BMP Manual
Academic Year 2009-2010

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MISSION, VISION AND GOALS

Mission: To provide Mercer medical students a foundation in the basic medical sciences relevant to the practice of medicine.

Vision: Each student will leave the BMP Program competent in the basic science knowledge, skills, attitudes and behaviors that will support their clinical development and benefit the health of their patients.

Goals:

1. The program will include curriculum which provides fundamental knowledge in the basic medical sciences relevant to the practice of medicine.

2. The program curriculum will incorporate analysis of biomedical problems to integrate information and concepts from individual disciplines into an overall understanding of medical sciences.

3. Curricular elements will emphasize the importance of articulate and thoughtful analysis of the scientific issues, concepts and major mechanisms necessary for understanding the underlying medical sciences.

4. The curriculum will provide an environment and resources necessary to promote the development of professional attitudes, skills and behaviors.

5. Curricular components will include evaluation requirements to facilitate individual, group and program improvement.

6. The program components will base their learning objectives on the overall competencies of the curriculum.

(Approved CIC 2/21/06)

I. KEY CONTACTS, FACULTY, STAFF

A. TUTORS

1. The tutor will be either a basic scientist or clinician.

2. The tutor is to facilitate:
   a. the creation and maintenance of an environment in which focused, efficient, scientific discussions can occur, and during which each group member can participate.
   b. the generation and prioritization of learning issues.
   c. discussion of issues at an intellectual depth consistent with the BMP and the phase of the curriculum.
   d. the general development during group discussions of each group member's Independent Learning Skills, Higher Cognitive Skills, Oral Communication Skills and Evaluation Skills as listed in the BMP Goals.
   e. the group's definition and location of adequate resources, including faculty members.
   f. group evaluation of its process skills in the areas of:
      Knowledge Learning Skills
      Oral Communication Skills
      Evaluation Skills
   g. the defining of group problems, both cognitive and interpersonal, and the resolution of the problems.

3. The tutor is to evaluate each group member, give verbal formative assessment in an ongoing manner, and give written evaluation at mid-phase and end of the phase in the following areas:
   Acquiring Knowledge
   Learning Skills
   Oral Communication Skills
   Evaluation Skills

4. The tutor shall give a student written notice at the point in time his or her group performance becomes Unsatisfactory. (See Evaluation section)

B. PHASE COORDINATORS

It is intended that the Phase Coordinator be a broadly based member of the faculty who shall be knowledgeable in many of the content areas of the Phase, and who shall be responsible for the academic excellence of the Phase and shall serve on the Phase Coordinators Committee.

1. Are responsible for overall quality of the phase.
   a. Study Guide (SG)
      The Coordinator will evaluate the appropriateness of all discipline material in the Phase. This evaluation will include the content as well as volume of topics, objectives, resources and references.

      They are encouraged to seek the guidance of any faculty member with a significant knowledge of the Phase and the active involvement and inclusion of Phase tutors is an expectation.

   b. Cases
      Recommend and implement improvements in BMP cases. These improvements will be based in part on the suggestions of students and tutors and will be made in consultation with discipline faculty.

   c. Examinations
      1) Coordinate the creation of the MDE from submitted materials from the disciplines and subsequent revisions.
      2) Coordinate the creation of the oral examination with the assistance of the phase clinical tutors and clinicians.
      3) Assist with the administration of the examinations

   d. Resources
      1) The coordinator of each phase, in cooperation with the class president or designee, will oversee and manage the scheduling of resource sessions offered to the class, and shall be responsible for their availability, appropriateness, and evaluation by the students. The coordinator is responsible for submitting all resource sessions for inclusion on the BMP Phase calendar on the Web.
      2) Problems arising in the resourcing component of a phase should be reported to the phase coordinator. The coordinator will monitor textbook problems and opportunities.
      3) The coordinator will communicate phase information, needs and materials to the library, LRC, and other areas as needed by the phase. This communication may be directly or through the discipline representatives.

2. Are responsible for resolving problems that arise during the phase which tutors are unable to resolve.

3. Review tutor and student recommendations for phase improvements and make appropriate recommendations.
   a. Encourage feedback during the phase and act as appropriate
   b. Assist in the evaluation of the phase by students and faculty
   c. Prepare a report that incorporates phase data, the above evaluations, and analysis
   d. Utilize these evaluations to improve the phase

4. Phase Coordinators 2009-20010:

Phase	**Coordinator**
A	Dr. Horst
B	Dr. Perkins
Host Defense	Dr. Garner
Hematology	Dr. Walker
Neurology	Dr. Thompson
Musculoskeletal	TBN
Brain & Behavior	Dr. Shillcutt
Cardiology	Dr. Russ
Pulmonology	Dr. Tift
GI	Dr. Reagan
Renal	Dr. Thomas
Endocrinology	Dr. Kacsoh

C. PROGRAM DIRECTORS

For each MUSM program, there is a Program Director and an Assistant Program Director. For the BMP program, the Program Director is Dr. Tina Thompson and she is located on the Savannah campus. The Assistant Director is Dr. Jerry Tift and he is located on the Macon campus.

1. Are responsible for implementation of the BMP Program

2. Are responsible for assisting the phase coordinators to resolve problems

3. Review all program evaluations.

4. Report to Associate Dean(s) for Academic Affairs

5. Program Director – Dr. Thompson
   a. Assessment of students – Administration and Reporting
   b. Faculty
      1) Scheduling
      2) Evaluation activities
      3) Faculty Development issues associated with the Program
   c. Curriculum
      1) Chair, Phase Coordinators Committee
      2) Report to CIC and Administration
      3) Facilitate current BMP curriculum
      4) Curricular evaluation and improvement

6. Assistant Director – Dr. Tift
   a. Evaluations of Students
      1) Faculty evaluation of students (mid-phase and final)
      2) Student evaluation of faculty (mid-phase and final)
      3) Student evaluation of program
         a) Test review
         b) Phase review
   b. Student absences
   c. Communications between students, faculty, and program

D. RESOURCE FACULTY

Resource faculty are located on both the Macon and Savannah campus. Students may contact faculty at either campus.

A. Macon Campus (478-301-ext)

1. Department of Pathology

Dr. Robert Donner (Chairman) ..... W94 [2560]
Dr. Jerry Tift ..... W96 [2405]
Dr. Anna Walker ..... W90 [4067]

2. Division of Basic Medical Science

Dr. Roy Russ (Chair)……E46 [2390]

Anatomy, Gross and Embryology

Dr. Henry Young……W104[4034]
Dr. Qian Wang ..... W99 [4053]

Histology/Cell Biology

Dr. Balint Kacsoh..... W92 [2225]
Dr. Rudy Zalups..... W84 [2559]
Dr. Christy Bridges ..... E53 [2986]

Biochemistry/Nutrition

Dr. Michael Horst ..... W98 [2558]
Dr. Susan Cline ..... E59 [2231]
Dr. Rick McCann……E57[4066]

Genetics

Immunology

Microbiology (bacteriology, mycology, virology)

Dr. Jon Martin..... E46 [4060]
Dr. Dayle Daines……E55[4013]

Neuroscience

Dr. Ananda Weerasuriya……. Law School [335-0262 cell]

Pharmacology

Dr. Roy Russ..... E46 [2390]
Dr. Jim Thomas ..... W85 [4177]
Dr. Ashley Horner..... W89 [4050]

Physiology

Dr. Charles Reagan ..... W88 [4065]
Dr. Sandra Leeper-Woodford ..... W102 [2555]
Dr. Michael Russell ..... E51 [5128]
Dr. Barry Prior ..... E56 [5315]

3. Behavioral Science

Dr. Melton Strozier (Chairman)..... 655 First Street [2218]
Dr. Kerry Coburn ..... 655 First Street [2444]
Dr. Sam Shillcutt..... 655 First Street [2330]

4. Clinical Departments - Various faculty from the departments of Internal Medicine, Family Practice, Pediatrics, Surgery, Obstetrics and Gynecology, and Psychiatry participate in the BMP Program. – Please consult faculty directories and phase tutor rosters.

B. Savannah Campus

Off Campus (912) 350 + last 4 digits
On campus 5 digit extension

1. Department of Biomedical Sciences

Dr. Wayne Glasgow (Chair)……..……Faculty Bldg 2-51[21707]

Anatomy, gross and embryology

Dr. William Rhoten……Faculty Bldg 2-49[21709]
Dr. Nan Lin…….……Faculty Bldg 2-27 [21713]

Biochemistry/nutrition

Dr. Himangshu Bose…….…… Faculty Bldg 2-48 [21710]
Dr. James Knapp……..……..Faculty Bldg 2-31 [21712]

Genetics

Dr. Shi-Wen Jiang……Hoskins Research Lab [20411]
Dr. Ed Perkins…….…Faculty Bldg 2-47 [21711]
Dr. Amy Greene……. Faculty Bldg [21737]

Histology

Dr. Nan Lin…….Faculty Bldg 2-27 [21713]

Immunology

Dr. Ron Garner……...…Faculty Bldg 2-26 [21726]

Microbiology

Neuroscience

Dr. Tina Thompson……..… Ed. Bldg, Dean's office [21721]

Pathology

Dr. Ed Klatt…….....Faculty Bldg 2-30 [21728]

Pharmacology

Dr. Wayne Glasgow……Faculty Bldg 2-51 [21707]

Physiology

Dr. Wei-Hsiung Yang…….Faculty Bldg 2-50 [21708]
Dr. Zhi-Qing Zhao……..Faculty Bldg 2-29 [21727]

2. Behavioral Science

Dr. Lee Bowen……Clinical Skills Bldg [21730]

3. **Clinical Departments** - Various faculty from the Anderson Cancer Institute and the Departments of Internal Medicine, Family Practice, Pediatrics, Surgery, Obstetrics and Gynecology, and Psychiatry participate in the BMP Program. – Please consult faculty directories and phase tutor rosters.

II. COURSE OBJECTIVES:

The overall objectives of the BMP Program are for each student to acquire, increase, and/or improve the following:

A. BASIC MEDICAL SCIENCE KNOWLEDGE

A fundamental knowledge in the basic medical sciences relevant to the practice of medicine**.**

B. LEARNING SKILLS

1. Independent Learning Skills
   a. The ability to identify areas of basic science weakness from the analysis of biomedical problems and to learn the material required for the analysis.

   b. The ability to search for and to retrieve information relevant to the biomedical problem from a variety of sources.

2. Group Learning Skills
   The ability to incorporate unfamiliar information contributed by others during group discussions into an expanding knowledge base.

3. Higher Cognitive Skills
   a. The ability to integrate information and concepts from the individual disciplines into an overall understanding of medical science.

   b. The ability to analyze biomedical problems, including the ability to:
      1) Apply information and concepts to biomedical problems
      2) Integrate information from different disciplines.
      3) Synthesize new information from existing information.
      4) Collate information and evaluate its relevance to biomedical problems.
      5) Evaluate scientific accuracy and applicability of information read and/or presented by others.
      6) Explain the scientific basis of a medical problem, its various manifestations and treatments.

7) Discriminate between cause and effect.
8) Use the hypothetico-deductive style of reasoning.
9) Be objective, open-minded, skeptical and willing to suspend judgment if there is insufficient evidence.

4. Oral Communication Skills
   a. The ability to identify and articulate thoughtfully and clearly, the scientific issues, concepts, and major mechanisms underlying medical problems.
   b. The ability to summarize biomedical problems succinctly and adequately.
   c. The ability to work effectively and to communicate with others in group learning tasks.

5. Evaluation Skills
   a. The ability to evaluate others and to provide constructive criticism.
   b. The ability to evaluate the group and its functioning.
   c. The ability to realistically assess one's own deficiencies so that appropriate corrective measures can be sought and implemented.

III. EVALUATIONS

A. TUTORIAL

1. The tutor evaluates each student at the midpoint and end of the phase. The student behaviors listed below may be considered as minimal in tutor evaluation of students, with the recognition that tutor expectations increase from Phases A through Infectious Disease:
   a. Group and Interpersonal Skills
      e.g., the student is actively involved in group process; actively collaborates with others in group learning tasks; exhibits a positive attitude toward tutorial process
   b. Problem-solving Skills
      e.g., the student applies scientific issues, concepts, and mechanisms underlying medical problems; closes cases using SOCA format
   c. Information- gathering Skills
      e.g., the student incorporates primary reference information into discussion; incorporates outside material into discussion
   d. Evaluation Skills
      e.g., offers insights of material used during discussion, generates and critiques various hypotheses relative to concepts discussed in group.
   e. Presentation Skills
      e.g., summarizes and paraphrases biomedical concepts and information; offers a well structured discussion and uses appropriate terminology.

2. Tutors shall keep individual students informed of deficiencies in participation as the tutorials progress, and the tutors shall make suggestions for student improvement. Deficiencies in individual participation at the end of a given phase shall be so noted in tutor evaluation of the student. THE TUTOR SHALL GIVE A STUDENT WRITTEN NOTICE AT THE POINT IN TIME WHEN HIS OR HER GROUP PERFORMANCE BECOMES UNSATISFACTORY.

3. The regularly assigned tutor (not co-tutor) will determine at the midpoint and end of the phase an OVERALL performance evaluation of Excellent, Good, Satisfactory, Unsatisfactory or Poor using the form: Tutor Evaluation of Student. **Academic Records** will record a numerical grade according to the following scale:

Grade	**Points**
Excellent	5
Good	4
Satisfactory	3
Unsatisfactory	2
Poor	1

4. To be SATISFACTORY in the tutorial component of the BMP evaluations, a student must accumulate at least 18 points during Year I and 18 Points during Year II.

5. If a student has fewer than 18 but more than 15 points in Year I OR fewer than 18 but more than 15 points in Year II they shall be given a grade of INCOMPLETE. Incomplete grades can be changed to Satisfactory by accomplishing the remediation outlined below.

B. STUDENT ORAL CASE ANALYSIS (SOCA)

1. Purpose: The primary purpose of this exam is to assess the student's ability to effectively communicate a critical analysis of a Biomedical Problem (case) through the application and integration of basic science knowledge learned during the phase.

INFORMATION FOR STUDENTS

a. SOCA exam will be conducted at the end of each phase. The format is proscribed. It is an adaptation of the 4 part SOAP [subjective, objective, assessment, plan/prognosis] note format modified to provide an organizational scheme for the oral presentation of a paper case. Each SOCA must utilize the following format:

1). an opening case summary based on the SOAP format

2). identification of 2-4 key concepts that will be developed in the presentation
3). a scientific case analysis based on the SOAP format that includes discussion of the identified concepts.
4). a brief concluding summary

For examples of case presentation in SOCA format, copy and paste the following link to the SOCA Manual after you LOG ON to the MUSM website.
http://medicine.mercer.edu/files/SOCA_Manual.pdf

The only Phase which will not utilize the SOAP format is Brain and Behavior. Because SOAP notes are not used in psychiatry, students will be expected to use the bio-psycho-social method to analyze the cases in this phase and as the organizational framework for the SOCA. For the Brain and Behavior SOCA the following format must be used:

1). an opening case summary
2). identification of 3-4 issues that will be developed in the presentation
3). a scientific case analysis based on the bio-psycho-social model that includes discussion of the identified issues.
4). a brief concluding summary.

b. The SOCA will be formative in nature. The exam will be evaluated against a standard consistent with the phase goals and the position of the phase within the curriculum. Based on that standard, a single examiner who is a tutor in the phase will evaluate the student's performance and determine whether or not the performance was satisfactory based on its adherence to the exam standard. The student will be told the decision and provided constructive feedback as time permits. A written evaluation will be submitted to Academic Records but will not be included on the student's external transcript. Subsequently a copy of the evaluation will be given to the student.

c. Any student receiving an unsatisfactory SOCA evaluation will be required to schedule a meeting with the Phase Coordinator and a Phase tutor of the student's choosing. The student, PC and tutor will review the tape of the exam together. A critical analysis of the performance will be conducted using the exam standard as a guide, and the student will be provided with a summary of its strengths and weaknesses. In addition, the student will be given specific suggestions on how the performance may be improved. This information will be expected to provide suggestions on both content and process. Following this meeting, a written summary of the recommendations will be provided to both the student and Academic Records. At this point Academic Records will be told to reverse the unsatisfactory evaluation to a satisfactory one. If a student performs unsatisfactorily on a second exam, a similar remediation protocol will occur.

The PC and faculty member associated with the second phase will be given a copy of the SOCA recommendations provided after the first unsatisfactory evaluation. This information will be important in determining whether there is a pattern to the student's poor performance.

d. If a student receives an unsatisfactory evaluation on a third exam, a more extensive remediation procedure will be instituted. The student will be required to provide a written analysis of the most recently failed case to the PC. The PC will evaluate the written exam against the SOCA standard originally used for the oral exam. Once the PC is confident that the written analysis at least meets those standards, he will arrange for the student to present the case to two new examiners using standard SOCA procedures. Satisfactory performance must be achieved before the student is released from remediation. A written summary of this remediation will also be provided to the student and Academic Records.

   All subsequent unsatisfactory evaluations will be remediated in a similar manner.

e. All remediations will be completed during the first week of the subsequent phase or ASAP. This is consistent with a philosophy which values the educational appropriateness of a timely remediation of deficiencies.

f. In keeping with the formative nature of the SOCA exam, any student wishing to improve his/her skill may ask to view the taped exam with a faculty member. This session may be informal (verbal recommendations) or formal (written recommendations) at the student's discretion.

g. At the end of each year, a student who satisfactorily completes every exam or participates in the required remediation of any failed exams will be declared satisfactory in the SOCA component of the BMP.

   A student who fails to participate in this remediation program will be unable to advance to the next year. In addition, failure to participate in remediation will be considered a professionalism issue.

h. As a student progresses through the program, the SOCA process will evolve. Students will be slowly introduced to the concept of case analysis over the course of the first year. Expectations for a satisfactory performance will be determined by the tutors in the phase prior to the administration of the exam and will be consistent with the student's educational level. Using this model, the first year student who is undertaking the Musculoskeletal exam will be expected to be significantly more adept at case analysis, organization and presentation skills than one just finishing Phase B.

i. Procedurally, the Cardiology oral will be similar in format to those of first year. **However, beginning with the Pulmonology phase, the diagnosis will be withheld from the written case**. The purpose is two-fold: 1) to allow student to apply specific knowledge from the phase to explain the biomedical basis of the disease state and 2) in a logical fashion analyze the information given and deduce a list of possible explanations for the patient's condition. The goal is to introduce the student to the skills that will be required during the 3rd and 4th years and beyond. The goal is not to teach differential diagnosis. Instead, it is the thought processes, logic, critical thinking and integration of basic science knowledge learned during the phase that will be emphasized. To achieve this goal, slight changes in SOCA format must be possible in the later phases. PCs and tutors associated with those phases will be given some latitude to utilize a case format which best fits the goals of the phase and the educational level of the students. The clinical tutors and/or clinical co-coordinator would be expected to play an invaluable role in this process.

Similar to the first year, expectations for student performance will increase from Cardiology to Endocrinology. This change in expectation is consistent with the use of the SOCA as an evolving educational tool over the two years of the curriculum.

2. Format

a. The SOCA is a formal presentation and students are expected to act and dress professionally. Students are required to wear their white coats.

b. A case similar to those presented during the phase is reviewed by the student for 45 minutes prior to the presentation. During this time, students may take notes and outline their presentation. These notes may be taken into the exam room during the presentation.

c. The student has approximately 20 minutes to present an analysis and discussion of the case.

d. In Phase A, the oral examiners will be tutors in the phase. The tutors will examine the members of their respective tutorial groups.

e. In all other phases, tutors will NOT examine members of their tutorial group.

3. Dates
   a. Evaluations will take place according to the BMP Calendar
   b. Evaluations will generally begin at approximately 7:30 A.M.
   c. A schedule of evaluation times will be posted on Monday prior to the evaluations.
   d. Students will be e-mailed the written evaluation **within 1 week** of the completion of the exam.

INFORMATION FOR TUTORS/EVALUATORS

4. SOCA Preparation and the role of the Tutors:
   a. A clinical tutor, in consultation with the Phase Coordinator shall prepare the case for the SOCA. The case and its complexity shall be representative of the information which reasonably should have been covered during the phase and based on the phase goals and content.
   b. The Phase Coordinator and tutors are responsible for maximizing the reliability of the examination. To accomplish this, they are expected to develop:

      1) The case early in the phase. The purpose of preparing the case early is to provide sufficient time to develop, practice and fine-tune the exam standard.
      2) An exam standard. The exam standard must adhere to the SOCA format and be consistent with the SOCA evaluation tool.
      3) At least one videotape of the exam case. The presenter will be a student chosen by the BMP coordinators. The purpose of this videotape is to provide an opportunity for the tutors to practice using the evaluation standard and normalizing their evaluations prior to the actual exam. This is important in maintaining a reliable assessment of student performance.

      In addition, tutors/evaluators are required to:

      1) Participate in video-tape remediation as required.

2) Participate in post-phase tape reviews. Reviews of randomly selected SOCA presentations will be completed by tutors in the phase. Tutors will be assigned a set of presentations from another examiner and will independently assess each presentation based on the exam standard. This information will be used to evaluate inter-rater reliability and for the identification of faculty development needs. These reviews will **NOT** be used to re-assess the student and the results of the post-phase reviews will remain confidential.

5. Oral Case Analysis

a. Any tutor who is a health professional who provides psychiatric/psychological counseling or other sensitive health services to a medical student must have no involvement in the academic evaluation or promotion of a student receiving those services.

b. The student presentation shall not be allowed to exceed 20 minutes.

c. The evaluator shall allow the student to present a critical analysis of the case, and shall refrain from interrupting the student presentation except under circumstances that may inordinately jeopardize chances of satisfactory performance, such as (but not limited to):

1) significant misinterpretation of information provided;
2) utilization of incorrect information;
3) inability of the student to analyze the case critically, due to lack of essential information;
4) extreme anxiety.

d. Interrogating students as to factual information is inappropriate.

e. The oral evaluator shall have the option of asking specific questions related to the CASE only after the student has completed the presentation. Any questions shall be for the purpose of helping a student to satisfy the performance criteria in the event that the student has not already done so. Thus, questions should be directed strictly at either clarification of points or previous comments, reevaluation of statements or interpretations, or extrapolation or extension of the presented analysis. The exam must not exceed the allotted 30 minutes.

f. Immediately following the exam, the examiner should provide constructive feedback (positive and negative) and an overall assessment of the student's performance (satisfactory or unsatisfactory)

g. The oral evaluator shall submit a written summary of the presentation using the approved SOCA Evaluation form to the Office of Academic Records. **No handwritten evaluations will be accepted.**

C. MULTI-DISCIPLINE EXAMINATION (MDE)

1. Format
   a. This is a written examination given at the end of each phase. There may be two sections to the examination, one based on written material and one based on visual material (projected images, microscopic slides, cadavers, specimens, etc.) USMLE one-best-answer formatted examination questions will be used (See 'Constructing Written Text Questions for the Basic and Clinical Sciences' prepared by NBME for details) with the following exceptions:
      1) Visual material in anatomy lab may use short answer/fill-in-in the blank questions.
      2) Occasional questions which do not meet USMLE format standards can be approved by the PC and the Program Director, not to exceed 5% of the allotment for any discipline
      3) Questions that do not meet these requirements will be rewritten or removed from the exam.
   b. The multiple-choice questions will count one point each.
   c. The fill-in-the-blank questions will count one point each.
   d. A small percentage of questions may be multidisciplinary. In these cases, the question will count as one point on the MDE. However, the question will count as one point for **each** discipline contributing to the question.
   e. Essay questions will have a value of 5 points each.
   f. Answer sheets will be identified as directed by Academic Records.
   g. There will be from 170 to 250 points on the written examination. The written exam may include a separate visual (x-rays, specimens, etc.) section.
   h. Questions are based on objectives and primary references in the Study Guide and on the cases in the phase. (Material exclusively contained in the Secondary References is not testable.)

2. Time
   a. Time for the examination exclusive of practical or projected visual components is approximately 1.2 minutes for each question (e.g. 240 minutes for a 200-question exam). Students will receive 1.5 minutes to answer questions with projected images and 2 minutes per point for essay questions. Additional time will be added for moving between testing locations, viewing projected images, and short breaks.

b. Preliminary results will be released by 5:00 pm on the day of the exam. Final grades will not be released until after test review.

IV. EFFECT OF FAILURE TO MEET EVALUATION STANDARDS

A. STANDARDS FOR THE BMP PROGRAM

Please see the MUSM Student Handbook for Academic Performance Standards in Years I and II. The portions that are applicable to the BMP Program will serve as the Standards for the BMP Program.

B. REPETITION OF A YEAR OR A PORTION OF A YEAR

1. When a student repeats a total year, the grades awarded during the repeated year shall replace the grades awarded during the unsuccessful year.

2. When a student repeats a portion of a year, the grades awarded during the repeated phases shall replace the grades awarded during the unsuccessful phases. Grades awarded during the non-repeated portion of the year shall stand.

V. REMEDIATION

Remediation constitutes an integral component of the BMP Program and is intended to help students overcome academic difficulties. Remediation consists of diagnosis, instruction and evaluation. A specific case of remediation might include any or all three components.

A. INITIAL REMEDIATION

Students must meet with faculty members of a given discipline to discuss remediation at the following nodal points; however, the decision to undertake remediation at these times is left to the student.

Discussion with faculty members in a given discipline must take into account whether the number of questions remaining to be asked in that discipline is sufficient to allow the student to raise his/her score to 65%.

1. During YEAR I:
   a. When 50% of the MDE questions for the year in a given discipline have been asked; and a student's unremediated score in that discipline is below 61%.
   b. When a student fails a first or second MDE or oral examination, the student will be required to meet with the student’s Academic Counseling Team. See the MUSM Student Handbook.

2. During YEAR II:
   a. When 50% of the MDE questions in a given discipline for the two years have been asked; and a student's unremediated score in that discipline is below 61%.
   b. When a student fails a first or second MDE, the student will be required to meet with the student's Academic Counseling Team. See MUSM Student Handbook.

3. Student Oral Case Analysis Examinations:
   See SOCA policy above for remediation requirements.

B. SUBSEQUENT REMEDIATION

1. If, at the end of Year I, a student's overall MDE average is below 65% but above 60%, that student must remediate sufficient disciplines to bring his/her overall MDE average to 65% before they can enter Year II. Each discipline that remediates a student must certify him/her satisfactory for the Year I content in that discipline. The student's average in that discipline will then be raised to 65% but no higher.

2. After the completion of Year I, a student **may choose** to remediate any discipline in which his/her average is less than 65%. If the student passes the remediation examination, a score of 65% will be recorded as the discipline score for the start of Year II. **If the student fails the remediation examination, the remediation exam score will be recorded as the discipline score for the start of Year II.**

   If a student who remediated and failed a discipline after Year I, has a discipline average of less than 65% after the end of Year II, he/she may remediate both Year I (for a second time) and Year II discipline material in an attempt to bring their discipline average to 65%.

3. Histology offers a deceleration program. Students are eligible for this program if their Histology average is below 65% at the end of the 1st year when over 50% of the Histology questions have been asked. The essence of the program is that students retake all of the Histology segments of the 1st year MDE exams (with the exception of the Musculoskeletal phase). If their new scores and the original Musculoskeletal scores are >65%, the first year average is raised to 65%. With satisfactory performance on the year 2 examinations, the students would be satisfactory in Histology and avoid subsequent remediation. The deadline for participation is the first week of Cardiology. See Dr. Kacsoh for more information.

4. If, at the end of Year II, a student's average in any discipline is below 65%, the student must remediate that discipline.
   a. Each discipline that remediates a student must certify him/her satisfactory for the Years I and II content in that discipline.

b. The student's average in that discipline will then be raised to 65% but no higher.

5. If at the end of Year I or Year II a student receives an INCOMPLETE Tutorial grade, the following remediation must be accomplished in the following sequence in order to be Satisfactory in the BMP Program:
   a. Search the literature on the benefits of small group learning models;
   b. Write a minimum of a 1000 word original paper on the benefits to medical students of the small group tutorial education model;
   c. Have this paper graded satisfactory by the BMP Directors.

6. For each student who has to remediate, the Discipline Representative must submit to the BMP Directors a written remediation contract cosigned by the student and by a member of the discipline faculty involved in the remediation, or BMP Directors in the case of Tutorial remediation.

C. UNIFORMITY OF EVALUATION

In order to achieve uniformity in the evaluative component of the Remediation Program, the following shall apply:

1. When a student's score in a given discipline is less than 63%, a written, quantitative examination shall be administered to certify that remediation has been completed and that the student is satisfactory. The level of difficulty of this examination shall be consistent with that of the initial test(s).

2. When a student's score in a given discipline is unsatisfactory but not less than 63%, the nature of the examination used to certify successful remediation shall be at the discretion of the faculty of said discipline.

3. The complete details of the evaluation component of the Remediation Program and examination limits will be made available prior to the initiation of mandatory remediation. Please see the BMP program directors for details

VI. AUTOPSY PROGRAM

A. Each student shall participate in a minimum of one autopsy during the second year.
   1. Autopsies will be scheduled by the Department of Pathology.
   2. Students may not miss other scheduled academic programs in order to attend autopsies with the following exception:
      a. A student may absent himself/herself from a BMP discussion group in order to attend an autopsy as long as no more than one student from any one group must leave to attend the autopsy.

B. A satisfactory write-up, as determined by the pathologist in charge, will be required and will be a part of the overall BMP evaluation.

VII. POLICY ON ATTENDANCE

Group attendance is mandatory: However, an occasional absence cannot be avoided. All absences must be reported to Academic Records. **Students who exceed the allowable number of unexcused absences will receive a failing tutorial grade for the phase in which the policy is exceeded.**

A. YEAR ONE ATTENDANCE POLICY: FIRST-YEAR STUDENTS

1. are allowed one unexcused absence during the time period that encompasses Phases A, B, and Host Defense.
2. are allowed one unexcused absence during the time period that encompasses the Hematology, Neurology, and Musculoskeletal Phases.
3. In addition to the unexcused absences listed in #1 and #2, an additional unexcused absence would be permitted during either period.
4. are not be allowed to carry over unused unexcused absences to the next session of phases. Therefore, first year students would be allowed a maximum of three unexcused absences with no more than two unexcused absences allowed during the time frames listed in #1 and #2.
5. **No student will be permitted more than one unexcused absence during any individual phase.**

B. YEAR TWO ATTENDANCE POLICY: SECOND YEAR STUDENTS

1. are allowed one unexcused absence during the time period that encompasses the Brain & Behavior, Cardiology, and Pulmonology Phases.
2. are allowed one unexcused absence during the time period that encompasses the Renal, Endocrinology, and Infectious Diseases Phases.
3. are not be allowed to carry over unused unexcused absences to the next session of phases. Therefore, second year students would be allowed a maximum of two unexcused absences during the entire second year.

C. PROCEDURES

1. Prior to known absence
   a. Notification and consultation with the Director (Dr. Thompson 912-350-1721) or Assistant BMP Director is required (Dr. Tift 478-301-2405). Such notification may be done by email, telephone, or in person.
   b. Notification of tutor and group is strongly recommended.

2. Unexpected absence (e.g. illness)
   a. Academic Records (Macon: 301-4109; Savannah: 350-1716) should be contacted to give notice of absence.
   b. Students will automatically receive a notification by email that they have 1 week to provide an excuse by meeting in person with one of the BMP Directors. Failure to respond will result in an automatic unexcused absence.

3. Students are responsible for all missed academic work. It is the responsibility of the student to contact the tutor and group for issues, assignments, and other information.

4. Students should be aware of the MUSM Medical leave policy in the MUSM Student Handbook.

5. **Absences from examinations are to be avoided.** Students are expected to notify the BMP Directors as soon as a problem is recognized and prior to the exam.

6. **Illness on the day of the exam will require documentation and verification from a physician**.

7. Decisions on excusing absences are made by the Assistant BMP Director. The BMP Director will be consulted as necessary. The Associate Dean for Academic Affairs will serve as a consultant to the Directors. Appeals of decisions should be made in writing and will be forwarded to the Associate Dean for Academic Affairs.

VIII. CURRICULUM

A. ORGANIZATION

1. Phases: The BMP program is divided into 12 phases ranging from 5-7 weeks.

Phase	Length	Coordinator
A	6 Weeks	Dr. Horst
B	6 Weeks	Dr. Perkins
Host Defense	6 Weeks	Dr. Garner
Hematology	6 Weeks	Dr. Walker
Neurology	7 Weeks	Dr. Thompson
Musculoskeletal	6 Weeks	Dr. Young
Brain & Behavior	5 Weeks	Dr. Shillcutt
Cardiology	6 Weeks	Dr. Russ
Pulmonology	6 Weeks	Dr. Tift
GI	6 Weeks	Dr. Reagan
Renal	5 Weeks	Dr. Thomas
Endocrinology	6 Weeks	Dr. Kacsoh

2. Disciplines: Much of the content in the phases is coordinated by disciplines. Scores are determined for each discipline. These discipline scores are determinants of remediation activities and factor in promotion standards.

The disciplines (and associated sub-disciplines) are

- Anatomy
  - Gross Anatomy
  - Embryology
- Behavioral Science
- Biochemistry
  - Biochemistry
  - Nutrition
- Genetics
- Histology and Cell Biology
- Immunology
- Microbiology
  - Microbiology
  - Virology
- Neuroscience
- Pathology
- Pharmacology
- Physiology

B. TUTORIALS (Discussion Groups)

1. Constituents
   a. There will be 6-9 students in each group.
   b. Students will be assigned randomly. Exceptions require permission of the BMP Director.
   c. Students will be reassigned each phase.

2. Meetings
   a. Groups meet three times each week, usually on Monday, Wednesday and Friday.
   b. Groups must start by 9:00 A.M.
   c. Group meetings last for approximately three hours with a short break.

3. Group Process – Students
   a. Develop learning issues and objectives from written biomedical cases.
   b. Discuss information obtained by independent study that pertains to issues and objectives and participate in group learning activities.
   c. Refine learning objectives and discuss new information.

d. Wrap the case; summarize the basic science knowledge necessary to sufficiently analyze the clinical case.
e. Evaluate their group's process and progress. Resolve group problems.
f. Professionalism is expected in all activities.
g. See a detailed description of Group Process in Appendix A.

4. Evaluations
   a. Formal evaluations are completed in writing at the end of each Phase with the goal of providing feedback to the student, tutor, or phase/program about areas of strengths and weaknesses.
   b. Students evaluate: Tutors, and Phase/Program
   c. Tutors evaluate: Students and Phase/Program.
   d. Formal Phase de-briefing sessions are held at the end of each phase. Students are randomly assigned to one session/year. These assignments are made at the start of the academic year. Attendance is required. These sessions are conducted by the Asst. BMP director and include the Phase Coordinator and the BMP director.

C. STUDY GUIDE

1. Purpose: To assist the student in meeting the learning goals of the BMP curriculum by:
   a. identifying the discipline learning objectives for each phase
   b. clarifying the depth of understanding expected for each discipline's objectives
   c. specifying source material for the multi-disciplinary examination.

2. Format
   a. In Phase A, the Study Guide is organized around each case. In the other phases, the Study Guides are organized by disciplines.
   b. The study guides contain learning objectives for each discipline represented in the phase and are arranged by either case (Phase A) or discipline (remainders of phases).
   c. Primary references and page numbers are given for each topic and at the discipline's discretion with each learning objective.
   d. Representative slides, cadavers, prosected or plastinated specimens, X-rays, imaging studies and other visuals/multimedia may be given as primary references.
   e. Secondary references may be included to provide an alternative view of the material or for enrichment. Information provided exclusively in secondary references is not testable on the MDE.

D. RESOURCE SESSIONS

1. Resource sessions at MUSM are voluntary learning activities which can either be student or faculty generated. The essence of independent learning necessitates student-generated faculty resource sessions and the practicality of efficient faculty guidance requires strategically administered faculty-generated resource sessions. In both cases the following expectations are acknowledged as necessary adjuncts to the BMP.
    a. The resource faculty member(s) for the phase material in question is (are) designated in the study guide, and this assignment should be respected by the students. Substitution of different resource person(s) is at the discretion of the designated study guide resource person(s).
    b. The learning activity in each resource can be instructive, explanative or informative, but should involve only assigned study guide reading or case material. Material not found in the assigned study guide reading or cases is inappropriate for resources; however its use in a very limited capacity is acceptable if the material is defined to the students by the resource person as nonessential for evaluation.
    c. Resource sessions may not be held during normal tutorial time.
    d. The coordinator of each phase in cooperation with the class president or designee will oversee and manage the scheduling of resource sessions offered to the class, and shall be responsible for their availability, appropriateness, and evaluation by the students. **No discipline is allowed to schedule multiple resource sessions in a given phase UNTIL all other desired sessions have been scheduled. The number of resource sessions/phase should be kept to a minimum (ideally no more than 10) to allow sufficient time for independent study.**
    e. In order to preserve inventive and innovative educational techniques, the nature of the resource, whether didactic, interactive, or team based, is left to the discretion of the resource person(s).
    f. The Phase Coordinator is responsible for insuring that all resource sessions are entered into the web based program calendar.
    g. Problems arising in the resourcing component of a phase should be reported to the phase coordinator. The effectiveness of class resourcing in each phase will be reviewed. The venue for this review will be the final phase review, which will include a written report of scheduled class resources. This resource review will reflect the viewpoint of both the phase coordinator and the students, including perceived problems and modifications.
    h. Resource sessions will be recorded when possible. Recordings of sessions may be uploaded to a server and/or converted into audio podcasts. Links to these resources will be available through the password protected Medicine.Mercer.edu web site. On occasion, DVDs of resource sessions may also be available, these may be checked-out from the LRC. **Under no circumstances may DVDs be copied or reproduced in any manner including printing. Possession of copied materials is an infraction of the Honor code.**

2. Faculty
   a. Many of the disciplines have designated individuals to handle resources in certain areas of their discipline.
   b. Study guides will identify the appropriate resource faculty for that phase.

3. Library
   a. Primary and some secondary Study Guide references are placed on reserve per Library and University policies.
   b. Library personnel will aid in searches for other material.

4. Learning Resource Center Macon (LRC) and Library-Savannah
   a. Some learning aids listed in the Study Guide are available in the LRC or Library. LRC/library personnel or the Phase Coordinator will help locate this material.
   b. Models, radiographs, preserved tissue specimens, histology and histopathology slides, computer-assisted instruction programs, interactive video programs and some audio-visual programs are also housed in the LRC/library.
   c. See Learning Resources Guide for complete listing (available in LRC/library).

5. Gross Anatomy Prosection Program
   a. Opportunities for cadaver dissection and review of prosected specimens, in addition to mandatory dissections, are available to groups of students.
   b. Exercises will be correlated as much as possible with the BMP phases.
   c. Policies for the Anatomy Lab
      1). <u>Authorized Use</u>. Only students, faculty and other authorized MUSM personnel are allowed in the gross anatomy lab. Under no circumstances may a student bring an unauthorized visitor into the lab.

      2). <u>Anatomy Lab Access</u>. Access to the gross anatomy lab may be restricted at certain times. However, for the most part students will have access to the Anatomy Lab 24 hours a day, seven days a week. Students may be required to access the Anatomy Lab with their University Bearcard (Macon) or their Memorial ID badge (Savannah). Such access is recorded in the respective access databases. After hours, students are encouraged to use the Lab only in the presence of another student; for security and safety. Working alone in the Lab, particularly at night, is strongly discouraged.

3). Anatomy Lab Attire. In keeping with the General Laboratory Safety Requirements of Mercer University, open-toed or perforated shoes are not allowed in the anatomy lab. In addition, although protective, disposable gowns are provided by MUSM, it is recommended that students wear clothing that can be damaged without concern.

4). Anatomy Lab Accidents. In the case of an injury in the anatomy lab, students are required to notify a faculty member immediately. If such an injury occurs in the anatomy lab after hours, students should seek appropriate medical care and must contact Mercer Police to file an accident report. The student should subsequently report the incident to either Dr. Henry Young (Macon) or Dr. Bill Rhoten (Savannah) Professors of Anatomy.

5). Pregnancy and Access to the Anatomy Lab. Medical students who are pregnant or who are preparing for pregnancy are advised to consult with their primary care provider before beginning or continuing the sequence of anatomy laboratory exercises of the BMP Program. If a student expects to be pregnant during lab rotations, she is to inform the Anatomy lab director (either Dr. Henry Young (Macon) or Dr. Bill Rhoten (Savannah). At that time, the student will be referred to Mr. Alan Baca, University Director of Environmental Health and Safety, who will inform her of the potential risks of exposure to formaldehyde and phenol as used in the Anatomy Lab. The student will also be instructed on potential filter devices that can be used to remove these chemicals from the air and that can be fitted to the student. A filtration device and its correct fitting may be provided at the School's expense. However, the student must provide written recommendation from her physician that (a) the wearing of a specific filtration unit is recommended for her/his patient and that (b) the student is physically fit to respire through that filtration unit.

IX. **COURSE EVALUATION**

A. CONTINUAL EVALUATION – Students and faculty are encouraged to give feedback whenever possible. This may be done either informally or formally, but always in a professional manner.

B. STUDENT

1. Web based, on-line evaluation- Students are required to complete evaluations following each phase. These evaluations include an evaluation of the tutor, SOCA exam/examiner and the Phase. Final grades will not be released to the students unless the evaluations have been completed. .
2. Phase review – A cohort of students meet with the phase coordinator and BMP Directors following each phase. Students are assigned to a single review session per year. A structured discussion on the components of the phase is held.
3. A summary of the on-line phase evaluation and the phase review discussion is made available to the entire student body and faculty in the office of the BMP Program Directors (Dr. Thompson, Savannah and Dr. Tift, W96)

C. FACULTY

1. Discipline faculty - Following grading, question analyses (e.g. difficulty and discrimination) are returned to each faculty member submitting questions to that exam. These analyses are used for exam, discipline, and phase evaluation and improvement
2. Phase Coordinator – Each Coordinator evaluates their phase and reports the findings in writing to the Phase Coordinator Committee. A written report is also forwarded to the Program Directors and the Associate Dean of Academic Affairs.

D. PROGRAM EVALUATION—The Program Directors will complete a program evaluation once a year. This evaluation will be submitted to the CIC.

APPENDIX A: GROUP PROCESS

These are the components of group process in the BMP Program.

1. READING THE BMP (Biomedical Medical Problem) or case

   Definition of a "BMP" - A BMP is a written medical narrative of a patient. Most clinical BMPs include:

   Chief Complaint or Initial Finding
   Background
   Family Medical History
   Personal Medical History
   Patient's Current Problem(s)
   History of Present Illness
   Physical Findings
   Laboratory Data
   Diagnosis
   Actions taken to Correct the Problem
   Results of the Actions Taken
   Prognosis

   When a BMP is read for the first time, it should be discussed as thoroughly as the students are able at their stage in the curriculum and phase.

   It is not considered important when or how much discussion takes place before beginning the process of generating issues. However, the above-mentioned "thorough discussion" should occur before issues are finalized and prioritized.

2. GENERATION OF ISSUES

   Definition of an "Issue" - An issue is a question or problem raised about a specific aspect of a BMP.

   Purpose of Generating Issues
   To identify and verbalize weaknesses or gaps in the students' basic medical science knowledge necessary to understand and discuss the BMP at the molecular through the community levels.

   Purposes of Issues

   a. To guide appropriate self-directed study by the students in seeking relevant answers or solutions.
   b. To guide focused, productive group discussions of the basic science information and concepts relevant to the BMP under consideration.
   c. While it is important for the group to raise all pertinent issues, it is understood that not all issues which satisfy these purposes will be a part of the list of issues finalized and prioritized by the group.

Reasons for deleting issues include:

1) There is a more appropriate BMP in the phase or a more appropriate phase for the issue.
2) The issue has already been covered in a previous phase and the group agrees that it is unnecessary to revisit the issue. It is important to note here that in wrapping up a BMP this material should be applied to the BMP at some reasonable level.
3) A group member adequately addresses the issue for the group during Issue Generation. The issue is modified to a better or more complete issue and in the process loses its identity.
4) The group no longer considers the issue to be substantive.
5) The aggregate of issues raised about a BMP should lead to a group discussion at the level of analysis, synthesis and integration. The result of this discussion will be a clear, sound, scientific understanding of the patient's history, diagnosis, treatment and outcome.

d. Nature of an Issue

1) An issue does not necessarily have to be in the form of a question. It should have sufficient clarity and specificity so that the group understands the task for both independent study and the discussion at the subsequent meeting.
2) How the questions or problems are stated can have a tremendous impact on how the discussion proceeds when the group assembles to tackle the issues.
3) In general, questions or problems which engender short answers (yes/no or one/two word) are to be minimized. They do not usually lend themselves to in-depth understanding; e.g., "Where is the thyroid gland?" [Munson, 1976 mused "The truth is, that not a whole heck of a lot about a complicated subject can be learned from a definition of it."]
4) Short answers are not to be avoided completely because they can be important; i.e., the group needs to know a definition or some other piece of information in order to determine an appropriate direction or broader learning issue.
5) An issue should be broader than can be addressed in a very short answer, but not so broad so as to lose its relevance to the BMP; e.g., "What is the anatomy of the thorax?" Nor should they be so broad as to be ill defined for the tasks of studying and discussing; e.g., "Hyperthyroidism."

e. Combining/Refining Issues

Not all of the issues as originally generated will satisfy the purpose of issues. One of the group tasks is that of dropping, clarifying, refining, splitting and/or combining issues. This process serves several useful functions:

1) It improves the efficiency of information search and retrieval, study and discussion.
2) It often requires consideration of the patient.
3) It causes further analysis of the information in the BMP or information furnished by group members.
4) It further clarifies the issue(s) so that the group is more nearly of one mind concerning the focus of the discussion planned for the next meeting.

f. Prioritization of Issues

The final task in issue generation is to arrive at a consensus concerning which issues will be discussed and in what order they will be discussed at the ensuing meeting(s). Benefits of this process are:

1) Students are encouraged to think about which issues should logically precede or follow other issues.
2) It is the basic process involved in organizing material for presentation.
3) If they have underestimated the amount of material involved, it also assures that the whole group will do first-things-first (be prepared on the first issues).
4) It should be recognized that more complete knowledge gained by study may legitimately suggest altering the priorities at the beginning of the next meeting.

g. Tutor's Role in Issue Generation

To facilitate the generation and prioritization of issues which are necessary and sufficient to guide the group to an adequate understanding of the BMP and the medical science related to the BMP.

3. DISCUSSION OF ISSUES

a. Purposes of Discussion

1) To bring each group member to an adequate understanding of the basic science information and concepts involved in answering or addressing the issues. To accomplish this through the exchange of information derived from the group's collective knowledge and deliberation.
2) To identify weaknesses in knowledge or understanding which require new or modified issues.
3) To bring each member to an understanding of the scientific basis of the medical problem, its manifestations and treatment through the groups' discussion of all the issues.

b. Nature of the Discussion

1) Throughout its course, the discussion will involve all group members. For individual group members, this will cycle between active and passive involvement.

2) Discussion by group members will exhibit Higher Cognitive Skills and Oral Communication Skills elucidated in the BMP Goals. It will be at a scientific level commensurate with contemporary medical education, the phase of the curriculum and the progress within the Phase.

3) The discussion should be focused, productive, and efficient, while adhering to the plan which was determined by the group.

4) Reading from written material as a means of presenting scientific information is not in keeping with the intent of the BMP Program. Appropriate use of written material in discussions would be to refer occasionally to such material as one would when giving a speech. Reading verbatim from texts or notes is appropriate if done to clarify a point of confusion or disagreement.

4. BMP (Case) Closure

a. Purpose: To integrate the discussions of the various issues into an explanation of the scientific basis of the BMP.

b. Nature of the Closure

1) In the BMP closure, the group will demonstrate an understanding of the basic science of the BMP as an integrated whole rather than as a series of parts (e.g., epidemiology, physical findings, treatment, prognosis, etc.) and will reach appropriate conclusions.

The BMP closure will take the form of a summary of the information and concepts from each issue, as well as pertinent relationships among issues. The information presented at this time will not be at the same level as during the issue discussion but will be alluded to specifically; e.g., "this is where we detailed the metabolic pathway"; or, "This is where we went over the histology slides of the …