

**MEDICAL SCHOOL GOALS AND OBJECTIVES
DUKE UNIVERSITY SCHOOL OF MEDICINE**

Approved by Curriculum Committee
September 3, 2003

Endorsed by R. Sanders Williams, Dean for the School of Medicine
September 15, 2003

CATEGORY I: SCIENTIFIC FOUNDATIONS

Goal 1: Understand the normal structure and function of the human body, at levels from molecules to cells to organs, to the whole organism.

Objectives: By graduation, medical students will be able to:

1-1	Apply basic principles of Mendelian inheritance (autosomal vs. sex-linked, dominant vs. recessive) to human reproduction and disease.
1-2	Discuss the processes of transcription and translation and their relation to human disease.
1-3	Describe protein folding and its relation to protein function.
1-4	Discuss the function of vitamins in metabolism.
1-5	Discuss penetrance, expression, "complex" (multifactorial) genetics and their impact on human patterns of inheritance.
1-6	Describe different types of genetic variability, including mutation types and consequences, and trinucleotide repeats.
1-7	Explain the impact of genetic and environmental factors on the course and timing of ontogenetic events and the patterned occurrence of clinically significant developmental anomalies.
1-8	Describe membrane structure and components, and their role in cellular function and response to drug interventions.
1-9	Describe the structure, synthesis, control, and importance of key molecules including fatty acids, triglycerides, phospholipids, and cholesterol.
1-10	Summarize the processes of glycolysis, gluconeogenesis, the Krebs cycle, and the pentose shunt.
1-11	Compare and contrast the structure and function of the four tissue types: epithelium, connective tissue, muscle, and nerve.
1-12	Describe the structure and function of cellular organelles.
1-13	Demonstrate proper technique in use of the light microscope.
1-14	Describe the cellular and humoral immune mechanisms by which the human body defends against pathogens and foreign substances, including the limitations of these mechanisms.
1-15	Describe the biology and function of stem cells.
1-16	Describe the basic principles of embryology in the context of differentiation, morphogenesis and organogenesis.
1-17	Describe and explain the structure, function, physiology, arrangement, neural and hormonal control mechanisms, and blood supply of major organs and organ systems.
1-18	Explain the basic concepts and principles that govern the function of each organ and organ system.
1-19	Explain the ways in which the organs and systems of the normal body integrate to maintain homeostasis.
1-20	Recognize, describe, and differentiate processes common to all organ systems (growth, metabolism, repair, and communication).

1-21	Infer and explain anatomical detail from the larger structural, historical, and causal principles underlying human morphology and ontogeny.
1-22	Recognize, describe, and differentiate tissues, organs, and organ systems according to their molecular, cellular, and gross structures.
1-23	Discuss complex brain functions related to perception, pain, emotion, language, memory and rational thinking, including: <ul style="list-style-type: none"> • Neural mechanisms of reward, punishment, and motivation. • Pre- and post-synaptic mechanisms of plasticity. • Molecular mechanisms of long-term change in neural structure and function. • Neural basis of addiction, affective disorders, psychiatric illness.

Goal 2: Understand basic principles of human behavior.

Objectives: By graduation, medical students will be able to:

2-1	Discuss development during infancy, childhood and adolescence with reference to cognitive, motor, language, social, and emotional domains, taking into account genetic as well as pre- and post-natal environmental influences.
2-2	Discuss normal development through adulthood and late life (normal aging), developmental tasks throughout adulthood, and adaptation to loss (normal bereavement).
2-3	Discuss learning, reward, and motivation, providing human examples of operant and classical conditioning, positive and negative reinforcement, punishment, and the influence of schedule of reinforcement. Identify neurobiological substrates of these processes.
2-4	Define the functional types of memory and their neurobiological substrates.
2-5	Define personality; describe normal variants; discuss genetic, neurobiological and psychosocial influences on personality development.
2-6	Discuss normal human emotions, including typical responses to illness, and cultural variations in emotional expression. Identify neurobiological substrates and the applicability of findings from animal research to the understanding of human emotions.
2-7	Define stress; discuss typical neurobiological and behavioral responses to stress and their implications for physical and mental functioning.
2-8	Delineate sensory, physiological, cognitive, emotional, and behavioral responses to acute and chronic pain.
2-9	Define normal stages of sleep and related neurobiology; variation in sleep requirements among individuals and across the lifecycle; sleep hygiene; effects of sleep deprivation on physical and mental functioning.
2-10	Discuss normal human sexuality throughout the life cycle, including physiological responses, gender identity and sexual orientation, cultural differences.
2-11	Discuss patterns of normal eating and substance use behavior throughout the life cycle, identifying biological, cognitive, emotional, behavioral, and social determinants.

Goal 3: Describe the major pathological processes and their biological alterations.

Objectives: By graduation, medical students will be able to:

3-1	Recognize, describe, and differentiate features of the major pathological processes: <ul style="list-style-type: none"> • Inflammatory/infectious/immunologic • Vascular/hemodynamic • Developmental/genetic • Neoplastic • Environmental/nutritional • Degenerative • Metabolic • Behavioral
3-2	Describe how errors in cell division (meiosis, mitosis) can result in human disease.
3-3	Recognize, describe and differentiate classes of pathogenic microorganisms according to their microscopic appearance, staining characteristics, natural history and mechanisms of pathogenesis.
3-4	Explain how new strains of microbial pathogens emerge and the ways in which medical practice and public health measures can minimize this phenomenon.
3-5	Describe the relationship among gene/protein/cell in common diseases including, but not limited to, those listed in Appendix D.
3-6	Discuss the role of chromosome instability and oncogenes in the development of cancer.
3-7	Relate normal processes to aberrations leading to common diseases.
3-8	Utilize a biopsychosocial model as a framework for analyzing interactions between biological, psychological and sociological factors that determine the development of disease, the course of disease and the patient's adaptation to disease.
3-9	Explain how biological mechanisms and processes that normally serve to protect the body can themselves damage the body. EXAMPLES <ul style="list-style-type: none"> • Prolonged feedback response (diabetes type II, congestive heart failure) • Physiologic response to stress • Autoimmune diseases • Allergic reactions

Goal 4: Describe how the major pathologic processes affect the organ systems.

Objectives: By graduation, medical students will be able to:

4-1	Explain the etiology and pathogenesis of the common diseases including, but not limited to, those listed in Appendix D.
4-2	Explain how disease processes result in specific signs and symptoms.
4-3	Trace the mechanisms by which diseases alter human physiology, from cellular/molecular events to whole organ function and the whole patient.
4-4	Identify the gross and microscopic changes brought about by selected diseases and correlate these changes with radiographic and imaging studies.

Goal 5: Integrate basic science and epidemiologic knowledge with clinical reasoning.

Objectives: By graduation, medical students will be able to:

5-1	Apply basic science knowledge to specific clinical cases.
5-2	Anticipate drug interactions based on the pharmacodynamic and pharmacokinetic properties of the drugs.
5-3	Describe the biochemical and genetic basis of heritable diseases, recognizing normal process/structure and contrasting with the disease state.
5-4	Describe the epidemiology and clinical manifestations of common diseases including, but not limited to, those listed in Appendix D.

CATEGORY II: BASIC CLINICAL SKILLS**Goal 6: Establish and maintain appropriate therapeutic relationships with patients.**

Objectives: By graduation, medical students will be able to:

6-1	Demonstrate effective use of rapport-building techniques, including empathic listening, facilitation, clarification, validation, reflection, and appropriate nonverbal cues.
6-2	Use appropriate eye contact, body language, and voice quality to attend to patients.
6-3	Respond to patients' emotions, verbal, and nonverbal behavior appropriately.
6-4	Treat medical and personal information in a confidential manner, sharing with others only with the implied or stated permission of the patient.
6-5	Demonstrate respect for the patient in words and deeds - the humanness, autonomy, individuality, differences from others, and the opinions and beliefs of the patient.
6-6	Convey compassion and concern for patients and families.
6-7	Continue to care for a patient until dismissed by the patient or until the orderly transfer of care is effected.

Goal 7: Obtain a sensitive, thorough medical history.

Objectives: By graduation, medical students will be able to:

7-1	Perform a medical interview, including chief complaint, history of present illness, past medical history (to include alternative therapies), family history, and social history (to include occupational, sexual, substance use, and trauma history).
7-2	Assess patients' expectations, values, and goals.
7-3	Communicate effectively using open and closed questions, encouragement, paraphrasing, and summarizing.
7-4	Employ a biopsychosocial perspective in investigating a patient's concerns (including patient's use of alternative therapies).
7-5	Thoroughly elicit and assess all of the patients concerns.
7-6	Perform a basic psychiatric interview, including risk of suicide and potential of harm to self or others.
7-7	Maintain composure when dealing with hostile or difficult patients.
	Obtain an accurate dietary history.

Goal 8: Perform a sensitive and accurate physical exam.

Objectives: By graduation, medical students will be able to:

8-1	Use proper hand washing technique prior to starting the physical exam.
8-2	Consistently ask for permission to touch the patient prior to starting the physical exam.
8-3	Demonstrate appropriate sequence when performing the physical exam so as to minimize discomfort for patient.
8-4	Demonstrate proper draping technique to address issues of modesty and personal space when performing the physical exam.
8-5	Explain and demonstrate sensitivity to issues of power imbalance when performing the physical exam.
8-6	Explain the significance (i.e., what one is looking/listening /palpating for) of each component while conducting the physical exam.
8-7	Measure and record accurate vital signs, including temperature, pulse, respiratory rate, blood pressure, and pain.
8-8	Demonstrate proper technique for inspection, palpation, auscultation, and percussion in the examination of various organ systems.
8-9	Demonstrate skilled observation while conducting the physical exam.
8-10	Demonstrate knowledge and proper technique for the components of the entire physical exam, including: <ul style="list-style-type: none"> • Head and neck • Lung exam • Breast exam • Cardiovascular exam • Abdominal exam • Genitourinary exam, male and female • Rectal exam • Musculoskeletal and joint exam • Neurologic exam, including mental status
8-11	Demonstrate proper technique in use of common tools of physical examination, including: <ul style="list-style-type: none"> • EKG leads • Hand held ophthalmoscope • Otoscope • Reflex hammer • Sphygmomanometer • Stethoscope • Tuning forks • Vaginal speculum

Goal 9: Perform general clinical procedures.

Objectives: By graduation, medical students will be able to:

9-1	Discuss indications and contraindications for procedures including, but not limited to, those listed in Appendix A.
9-2	Discuss risks and benefits of the procedure, and obtain informed consent as appropriate.
9-3	Demonstrate proper use of local anesthetics.
9-4	Use proper sterile technique and scrubbing for surgical procedures.
9-5	Consistently apply universal precautions in all clinical activities.

CATEGORY III: COMMUNICATION AND INTERPERSONAL SKILLS

Goal 10: Develop the knowledge, skills, and attitudes needed for culturally competent care.

Objectives: By graduation, medical students will be able to:

10-1	Abide by the conventions of dress and personal behavior appropriate to the medical setting and acceptable to the population served.
10-2	Communicate effectively with individuals of other cultural and linguistic backgrounds, including appropriate use of interpreters.
10-3	Recognize and assess cultural beliefs that impact a patient's health and function.
10-4	Formulate treatment plans that are culturally sensitive to the patient's concept of health and illness.
10-5	Discuss how one's own ethnocentricity influences the approach to patient care.
10-6	Demonstrate sensitivity to cultural differences in interactions with patients, families, and all members of the health care community.
10-7	Develop a broad-based health plan with the patient, respecting patient beliefs and biases with the goal of healing as much as curing.
10-8	Recognize and discuss the interaction of faith healing traditions with current medical practice in North Carolina.
10-9	Discuss the historical factors that impact the health of populations, such as racism and immigration patterns.

Goal 11: Participate in discussions and decision-making with patients and families.

Objectives: By graduation, medical students will be able to:

11-1	Communicate with and educate patients and families about their care using terms they can understand.
11-2	Assess the full scope of patients' decisions regarding their own care including the use of unconventional approaches.
11-3	Demonstrate respect for the needs of the family.
11-4	Engage with the family by answering questions about diagnosis, treatment and prognosis (when appropriate).
11-5	Negotiate goals and care plans with patients (and families, when appropriate).
11-6	Sensitively address end-of-life issues with patients and their families.

Goal 12: Work effectively with other providers in the health care arena.

Objectives: By graduation, medical students will be able to:

12-1	Describe the roles of various individuals within a team, including one's own.
12-2	Clearly exchange information with other medical science professionals.
12-3	Interact with others with honesty, civility, and respect.
12-4	Recognize and manage conflict with others.
12-5	Collaborate with other professionals across the spectrum of providers.
12-6	Request consultations with focused and pertinent questions generated after completing a thorough evaluation of the patient.
12-7	Advise colleagues in a respectful manner when working as a consultant.
12-8	Recognize, report, and manage unprofessional behavior (as defined in the Honor Code of Professional Conduct).
12-9	Help colleagues and others to maintain behavior consonant with the canons of the profession.

Goal 13: Clearly communicate medical information in spoken and written form.

Objectives: By graduation, medical students will be able to:

13-1	Write complete, concise, and accurate medical record entries, including: <ul style="list-style-type: none"> • Inpatient admission notes • Inpatient progress notes • Outpatient SOAP notes • Procedure notes • Discharge summaries • Consultation requests • Consult notes
13-2	Discuss legal and Risk Management issues related to medical records.
13-3	Present a patient case in standard format.
13-4	Communicate uncertainty in medical information in an appropriate manner.
13-5	Communicate medical orders clearly and precisely.

CATEGORY IV: PREVENTION

Goal 14: Develop knowledge, skills, and attitudes to practice the basic principles of prevention.

Objectives: By graduation, medical students will be able to:

14-1	Apply concepts of primary, secondary, and tertiary prevention to disease and injury risk.
14-2	Discuss the 4 components of prevention -- screening, counseling, immunization, and chemoprophylaxis – and apply to the prevention of common disorders.
14-3	Evaluate a preventive strategy for effectiveness and appropriateness.
14-5	Explain the availability and utility of genetic testing to at-risk patients.
14-6	Educate patients regarding recommendations for preventive services.
14-7	Counsel patients on healthy diet and exercise.
14-8	Incorporate preventive care into routine care.

Goal 15: Practice personalized health planning for long-range goals.

Objectives: By graduation, medical students will be able to:

15-1	Assess patients' long-term health goals, based on their health risk assessment.
15-2	Develop personalized health plan to support the patient's goals and decrease their health risks.
15-3	Describe the impact of psychosocial (emotions, spirituality, occupation, relationships, habits, stressors, finances) issues on patients' ability to follow a care plan over time.
15-4	Use patient-centered counseling skills and strategies for behavior change to enhance health and decrease risk behavior.

Goal 16: Understand health planning for communities and populations.

Objectives: By graduation, medical students will be able to:

16-1	Identify health issues that are appropriately addressed at a community or population level.
16-2	Identify and use community resources available to patients for education, treatment, and rehabilitation.
16-3	Discuss the importance of involving community members in planning population-level strategies for prevention or care.
16-4	Describe the process of needs assessment for a defined population, including appropriate quantitative and qualitative methods.
16-5	Describe how appropriate population-based interventions can be used to address identified health problems.
16-6	Discuss the special needs of vulnerable populations in North Carolina.
16-7	Discuss factors contributing to disparities in health care, and potential interventions.

CATEGORY V: DIAGNOSIS

Goal 17: Demonstrate sound clinical reasoning.

Objectives: By graduation, medical students will be able to:

17-1	Identify and prioritize patient problems based on patient information, expectations, and clinical judgment.
17-2	Correlate results from history and physical examination with results of various diagnostic tests (laboratory, radiographic, etc.) to diagnose diseases.
17-3	Apply the concepts of sensitivity, specificity, and predictive value in assessing a diagnostic hypothesis.
17-4	Recognize and consider uncertainty explicitly in clinical decision-making.
17-5	Recognize acutely dangerous health problems and prioritize decisions accordingly.
17-6	Recognize the impact of biologic changes across the lifespan.

Goal 18: Appropriately assess common signs and symptoms.

Objectives: By graduation, medical students will be able to:

18-1	Formulate a differential diagnosis for common presenting complaints or findings including, but not limited to, those listed in Appendix B.
18-2	Outline a plan for assessment of patients with common presenting complaints or findings including, but not limited to, those listed in Appendix B.

Goal 19: Appropriately use testing to help guide diagnostic and therapeutic decisions.

Objectives: By graduation, medical students will be able to:

19-1	Interpret laboratory reports on clinical specimens, recognizing the value and limitations of the tests including, but not limited to, those listed in Appendix C.
19-2	Discuss indications, contraindications, and relative costs for the most commonly ordered studies including, but not limited to, those listed in Appendix C.
19-3	Provide an explanation for the utility of any study one has ordered.
19-4	Calculate and use the predictive value of test results in decision-making.
19-5	Name and locate sources to clarify questions relating to interpreting lab values.
19-6	Demonstrate appropriate selection and use of diagnostic testing in monitoring patients over time.
19-7	Demonstrate a systematic approach to imaging studies interpretation, including identification of normal anatomy.
19-8	Interpret findings on bedside monitoring (including EKG, venous/arterial pressures, pulse oximetry).
19-9	Recognize and discuss ethical issues raised by the use of new technologies for diagnosis and treatment.

Goal 20: Diagnose and demonstrate basic understanding of common diseases and conditions.

Objectives: By graduation, medical students will be able to:

20-1	Recognize typical presentations of common diseases including, but not limited to, those listed in Appendix D
20-2	Discuss variations in presentation in different age groups.
20-3	Recognize suspected abuse and neglect.
20-4	Recognize the influence of emotional and behavioral factors on the patient's response to illness.

CATEGORY VI: TREATMENT, ACUTE AND CHRONIC

Goal 21: Understand therapeutic options and participate in the care of patients with common problems.

Objectives: By graduation, medical students will be able to:

21-1	Evaluate a patient's health status and devise a treatment plan based on the totality of information about that patient.
21-2	List the major drugs and non-pharmacological treatments used to treat common diseases.
21-3	Propose medical treatments considering evidence of efficacy, safety, cost, and convenience.

21-4	Critically evaluate the potential for “alternative” therapies to be effective for the treatment of certain conditions, and recommend “best practices” based on safety, efficacy, and cost.
21-5	Explain the effects of treatments, the mechanisms by which these effects are produced, the rationale for use, and benefits and risks compared to alternatives.
21-6	Adjust treatment regimens according to patient characteristics, including age, health status, and psychosocial factors.
21-7	Design appropriate dosing regimens.
21-8	Predict and avoid adverse drug interactions.
21-9	Recognize and describe the role that the physician’s own core beliefs and cultural, ethnic, or religious background may play in their recommendations regarding treatment decisions.
21-10	Utilize the patient’s response to treatment as a means of confirming or modifying a diagnosis.
21-11	Evaluate the impact of treatment on the patient’s life.
21-12	Offer referral to community-based programs that aid patients and their families in managing illness.
21-13	Describe advantages of continuity of care in evaluation and treatment.

Goal 22: Recognize acute life-threatening medical problems and initiate care.

Objectives: By graduation, medical students will be able to:

22-1	Recognize the need for patient resuscitation and initiate appropriate procedures.
22-2	Describe appropriate initial treatment for the selected acute life-threatening problems listed in Appendix E.

Goal 23: Acquire the knowledge and skills necessary to assist in the management of chronic diseases.

Objectives: By graduation, medical students will be able to:

23-1	Describe how chronic disease impacts patients and their families/support systems, and how this may vary across the age spectrum.
23-2	Describe the effects of chronic disease at the societal and community levels.
23-3	Discuss the financial pressures of life with chronic disease.
23-4	Recognize and discuss common physician attitudes and behaviors in managing chronic illnesses.
23-5	Recognize and manage one’s own responses to caring for people with chronic illness.
23-6	Present effectively the diagnosis of a chronic illness to previously healthy persons.
23-7	Design regimens for care of patients with chronic illness to maximize adherence.
23-8	Discuss appropriate management of chronic pain.
23-9	Describe how to assess and maximize functional capacity.
23-10	Describe and make referrals to social and government programs and resources available to patients with chronic diseases.

Goal 24: Participate in care in a variety of settings.

Objectives: By graduation, medical students will be able to:

24-1	Describe the advantages and limitations of management in various settings, including office, emergency department, hospital, intensive care unit, long term care, and home.
24-2	Define the impact of care in different health care settings on the family of the patient.

CATEGORY VII: PATIENT SAFETY

Goal 25: Identify and remove common sources of medical errors.

Objectives: By graduation, medical students will be able to:

25-1	Discuss mechanisms of human error and limitations of human performance.
25-2	Define health care “quality,” “medical error,” and “adverse outcome.”
25-3	Describe the epidemiology of medical errors, including the most common types in selected disciplines and settings (e.g., inpatient, outpatient, surgical).
25-4	Describe the role of systems and process measurements in medical errors.
25-5	Describe error identification and reporting strategies, and their impact upon quality.
25-6	Discuss significance of near-misses.
25-7	Demonstrate proper prescription writing technique to minimize potential for error.

Goal 26: Understand and apply models of Quality Improvement.

Objectives: By graduation, medical students will be able to:

26-1	Describe commonly accepted models for Quality Improvement (e.g., FADE, PDSA).
26-2	Discuss quality measurement in relation to provider credentialing, institutional accreditation, and other regulatory requirements.
26-3	Perform basic skills of Quality Improvement including chart audits and root cause analyses.

Goal 27: Appreciate the challenges associated with reporting and disclosure.

Objectives: By graduation, medical students will be able to:

27-1	Describe how cultures of blame, emotional responses, and potential legal ramifications impact disclosure and reporting.
27-2	Compare and contrast mandatory vs. voluntary reporting structures.
27-3	Discuss culturally appropriate strategies of communicating errors with patients, families, and the public.

CATEGORY VIII: INFORMATION MANAGEMENT

Goal 28: Use information and educational technology to facilitate research, education, and patient care.

Objectives: By graduation, medical students will be able to:

28-1	Critically evaluate information in texts and journal articles.
28-2	Filter, evaluate, and reconcile information based on critical assessment of the content (Evidence-based medicine).
28-3	Demonstrate ability to retrieve, evaluate, manage, and utilize information for solving problems and making decisions that are relevant to the care of individuals and populations.

28-4	Analyze, interpret, and report investigative findings utilizing computer based technology.
28-5	Apply new technologies to patient care when appropriate and effective.
28-6	Demonstrate the ability to record information in and retrieve patient-specific information from a clinical information system.
28-7	Select and utilize software and information resources for professional and patient education.
28-8	Use computer-based decision-support systems to assist in health care decisions.

CATEGORY IX: ETHICS, HUMANITIES, AND THE LAW

Goal 29: Develop a critical understanding of the multiple factors that affect the practice of medicine, public health, and research.

Objectives: By graduation, medical students will be able to:

29-1	Describe the interaction between government, industry, community and the individual physician as it impacts care.
29-2	Demonstrate basic knowledge of health care law.
29-3	Relate how historical analyses contribute to understanding contemporary health care.
29-4	Discuss the role of religion and spirituality in the treatment of patients.
29-5	Discuss the contribution of literature and the arts to the understanding of the human dimensions of health care, including interactions, feelings and emotions of clinicians and patients, as well as the impact of illness on patients and their families and friends.
29-6	Describe regulatory bodies and processes that impact upon credentialing, licensing, and practice.

Goal 30: Understand the interface between medical practice and health systems, including the related economic and public policy issues.

Objectives: By graduation, medical students will be able to:

30-1	Explain public, corporate and personal sources of health care dollars.
30-2	Explain the factors driving increasing healthcare costs.
30-3	Explain the rationale and mechanisms for controlling costs.
30-4	Describe the variables that influence the organization and delivery of health care.
30-5	Discuss the ethical tensions among physicians' traditional duties as advocate for the best interests of individual patients under their care, principles of distributive justice and application of the economic principal of efficiency to healthcare delivery.
30-6	Discuss the relationship of socioeconomic differences to health status and health behavior.
30-7	Outline variables that influence access to health care.
30-8	Describe the historical evolution and challenges of provider reimbursement since the inception of Medicare (1965-66), including the roles of government, insurance, providers, and the populations they cover.
30-9	Discuss the public policy implications of health care economics and the health care challenges faced by physicians and patients.
30-10	Describe the rationale for the health system responses to acute public health crises.

Goal 31: Incorporate ethical principles in clinical practice and research.

Objectives: By graduation, medical students will be able to:

31-1	Appropriately obtain informed consent to, or a valid refusal of, treatment.
31-2	Demonstrate how philosophical and theological principles inform issues faced in the practice of medicine and research.
31-3	Describe the ethical foundations of institutional policies and procedures regarding clinical practice as well as research involving human subjects and animals.
31-4	Discuss the ethical challenges faced by health care organizations and public health agencies.
31-5	Discuss the ethical, legal, and social issues associated with genetic counseling and testing.
31-6	Recognize, disclose, and manage conflicts of interest that may arise in medical practice and research.
31-7	Discuss the tension between the physician imperative to act in the best interest of the individual patient while balancing the just requirements of others.

CATEGORY X: PROFESSIONALISM

Goal 32: Develop healthy self-care behaviors and coping skills.

Objectives: By graduation, medical students will be able to:

32-1	Balance obligations to profession, family, and self.
32-2	Demonstrate awareness of one's own health status and care needs.
32-3	Demonstrate healthy coping mechanisms for dealing with stress.
32-4	Describe the importance of a healthy lifestyle in dietary habits, exercise, and the use of alcohol and drugs.
32-5	Describe the resources available to help impaired physicians.

Goal 33: Model service to patients and community.

Objectives: By graduation, medical students will be able to:

33-1	Fulfill commitments and obligations in a timely manner.
33-2	Discuss the primacy of attention to the needs of others, even when this may conflict with one's own desires.
33-3	Advocate for appropriate care regardless of patients' ability to pay.
33-4	Discuss the importance of offering one's skills and expertise for the welfare of the community.
33-5	Demonstrate cost-consciousness, in order to avoid unnecessary patient or societal health care expenditures.

CATEGORY XI: LEADERSHIP

Goal 34: Develop skills to become tomorrow's physician leaders.

Objectives: By graduation, medical students will be able to:

34-1	Take a leadership role in the medical and/or general community.
34-2	Manage a team or group to complete a defined task.
34-3	Contribute to the learning of health care professionals and students through formal and informal teaching activities.
34-4	Demonstrate effectiveness in teaching methodologies.

CATEGORY XII: SCHOLARSHIP AND LIFELONG LEARNING

Goal 35: Develop skills for scholarly investigation, pursuit of new knowledge, and transmission of knowledge to others.

Objectives: By graduation, medical students will be able to:

35-1	Adhere to relevant institutional policies and procedures regarding research involving human subjects and animals.
35-2	Design research strategies appropriate to chosen area.
35-3	Review and critically assess literature pertaining to a chosen topic.
35-4	Determine what data exist relative to a clinical question or formal hypothesis.
35-5	Complete a research proposal and obtain the appropriate approvals.
35-6	Execute a research plan for data collection, and organize data for analysis.
35-7	Use appropriate statistical methods to analyze data and interpret scientific literature.
35-8	Interpret and report findings, appropriately citing relevant work by others.
35-9	Present results orally and in poster form to an audience of colleagues.
35-10	Collaborate with other individuals as part of the research process.

Goal 36: Demonstrate commitment to life-long pursuit of learning.

Objectives: By graduation, medical students will be able to:

36-1	Seek to improve and increase knowledge and competence.
36-2	Define and discern problems and questions, and recognize and remedy one's own ignorance without anxiety or denial.
36-3	Maintain awareness of capabilities, interests, and strengths.
36-4	Stay abreast of changing medical knowledge.

APPENDIX A

Reference:

Goal 9 – Perform general clinical procedures.

- 9-1: Discuss indications and contraindications for procedures

Common procedures:

Procedures to be mastered (student feels confident in performing the procedure):

1. ACLS
2. BLS
3. Draw blood/blood culture
4. Foley catheter
5. Mask ventilation
6. NG tube
7. Pap smear
8. Sterile technique
9. Start IV

Procedures to be done by student at least once:

1. Blood gas (arterial stick)
2. IM, subcutaneous injection
3. Skin suturing
4. Throat swab
5. Tracheal intubation
6. Vaginal delivery
7. Wound care/dressing/local anesthetic

Procedures to be observed by student at least once:

1. Central venous access
2. Chest tube
3. Ear wax removal
4. L.P.
5. ECT
6. Joint aspiration
7. Paracentesis
8. Skin biopsy
9. Splint
10. Thoracentesis

APPENDIX B

Reference:

Goal 18 – Appropriately assess common signs and symptoms.

- 18-1: Formulate a differential diagnosis for common presenting complaints or findings
- 18-2: Outline a plan for assessment of patients with common presenting complaints or findings

Common complaints:

1. Abdominal pain
2. Acute neurologic deficit
3. Altered mental status
4. Amenorrhea
5. Anxiety
6. Chest pain
7. Cough
8. Dizziness
9. Dyspnea or wheezing
10. Dysuria
11. Earache
12. Fatigue
13. Fever
14. Headache
15. Joint pain
16. Low back pain
17. Nasal congestion
18. Rash
19. Sore throat
20. Traumatic injury
21. Vaginal bleeding, discharge or irritation
22. Visual disturbance

APPENDIX C

Reference:

Goal 19 – Appropriately use testing to help guide diagnostic and therapeutic decisions.

- 19-1: Interpret laboratory reports on clinical specimens, recognizing the value and limitations of the tests
- 19-2: Discuss indications, contraindications, and relative costs for the most commonly ordered studies

Common tests and studies:

Lab tests

1. arterial blood gas
2. *CBC, including blood smear
3. cholesterol/fasting lipid panel
4. culture and sensitivities
5. electrolytes
6. glucose
7. *gram stain
8. *KOH and wet mount
9. liver function tests
10. Pap smear
11. *stool hemocults
12. thyroid panel
13. *urinalysis, including microscopic exam

Radiographic studies

14. bone films
15. *chest x-ray
16. 2-view abdomen films
17. mammogram
18. ultrasound
19. CT scan (chest, pelvis/abdomen, and brain)
20. MRI scan (chest, pelvis/abdomen, and brain)
21. bone density scan

Other studies

22. *EKG (12-lead)
23. echocardiogram
24. pulmonary function tests

*** Student must also be able to read and interpret primary findings.**

APPENDIX D

Reference:

Goal 3 – Describe major pathological processes and their biological alterations.

- 3-5: Describe relationship among gene/protein/cell

Goal 4 – Describe how the major pathologic processes affect the organ systems.

- 4-1: Explain the etiology and pathogenesis of the common diseases

Goal 5 –Integrate basic science and epidemiologic knowledge with clinical reasoning.

- 5-4: Describe the epidemiology and clinical manifestations of common diseases

Goal 20 – Diagnose and demonstrate basic understanding of common diseases and conditions.

- 20-1: Recognize typical presentations of common diseases

Common Conditions:

1. Allergic rhinitis
2. Alzheimer's disease
3. Arthritis
4. Asthma
5. Breast cancer
6. Cerebrovascular disease and stroke
7. Cervical cancer
8. Chronic Obstructive Pulmonary Disease
9. Chronic renal failure
10. Colon cancer
11. Congestive Heart Failure
12. Coronary artery disease
13. Depression
14. Diabetes mellitus, types 1 and 2
15. GI bleed
16. HIV/AIDS
17. Hypertension
18. Kidney stones
19. Liver disease
20. Lung cancer
21. Obesity
22. Otitis media
23. Pneumonia
24. Pregnancy
25. Prostate cancer
26. Rocky Mountain Spotted Fever
27. Sickle cell disease
28. Substance abuse
29. Upper respiratory infection, including pharyngitis
30. Urinary tract infection

APPENDIX E

Reference:

Goal 22 – Recognize acute life-threatening medical problems and initiate care.

- 22-2: Describe appropriate initial treatment

Acute life-threatening problems:

1. Acute psychosis and agitation
2. Anaphylaxis
3. Closed head injury
4. Diabetic ketoacidosis and hyperosmolar state
5. Drug overdose/toxic ingestion
6. Meningitis
7. Pulmonary embolism
8. Respiratory failure
9. Sepsis
10. Shock
11. Suicidality and homicidality
12. Unstable arrhythmia/cardiac arrest