

MARSHALL UNIVERSITY JOAN C. EDWARDS SCHOOL OF MEDICINE

Program Assessment

2010-2011 Academic Year

I. Program's Mission: State the mission of your program and specify how your program's mission supports the university's mission.

The Joan C. Edwards School of Medicine at Marshall University is a community-based, Veterans Affairs affiliated medical school dedicated to providing high quality medical education and postgraduate training programs to foster a skilled physician workforce to meet the unique healthcare needs of West Virginia and Central Appalachia. Building upon its medical education foundation, the school seeks to develop centers of excellence in clinical care, including primary care in rural underserved areas, focused and responsive programs of biomedical science graduate study, biomedical and clinical science research, academic scholarship and public service outreach. The School is committed to fulfilling its mission by creating a diverse and inclusive academic community that is sustained in a collegial and nurturing environment of life-long learning.

II. Program's Student Learning Outcomes: List several specific, measurable student learning outcomes. These should be statements describing what competencies students must have, i.e. what students will be able to do, as they progress through and complete your program. We encourage an in-depth assessment of one-fourth of your outcomes each year, with all major outcomes being assessed in a four-year cycle.

Institutional Learning Objectives

Interpersonal and Communication Skills (ICS)

Students must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

Medical Knowledge (MK)

Students must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care.

Patient Care (PC)

Students must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Practice-based learning and improvement (PBL)

Students must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

Professionalism (PR)

Students must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

Systems-based Practice (SBP)

Students must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

III. Assessment Activities (you may refer to the chart):

- A. **Assessment Measures (Tools)** – Indicate the assessment measures used for each outcome evaluated during the reporting period. Although the majority of your measures should directly assess student learning, they may be supplemented with indirect measures. Assessment rubrics should be included as appropriate.

Each course has specific course objectives and outcome measures that relate back to the institutional learning objectives (ILOs). One example, for each academic period, is provided for review.

YEAR ONE/ACADEMIC PERIOD ONE

Course	# of exams	Internal exams	Lab or practical exams	Faculty/resident rating	OSCE/SP ¹ exam	Paper or oral pres.	Other†
Behavioral Medicine PSI 701	2	X		X		X	X
Ethics IDM 761	0			X		X	X
Gross Anatomy ACB 720	4	X	X	X			
Introduction to Clinical Skills IDM 716	6			X	X		
Microanatomy & Ultrastructure ACB 724	8	X	X	X			X
Molecular Basic of Medicine IDM 725	4	X		X			X
Neuroscience IDM 777	5	X	X	X			X
Physiology PHS 701	5	X		X			X

¹ OSCE = Observed Structured Clinical Examination
SP = Standardized Patient Examination

†Molecular Basic of Medicine
Behavioral Medicine

Homework and completion of online nutrition modules;
Seven homework assignments tasking the student to complete various exercises that promote independent learning. These assignments encourage the students to create patient education handouts, research web resources, and exercises on medication adherence.

Ethics
Microanatomy and Ultrastructure
Neuroscience

Facilitator evaluation in small group settings
Quizzes
Small Group discussions

Institutional Objectives	Behavioral Medicine PSI 701 Summary of Course Objectives	Measured Outcomes
ICS	Students will learn how to apply behavioral principles to issues in the doctor/patient relationship, appreciate the issues involved in grief, distinguish between normal and pathological forms of grieving, articulate and apply appropriate approaches to presenting bad news	Examinations Homework Assignments
MK	Students will understand the basic psychodynamic and behavioral concepts used to explain behavior and apply them to health issues Identify major developmental milestones of child development, adolescence, adulthood and later life and implications for health care Identify risk factors and consequences associated with domestic violence Identify types of sexual dysfunction, causal factors, and treatment, concepts of paraphilia, characteristic of major types Understand the strategies and methods of psychological and neuropsychological assessment and uses of the information Understand the nature of stress, its role in health and illness, and strategies for management	Examinations Homework Assignments
PC	Recognize health care issues associated with gender Identify vulnerable patients and the strategies and resources required to help them Identify and make use of factors that promote adherence Understand principles involved in supporting self-management behavior in patients, particularly as relevant to chronic illness Identify factors unique to palliative care	Examinations Homework Assignments
PBL	Enhance development of a personal philosophy of medical practice that permits a physician to negotiate the stresses and challenges of a demanding profession in a way that is supportive to one's own health and well being	Homework Assignments
PR	Students will recognize and implement principles of professional conduct, articulate and apply appropriate approaches to dealing with mistakes, recognize how principles of professionalism and empathy apply to dealing with difficult patients.	Homework Assignments Direct observation in class and small group sessions Collaborative Professionalism Meetings
SBP	Identify the core features of addiction, including features common to various addictions, and understand concept of process addiction including support systems such as Alcoholic Anonymous	Examinations Homework Assignments

YEAR TWO/ACADEMIC PERIOD TWO

Course	# of exams	Internal exams	NBME subject exams	Faculty/resident rating*	OSCE/SP exam	Paper or oral pres.	Other†
Approach to Patient Care MED 725	12	X	X	X			X
Advanced Clinical Skills MED 755	6			X	X		
Immunology MCB 743	5	X	X	X			X
Medical Microbiology MCB 720	12	X	X	X			X
Pathology PTH 720	11	X	X	X		X	X
Pharmacology PMC 720	12	X	X	X			
Psychopathology PSI 721	2	X		X			X

†Approach to Patient Care
Immunology
Medical Microbiology
Pathology

Take home multiple choice and multiple matching questions
Team-based Learning Exercise, Individual and group quizzes
Small group case-based exercises
Following the surgical pathology small group session each student submits a one page report about the role of the pathologist in clinical medicine. Homework may consist of multiple choice, short answer or essay questions, or a case study with questions, or building a concept map or completing a table or chart or other activities. The homework may be graded and points given or the student may receive points for completing the assignment.

Psychopathology

Clinical cases

Institutional Objectives	Approach to Patient Care MED 725 Course Objectives	Measured Outcomes
ICS	Students will effectively participate in in-class and small group discussions related to topics involving the assessment, management, treatment and ethical considerations of patient care	Direct observation during small group sessions.
MK	Students will learn the common clinical presentations for disease including history, physical examination findings and laboratory and diagnostic information. Students will learn the differential diagnosis for common patient complaints.	Examinations Homework Assignments NBME Mini-Boards
PC	Students will learn the common clinical presentations for disease and basic initial diagnostic methods and general treatment options	Examinations NBME Mini-Boards
PBL	Students will successfully participate in group discussions in which the larger context and system of patient care and how to utilize various clinical resources is reviewed.	Small Group Discussions
PR	Students will conduct themselves in a professional manner during all class sessions. Students will complete and turn in their IRB certification on time.	Direct observation in class and small group sessions Collaborative Professionalism Meetings Certificate completion
SBP	Students will successfully participate in group discussions in which the larger context and system of patient care and how to utilize various clinical resources is reviewed	Examinations Small Group Discussions

YEARS/ACADEMIC PERIODS THREE AND FOUR

Course or Clerkship	Contribute to Grade (Check all that apply)						Clinical skills observed (Y/N)	Mid-course feedback (Y/N)
	NBME subject exams	Internal written exams	Oral exam or pres.	Faculty/resident rating	OSCE/SP exams	Other*		
Family Medicine FCH 742	X	X	X	X			Y	Y
Internal Medicine MED 742	X	X	X	X		X	Y	Y
Obstetrics/Gynecology OBG 742	X	X	X	X	X	X	Y	Y
Pediatrics PED 742	X			X		X	Y	Y
Psychiatry & Behavioral Medicine PSI 742	X	X	X	X			Y	Y
Surgery SUR 742	X	X	X	X			Y	Y
Emergency Medicine EMS 744		X	X	X		X	Y	Y
Internal Medicine MED 744			X	X		X	Y	Y
Surgery SUR 744		X	X	X		X	Y	Y

Institutional Objectives	Family Medicine FCH 742 Summary of Clerkship Objectives	Measured Outcomes
ICS	Students are expected to make satisfactory case presentations to preceptor and course director as well as a written plan of treatment and care plan on clinical encounters.	Oral presentations Formal written plans of care
MK	<p>Students will be able to demonstrate basic level competency in diagnosing and treating medical problems commonly encountered in family practice.</p> <p>Students will be able to demonstrate the ability to respond to specific deficits in clinical knowledge arising from patient encounters.</p> <p>Students will present a satisfactory case-based medical topic presentation to the clinical preceptor that will consist of: formulation of appropriate clinical questions, evaluation of medical evidence, and application of the medical evidence to the patient encountered.</p> <p>Students will be able to demonstrate the ability to apply current practice guidelines to patient specific medical screening.</p> <p>Students will be able to demonstrate the ability to identify patient's high-risk personal behaviors and other patient education topics and provide appropriate patient education regarding disease prevention and other topics</p>	Examinations Patient encounter documentation Oral presentations Patient encounter demonstration
PC	<p>Students will demonstrate provision of continuity of care over the period of a clerkship.</p> <p>Student must demonstrate skill in performing selected procedures commonly encountered in family practice.</p>	Patient encounter documentation Patient Procedure Log
PBL	<p>Students will complete a medical literature review search specific to case-based medical topic in preparation for case presentations.</p> <p>Students are expected to demonstrate the ability to conduct a community health education meeting.</p>	Oral presentations Documentation
PR	<p>Students will demonstrate the ability to establish therapeutic relationships with patients.</p> <p>Students are expected to demonstrate awareness of inter-relationships between the individual patient and his/her family and community</p>	Satisfactory patient reports to clinical preceptors Direct observation with patients

B. **Benchmarks** – indicate benchmarks your program has set for each outcome assessed during the reporting period.

There are several ways MUSOM measures the achievement of the Institutional Learning Objectives (ILO). The successful National Residency Matching Program performance of our medical students is considered one of the strongest confirmations that our students are being prepared for the next stage in their training. Since 2004, 95% of our graduates have had a successful initial match, with over half going into primary care fields, supporting the overall mission of MUSOM.

Recent United States Medical Licensing Examination (USMLE) scores have been excellent. The most recent Step 2 Clinical Knowledge (CK) results were 99% pass rate with an average mean score of 229. The most recent Step 2 Clinical Skills (CS) results were a 100% pass rate. Additional outcome measurements supporting the accomplishment of our ILOs include the student procedure and patient loggers. Instituted in 2005, the logs have allowed for tracking of patient conditions and procedures to which the students are exposed, ensuring uniformity of experience. The Year 3 and Year 4 subcommittees, with the Curriculum Committee, annually evaluate the core lists of patient encounters and procedures, revise them based on student feedback and completion results, and add alternative experiences to ensure students meet expectations. The Office of Medical Education (OME) monitors this process and provides reports to the CC annually.

C. **Results/Analysis** – indicate detailed results for the reporting period, i.e. what were mean scores on each component of assessment rubrics, mean scores on exam questions related to outcomes, etc.

USMLE (United States Medical Licensing Examination) Results

STEP 1:

Year or Academic Year	Number Examined	Percent Passing	Mean Total Score	National Mean Total Score
2011	75	89	213	225
2010	75	79	208	222
2009	64	92	212	222
2008	65	77	205	221

STEP 2 CK:

Year or Academic Year	Number Examined	Percent Passing	Mean Total Score	National Mean Total Score
2010-2011	67	99	229	233
2009-2010	65	97	227	230
2008-2009	52	98	227	229
2007-2008	43	95	227	226

STEP 2 CS:

Year or Academic Year	Number Examined	Percent Passing
2010-2011	63	100
2009-2010	69	97
2008-2009	52	100
2007-2008	42	100

D. Analysis/Planned Action – Indicate what your results mean and what your program plans to do to improve student learning based on the outcome of assessment. Be very specific in this section. Remember that, even if you meet your specified benchmarks, there is always room for improvement. We encourage you to carefully analyze your program's relative strengths and weaknesses within each outcome.

Two classes struggled with USMLE Step 1 exam, one class before the most recent curriculum change and one class after the change. In response to these lower performances, the Office of Medical Education performed multiple analyses and provided presentations to the administration and to the Curriculum Committee (CC). These resulted in adjustments in admissions requirements, academic standards policies, remediation practices, and curricular content. In addition, the use of practice NBME Step 1 exams prior to sitting for the actual examination was instituted.

MUSOM uses demographic and admissions data, academic performance data, and survey data from students to evaluate and improve the education program. We have worked to evaluate predictors of success on USMLE exams through analysis of student information in efforts to incorporate more effective educational tools to enhance students' success. An example of this is encouraging and financially supporting students' use of Q-banks for USMLE Step 1.

We have also looked at performance data regarding specific subject areas on USMLE exams in order to incorporate changes to improve curriculum content. For example, the biostatistics and epidemiology portion of the Approach to Patient Care course now incorporates in-class problem-solving activities as well as examination questions.

Evaluation of program effectiveness is always a work in progress, and with the recent curricular changes we are closely monitoring the students' performance. Now that we have improved the flexibility of the overall structure and delivery of the pre-clinical years through the systems based format, we are focusing our efforts on Year 1 and 2 content, pedagogy, integration, and testing modalities.

IV. Overview of changes implemented in your program this past year based on results and planned action specified in last year's report.

NONE

V. Specify any changes/modifications made to your program based specifically on data obtained during Assessment Day Activities.

NONE

VI. Assistance Needed with Assessment: What assistance can the Office of Assessment give you to help improve your assessment program?

NONE

INSTITUTIONAL LEARNING OBJECTIVES

General Competency	Educational Program Objective(s)	Outcome Measure(s)
Patient Care (PC)	Students must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.	<p><u>All Years</u> Community Service Opportunities Evaluations (Course, Clerkship, Faculty, Standardized Patient, 4th Year Students) Examinations (Course, Clerkship , NBME shelf exams) OSHA Certification</p> <p><u>Year 1</u> Basic Life Support Certification Introduction to Clinical Skills (Mentor Reflections and OSCEs) Orientation ILO Exercise</p> <p><u>Year 2</u> Advanced Clinical Skills (Mentor Reflections and OSCEs)</p> <p><u>Year 3</u> Basic Life Support Certification Clinical Competency Exam Patient Logger Procedure Logger Obstetrics & Gynecology and Surgery- OSCEs</p> <p><u>Year 4</u> ACLS Certification Graduation Questionnaire Match Data Radiology Exam USMLE Step 2 Clinical Skills</p> <p><u>Post Grad</u> Alumni Survey Program Director Survey WVHEPC Report Card</p>
Medical Knowledge (MK)	Students must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care.	<p><u>All Years</u> Evaluations(Course, Clerkship, Faculty, 4th Year Students) Examinations (Course, Clerkship , NBME shelf exams) OSHA Certification</p> <p><u>Year 1</u> Basic Life Support Certification Introduction to Clinical Skills (Mentor Reflections and OSCE) Orientation ILO Exercise</p> <p><u>Year 2</u> Advanced Clinical Skills (Mentor Reflections and OSCEs) Approach to Patient Care- IRB Certification</p>

		USMLE Step 1 <u>Year 3</u> Basic Life Support Certification Patient Logger Procedure Logger Obstetrics & Gynecology and Surgery- OSCEs <u>Year 4</u> ACLS Certification Graduation Questionnaire Match Data Radiology Exam USMLE Step 2 CK USMLE Step CS <u>Post Grad</u> Alumni Survey Program Director Survey USMLE Step 3 WVHEPC Report Card
Practice-based Learning and Improvement (PBL)	Students must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.	<u>All Years</u> Evaluations (Course, Clerkship, Faculty) Examinations(Course, Clerkship , NBME shelf exams) OSHA Certification <u>Year 1</u> Introduction to Patient Care (Mentor Reflections) Orientation ILO Exercise <u>Year 2</u> Approach to Patient Care- IRB Certification and Journal Clubs Advanced Clinical Skills- Mentor Reflections <u>Year 4</u> ACLS Certification <u>Post Grad</u> Alumni Survey Program Director Survey
Interpersonal and Communication Skills (ICS)	Students must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.	<u>All Years</u> Community Service Opportunities Evaluations (Course, Clerkship, Faculty, Student, Standardized Patient, 4 th Year Students) Examinations (Oral) <u>Year 1</u> Basic Life Support Certification Introduction to Clinical Skills(OSCE and Mentor Reflections) Orientation ILO Exercise Professionalism Evaluation Meetings <u>Year 2</u> Advanced Clinical Skills (OSCE and Mentor

		<p>Reflections)</p> <p><u>Year 3</u></p> <p>Basic Life Support Certification Clinical Competency Exam Patient Presentations on Clerkships Patient Logger Procedure Logger Professionalism Evaluation Meetings</p> <p><u>Year 4</u></p> <p>ACLS Certification Graduation Questionnaire Match Data USMLE Step 2 Clinical Skills</p> <p><u>Post Grad</u></p> <p>Alumni Survey Program Director Survey WVHEPC Report Card</p>
Professionalism (PR)	Students must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.	<p><u>All Years</u></p> <p>Community Service Opportunities Evaluations (Course, Clerkship, Faculty, Student, Standardized Patient, 4th Year Students) OSHA Certification</p> <p><u>Year 1</u></p> <p>Basic Life Support Certification Introduction to Clinical Skills (OSCE and Mentor Reflections) Orientation ILO Exercise Professionalism Evaluation Meetings</p> <p><u>Year 2</u></p> <p>IRB Certification Advanced Clinical Skills(OSCE and Mentor Reflections) Professionalism Evaluation Meetings</p> <p><u>Year 3</u></p> <p>Basic Life Support Certification Clinical Competency Exam Patient Logger Procedure Logger</p> <p><u>Year 4</u></p> <p>ACLS Certification Graduation Questionnaire Match Data USMLE Step 2 Clinical Skills</p> <p><u>Post Grad</u></p> <p>Alumni Survey Program Director Survey</p>
Systems-based Practice (SBP)	Students must demonstrate an awareness of and responsiveness to the larger context and system of health	<p><u>All Years</u></p> <p>Community Service Opportunities Evaluations (Course, Clerkship, Faculty, Student)</p>

	<p>care, as well as the ability to call effectively on other resources in the system to provide optimal health care.</p>	<p>OSHA Certification <u>Year 1</u> Basic Life Support Certification Introduction to Clinical Skills (Mentor Reflections) Orientation ILO Exercise <u>Year 2</u> Advanced Clinical Skills (Mentor Reflections) <u>Year 3</u> Basic Life Support Certification <u>Year 4</u> ACLS Certification <u>Post Grad</u> Alumni Survey Program Director Survey</p>
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Marshall University Joan C. Edwards School of Medicine
Assessment of Program's Student Learning Outcomes
2010-2011 Academic Year

Not every student learning outcome must be assessed every year. However, it is expected that at least one-third of the outcomes will be assessed each year, allowing for assessment of all outcomes within a three-year cycle. It also is important to use more than one assessment measure for each outcome.

Program's Student Learning Outcomes	Assessment Measures (Tools)	Benchmarks	Results/ Analysis
Knowledge ILO: Medical Knowledge	Written Exams, Oral Exams, Oral Presentations, Observation, Evaluations, USMLE Exams, Clinical Competency Exam	"C" or better in all classes, passage of USMLE Exams, passage of Clinical Competency Exam	Students are performing at national norm on USMLE Exams.
Skills ILO: Patient Care Interpersonal and Communication Skills	Observation, Oral Presentations, Oral Exams, Evaluations, USMLE Exams, Clinical Competency Exam, Employer Surveys	Passage of USMLE Step II Clinical Skills section, passage of Clinical Competency Exam, satisfactory evaluations	Students are performing at national norm on USMLE Exams.
Attitudes & Behaviors ILO: Professionalism Practice-based learning and improvement System-based Practice	Oral Presentations, Evaluations, Mentoring Evaluation, Employer Surveys	Satisfactory evaluations, passage of USMLE exams, Employer satisfaction	Students are performing at national norm on USMLE Exams