Oral	Presentations						✓	✓	✓	✓	✓				✓	
	Information Given to Patient	✓				✓	✓	✓	✓	✓	✓		✓		✓	
Other Skills	Clinical Reasoning	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓		✓	
	Data Gathering and Interpretation	✓				✓	✓	✓	✓	✓	✓		✓		✓	
	Bibliographic Search		✓					✓								
	Critical Appraisal of Medical Literature		✓					✓				✓				