GENES TO SOCIETY

Genes to Society

Curriculum Leaders' Manual

Academic Year 2021-2022

Produced by the
Johns Hopkins University School of Medicine
Office of Medical Student Curriculum

Updated August 2021

GTS Course Directors' Handbook

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Preface

The Office of Medical Student Curriculum (OMSC) is pleased to provide this manual to assist course directors in the development and implementation of curricula for the M.D. degree program at JHUSOM.
Section I outlines the offices and personnel available to support the curriculum and course directors.
Section II outlines expected standards and policies for the curriculum as determined by the JHUSOM Educational Policy and Curriculum Committee, as well as our system of continuous quality improvement.
It is our hope that bringing the policies and resources into one document will facilitate the success and quality of the *Genes to Society* Curriculum.

Please feel free to send suggestions to us at officeofcurriculum@jhmi.edu, or directly to Nancy Hueppchen (nhueppc1@jhmi.edu) or Janet Record (jrecord2@jhmi.edu).

Highlights – New Items or Changes

JHU SOM Medical Student Program Mission Statement and Medical Education Program Objectives:https://www.hopkinsmedicine.org/som/curriculum/genes_to_society/mission.html

Genes to Society 4-Year Curriculum Website:
https://www.hopkinsmedicine.org/som/curriculum/genes_to_society/curriculum-overview.html

Office of Medical Student Curriculum (OMSC):
https://www.hopkinsmedicine.org/som/curriculum/

LCME Accreditation Visit (Academic Year 2021-22)
In preparation for our next accreditation cycle, education leaders and stakeholders have completed a comprehensive self-study culminating in the JHU SOM Data Collection Instrument (including all related documents) which can be found on the

jhed restricted site: https://restricted.hopkinsmedicine.org/LCME/2021/2020-2021-DCI-appendices.html
To become familiar with the LCME standards and elements, please visit: http://lcme.org/publications/
While our LCME accreditation visit will take place from 11-13 October 2021, we have identified important opportunities for improvement and have begun work which will be ongoing.

Content Review for Year 1-2
Beginning in Summer 2020, the OMSC launched an initiative to review content covered in courses in years 1 and 2 of the curriculum. The goals include to identify core material to retain in required sessions, and material that could be moved to an optional format because it is foundational (too basic and may have been covered prior to the course) or enhancement (of interest to some but not all students, or more detailed than material considered core for an undifferentiated student). The Content Review also aims to identify gaps, unhelpful redundancies within or across the curriculum, and any opportunities to identify and eliminate bias in the educational materials. Each section of Scientific Foundations of Medicine and the Genes to Society course has been or is being reviewed by a small team consisting of a student who has finished Year 2, a clinician educator and/or clinician scientist, another faculty member who teaches in a different course in Year 1 or 2, and the section leader.

Online Delivery of Lecture Content
Lectures will be recorded on Panopto and delivered asynchronously, allowing for a greater focus on in-person learning. Following content reviews, we aim for lectures to focus on material to be assessed with optional links to foundational review material or enhancement material for greater depth of learning. The OMSC and the Office of Online Education and the Office of Information Technology have partnered to provide support services for the transition from in-person lectures to online learning.

Enhancements for Learning in Small Groups and Improving Comparability Across Small Groups
A template for Small Group Session Guides is available at the OMSC home page >> Faculty Resources >> Small Group Session Guide Template. This guide helps students by clarifying learning objectives of the session, listing the preparation necessary prior to the session (e-lectures related to the content to be discussed), and answer keys to be released after the small group session. The Facilitator version of the session guide aims to enhance faculty facilitation and ensure a relatively consistent student experience across small groups on the given topic.

Entrustable Professional Activities
Clinical faculty will resume work on the EPA pilot and begin creating trigger videos for each EPA to be used for learner and faculty development. To learn more about the AAMC EPAs, please see the AAMC EPA Faculty and Learners' Guide: https://www.aamc.org/initiatives/coreepas/

Comprehensive Clinical Skills Examination (CCSE)
A task force has been formed to review teaching and assessment of clinical skills across the 4-year curriculum and design a new CCSE as a capstone clinical skills assessment as a reflection of our medical education program objectives and expectations for our graduates.

Standard Grading Model for Core and Advanced Clinical Clerkships
In collaboration with the Office of Assessment and Evaluation (OAE), the clinical clerkships continue to complete modeling of a proposed criterion-based, conjunctive or non-compensatory model for clerkship grades. Modeling is expected to be complete for stakeholder review by early 2022. A task force will begin fall 2021 to also explore whether to continue a P/F grading scheme, resume 4-Tiered scheme (H/HP/P/F), or another scheme.

Scheduling Required Sessions in Years 1 – 2
Please note that dates and times for any sessions with Required Student Attendance in Years 1 and 2 must be finalized in OASIS no later 2 weeks prior to the start of the course. Required asynchronous and synchronous learning should fall within the daily footprint allotted a specific course so that activities for all simultaneous courses will not exceed the workload policy and will allow for personal appointments and extracurricular learning and wellness activities.

Mission Statement and Medical Education Program Objectives
John Hopkins University School of Medicine

The **mission** of the Johns Hopkins School of Medicine is to prepare physicians to practice compassionate clinical medicine of the highest standard and to identify and solve fundamental questions in the mechanisms, prevention, and treatment of disease, in health care delivery and in the basic sciences.

The aim of the pre-doctoral medical curriculum of the Johns Hopkins School of Medicine is to prepare a diverse group of physician-leaders in Medicine to improve health of a diverse population through patient-centered medical practice and by addressing fundamental questions related to human health and disease; health care delivery; the medical humanities; and the basic sciences. As a measure of their competence, every graduate of the Johns Hopkins University School of Medicine will:

The Science and Practice of Medicine

- Apply scientific principles and a multidisciplinary body of scientific knowledge to the diagnosis, management, and prevention of clinical problems.
- Understand the variation in the expression of health and disease through critical evaluation of biomedical research.

Clinical Competence

- Obtain a sufficient level of medical knowledge to understand the basic facts, concepts, and principles essential to competent medical practice.
- Exhibit the highest level of effective and efficient performance in data gathering, organization, interpretation and clinical decision-making in the prevention, diagnosis, and management of disease.

The Social Context of Medicine

- Identify and respond equitably to the social, behavioral, economic, and structural factors that influence health, disease, health care, and biomedical science.

Communication

- Demonstrate effective and compassionate interpersonal communication skills toward patients and families necessary to form and sustain effective medical care.
- Present information and ideas in an organized and clear manner to educate or inform patients, families, colleagues and community.

Professionalism

- Display the personal attributes of compassion, honesty, and integrity in relationship with patients, families, and the medical community.
- Adhere to the highest ethical standards of judgment and conduct as it applies to the health care milieu.
- Demonstrate a critical self-appraisal in their knowledge and practice of medicine, as well as receive and give constructive appraisal from/to patients, families, colleagues, and other healthcare professionals.

Lifelong Learning

- Understand the limits of personal knowledge and experience and will demonstrate the intellectual curiosity to actively pursue the acquisition of new knowledge and skills necessary to refine and improve their medical practice and/or to contribute to the scientific body of medical knowledge.

The SOM Medical Education Program Objectives are mapped to the eight **AAMC Competencies for Physicians**:
Patient Care (PC), Medical Knowledge (MK), Interpersonal and Communication Skills (ICS), Professionalism (P), Practice-Based Learning and Improvement (PBLI), Interprofessional Collaboration (IPC), and Personal and Professional Development

(PPD).

Entrustable Professional Activities (EPAs)

The School of Medicine, the UMEPCC Clerkship/Clinical Skills Directors Subcommittee in particular, is currently considering how best to integrate formal assessment and handoff to GME of the 13 AAMC EPAs listed below:

EPA 1: Gather a history and perform a physical examination

EPA 2: Prioritize a differential diagnosis following a clinical encounter

EPA 3: Recommend and interpret common diagnostic and screening tests

EPA 4: Enter and discuss orders and prescriptions

EPA 5: Document a clinical encounter in the patient record

EPA 6: Provide an oral presentation of a clinical encounter

EPA 7: Form clinical questions and retrieve evidence to advance patient care

EPA 8: Give or receive a patient handover to transition care responsibility

EPA 9: Collaborate as a member of an interprofessional team

EPA 10: Recognize a patient requiring urgent or emergent care and initiate evaluation and management

EPA 11: Obtain informed consent for tests and/or procedures

EPA 12: Perform general procedures of a physician

EPA 13: Identify system failures and contribute to a culture of safety and improvement

Definitions

1. *Competency:* An observable ability of a health professional, integrating multiple components such as knowledge, skills, values, and attitudes. Since competencies are observable, they can be measured and assessed to ensure their acquisition.

2. *Entrustable Professional Activity (EPA):* EPAs are units of professional practice, defined as tasks or responsibilities that trainees are entrusted to perform unsupervised once they have attained sufficient specific competence. EPAs are independently executable, observable, and measurable in their process and outcome, and, therefore, suitable for entrustment decisions.

Directory of Curricular Support Personnel

Name	Title	Email	Voicemail	(curricular responsibilities)
Ziegelstein, Roy	Vice Dean for Education	rziegel@jhmi.edu	410-955-8401	Chairs UMEPCC
Hoebing, Joyce	Administrator for the Office of Education	jhoebin1@jhmi.edu	443-287-7120	Administrator for the Vice Dean; coordinates budgets for the curriculum
Faust, Bryant	Associate Dean Registrar	bfaust1@jhmi.edu	410-955-3080	Student enrollment and credentialing; maintenance of student records
Chretien, Katherine	Associate Dean, Medical Student Affairs	kchretien@jhmi.edu	410-955-3416	Office of Medical Student Affairs
Lipsett, Pamela	Chair, SAPE Committee	plipsett@jhmi.edu	410-955-3739	Internal review of courses
Hunt, Betsy, until 10/3/21 Geoffrey Tobias Miller, director as of 10/4/21	Director, Simulation Center	ehunt2@jhmi.edu	410-614-0847	Simulation Center
Jung, Jules	Associate Director Simulation Center	jjung@jhmi.edu	443-287-6983	Liaison for Medical Student curricular activities in the Simulation Center
Blanck, Jaime	Welch Library Liaison for SOM	jblanck1@jhmi.edu	410-955-7269	Library support for course work; information training
Staff:				
Hueppchen, Nancy	Associate Dean for Undergraduate Medical Education	nhueppc1@jhmi.edu	410-502-6105	Oversight of the medical student experience, content coordination and workload, LCME standards
Record, Janet	Assistant Dean for Undergraduate Medical Education	jrecord2@jhmi.edu	443-287-4421	Implementation, monitor content, coordination and workload, LCME standards, special projects
Stratton, Celeste	Instructional Designer	cstratt6@jhmi.edu	410-614-3746	Educational technology, course evaluation reports, implementation of online testing
Hennel, Terri	Program Admin for Undergraduate Medical Education	thennel1@jhmi.edu	410-614-3684	Supervisor, Office Manager, and Admin for the Year 2 Courses
Fornoff, Sherrie	Medical Training Program Admin	sfornoff@jhmi.edu	410-502-6075	Admin for the Year 1 Courses

Shultz, Susan	Medical Training Program Admin	sshultz1@jhmi.edu	410-955-8336	Admin for TIME and Translational Science Courses, Horizontal Strands, and Adv. Ambulatory Clerkship
Drake, Joanne	Senior Administrative Coordinator	jdrake5@jhmi.edu	410-614-0986	Senior Admin for Office of Medical Student Curriculum (OMSC)
Office of Assessment and Evaluation:				
Duran, Alex	Director, Office of Assessment and Evaluation	aduran2@jhmi.edu	410-955-5289	Provide analysis of test construction and performance, item formatting, test reliability and measurement strategies
Office of Information Technology (OIT) Staff:				
Spencer, Lorraine	Director, OIT	lspencer@jhmi.edu	410-955-7932	Management and creation of databases and applications
Dodd, Mark	Sr. Systems Engineer	mdodd@jhmi.edu	410-303-3015	IT and Academic Computing support
Steele, John	Multimedia Coordinator	jsteel12@jhmi.edu	410-419-4819	AV support, and AMEB room scheduling
Office of Online Education Staff:				
Kearns, Robert	Director, Online Education	Robert.kearns@jhmi.edu	410-955-0050	Director of Online Education
Ledebur, Lindsay	Instructional Designer	Lindsay.ledebur@jhmi.edu	410-502-5286	Design in Blackboard for courses; assistance in preparing online lectures
Burns, Sara	Instructional Designer	Sara.burns@jhmi.edu	410-502-5286	Design in Blackboard for courses; assistance in preparing online lectures
Thorne, Megan	Instructional Designer	Mthorne7@jhmi.edu	410-502-5176	Design in Blackboard for courses; assistance in preparing online lectures
Rundlett, Ethan	Instructional Technologist	Ethan.rundlett@jhmi.edu	410-502-3768	Online examination implementation
Colleges Advisory Program				
Goldstein, Mitchell	Director, Colleges Advisory Program	mgoldst2@jhmi.edu	410-502-3737	Colleges Advisory System, and Director of Clinical Foundations
Frosch, Emily	Associate Director, Colleges Advisory Program	efrosch@jhmi.edu	443-287-7223	Associate Director, CAP and Clinical Foundations of Medicine
Chawluk, Gen	Administrator, Colleges Advisory Program & Clinical Foundations	gen@jhmi.edu	410-502-3737	Administration of Colleges and course coordination for Clinical Foundations of Medicine
Office of Medical Student Research and Scholarship:				

Beach, Mary Catherine	Director, Scholarly Concentrations	mcbeach@jhmi.edu	410-614-7056	Director of Scholarly Concentration Course
Dodd, Delena	Academic Coordinator	ddodd5@jhmi.edu	410-614-7056	Coordinator for Scholarly Concentrations
Institute for Excellence in Education (IEE):				
Cofrancesco, Joseph	Director, IEE	joeco@jhmi.edu	443-287-4435	Director of IEE
Westman, Michael	Administrative Coordinator	mwestman@jhmi.edu	443-287-4435	Administrator for IEE
Armstrong Staff and Support:				
Hughes, Doug	Zone Maintenance Supervisor	dhughe22@jhmi.edu	443-509-2601	Maintenance of Armstrong; facilities support; configures rooms
Armstrong Security Desk			410-955-1333	Security in Armstrong

A. The Undergraduate Medical Educational Policy and Curriculum Committee (UMEPCC)

Established by the Dean of the Medical Faculty, the Undergraduate Medical Educational Policy and Curriculum Committee (UMEPCC) is a standing committee of the School of Medicine and the institutional body responsible for the overall design, management, and evaluation of a coherent and coordinated medical school curriculum associated with the M.D. degree and other related educational policies. The Committee also serves as the primary working contact for accreditation-related activities with the Liaison Committee on Medical Education or other organizations.

The UMEPCC and its standing committees examine a wide range of issues including, but not limited to, these aspects of the medical school curriculum:

- School of Medicine Medical Education Program Objectives;
- Sequencing of the various segments of the curriculum both within and across the academic periods of study (horizontal and vertical integration);
- Methods of pedagogy and student evaluation;
- Evaluation of course and program effectiveness;
- Content and workload in each discipline to identify omissions and unwanted redundancies; and
- Stated objectives of individual courses and clerkships.

The UMEPCC is also responsible for approving any substantive changes to the medical school curriculum as well as plans for implementation of said changes. No substantive changes can be made to the curriculum without this approval.

From time to time, the UMEPCC may also consider other issues related to the medical school curriculum.

In addition, the UMEPCC closely monitors the school's maintenance of LCME accreditation. These standards are available at www.lcme.org. Click on "Accreditation Standards."

The bylaws and minutes of the UMEPCC are located at https://www.hopkinsmedicine.org/som/curriculum/umepcc.html.

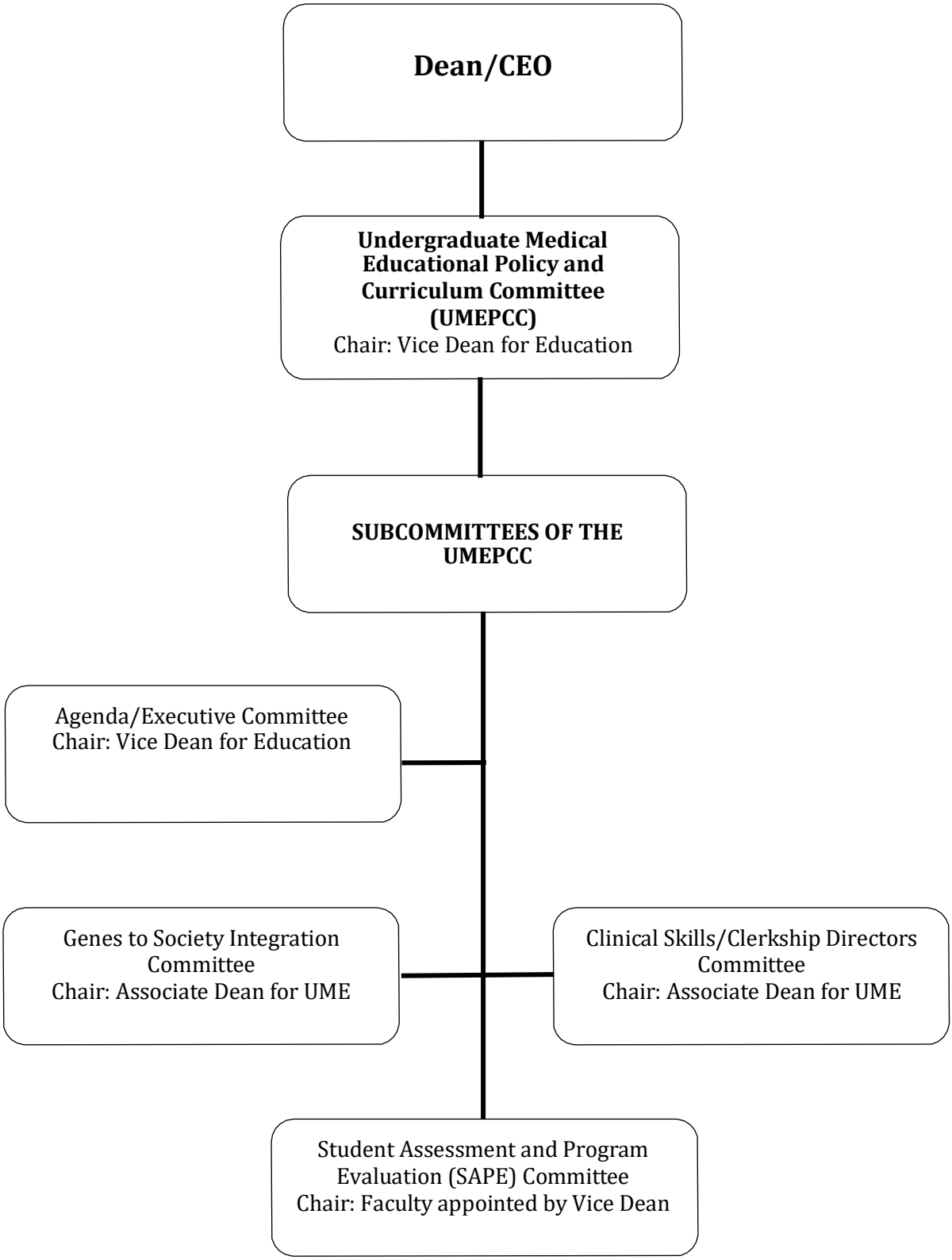
The UMEPCC has several subcommittees, which report regularly to the UMEPCC and serve to address the issues noted above. Course and section directors may be involved in several of these committees. They include:

- Curriculum Planning Committees:

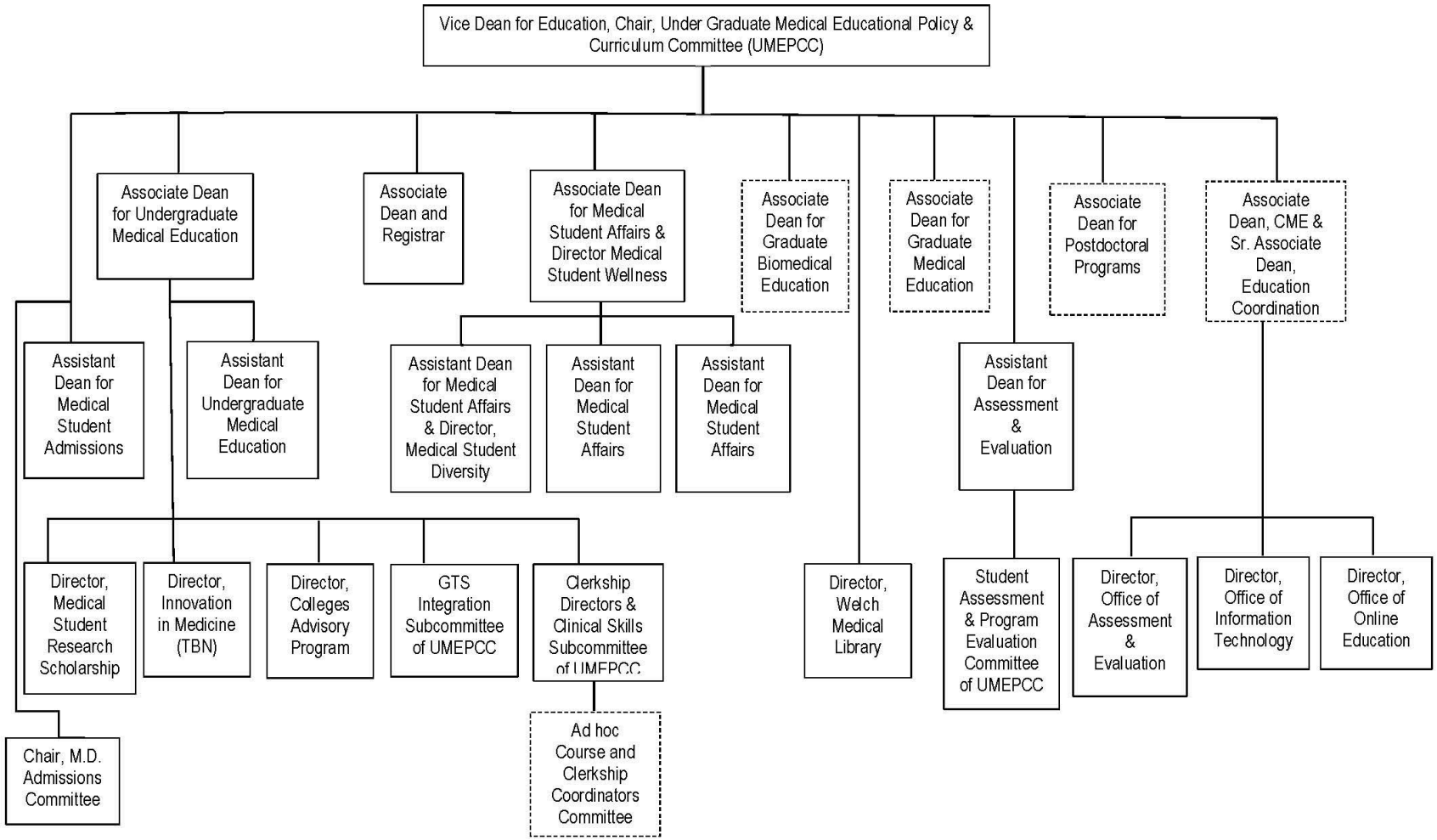
- GTS Integration Committee: meets every 1 to 2 months (Nancy Hueppchen, Chair)
- Clinical Skills/Clerkship Directors Committee: meets monthly (Nancy Hueppchen, Chair)
- Horizontal Strands Committees: Meets quarterly (Nancy Hueppchen and Janet Record, Co-Chairs)
- Scientific Foundations Committee: Meets annually (Brendan Cormack, Chair)
- GTS Course Committee: Meets twice yearly (Henry Fessler, Chair)
- Topics in Interdisciplinary Medicine (TIME) Year 1-2 Course Directors Committee: meets twice yearly (Lauren Sauer, Chair)
- TIME Year 3-4 Course Directors Committee: meets twice yearly (Michael Chattergoon, Chair)

- Student Assessment and Program Evaluation Committee (Pamela Lipsett, Chair)
- Year 1 and 2 Student Assessment and Formational Committee (Roy Ziegelstein, Chair)
- Year 3 and 4 Student Assessment Formational Committee (Roy Ziegelstein, Chair)
- Student Promotions Committee (Roy Ziegelstein, Chair)
- Grade Appeals Committee (Roy Ziegelstein, Chair)

Educational Policy and Curriculum Committee
Organizational Structure



JHUSOM UME Organizational Chart



Updated August 2021

C. Office of the Registrar

The Registrar's Office is the repository for all academic records for the School of Medicine medical and graduate students. It is also the official record-keeping office of appointment records for postdoctoral fellows, house staff, and trainees. The office also manages health, dental, vision, life, disability, dependent care account and retirement benefits for the students, fellows, house staff and trainees.

The office is responsible for student scheduling, transcript maintenance and preparation, medical licensure processing and certifications among a variety of other academic support services.

The Registrar sets and posts the academic calendar.
http://www.hopkinsmedicine.org/som/students/academics/calendar.html
https://www.hopkinsmedicine.org/som/offices/registrars/general-info/index.html

The office notifies course directors/coordinators of student enrollment in courses, and all grades are reported to the Registrar.

Major student activities coordinated through the Registrar's Office include student orientation and the SOM graduation/convocation ceremony.

Faculty who are contacted by students outside of JHUSOM for elective work should refer students to the Registrar's office to ensure compliance with the Visiting Student Policies of JHUSOM. More information is available at: http://www.hopkinsmedicine.org/som/students/policies/visitors.html.

Establishing a New Elective

1. The faculty member completes 3 forms - OMSC standard syllabus (streamlined a bit for electives), Registrar's new elective form, and the information form for our elective database.
2. The 3 forms are returned to the Registrar and OMSC for review. Clarifications may be requested, or edits suggested to help the faculty member meet requirements for learning objectives, and describe expectations to achieve a particular grade, credit weeks to be conferred based on Registrar's formula, and the grading scheme.
3. Once these are complete and approved, the Registrar will assign a course # and post to the electives online book.
4. Once posted, the course director may request a Blackboard site to curate course materials if they desire (requested through Office of Online Education). Students will be enrolled after they are officially registered.
5. Students may register as long as it does not interfere with a required course or another elective (may not register for more than 40hrs/week and synchronous sessions may not overlap). Electives may not overlap with clerkships.
6. The student will send their registration form to the course director for signature (may be digital signature) and then return to the Registrar to complete registration.
7. The course director should develop their class list as students obtain signatures.
8. Once elective complete, the Registrar's office sends an NI assessment form to the preceptor to be completed (4 different ones - research, non-research elective <20MS, 21-40 MS, and >40 MS - different for practical reasons).
9. Once elective complete, the Registrar's office sends a Program evaluation to each student completing the course. These are rolled up and a report sent to the course director and their department director.

D. Office of Medical Student Curriculum

Mission. The mission of the Office of Medical Student Curriculum is to deliver the highest quality Doctor of Medicine curriculum for the Johns Hopkins University School of Medicine. We advocate teaching and learning that will produce graduates who will achieve the knowledge, skills, and professional values to effectively address modern societal health care needs. By providing centralized management of the curriculum, the office will track formal curricular events, manage use of the Armstrong building resources (excepting college, and academic computing

spaces), provide program evaluation and continuous quality improvement of the curriculum, support faculty development and innovation, and maintain Educational Program LCME standards. We value excellence, teamwork and professionalism, and effective and fair use of our shared resources.

Services Provided:

- OASIS® course schedule and content support
- Course coordination for Year 1 and Year 2 courses and Translational Science Intersessions
- Administer course teaching material and distributing to students electronically on Blackboard
- Oversight and monitoring student attendance using ActivTracker APP software
- Creation of exams in ExamSoft and maintenance of item bank tagging
- Course evaluations in pre-clerkship curriculum
- Teaching faculty development in coordination with the Office of Faculty Development and the Institute for Excellence in Education (IEE)
- Curriculum development consultation
- Staffing and Administration of the GTS Integration Committee and Clerkship Directors/Clinical Skills Committee (CDCS, a subcommittee of UMEPCC)
- Maintain and monitor the Clerkship Central Monitoring Database
- Maintain and monitor the Academic Course Calendar, Curriculum Manuals, and GTS Contact List
- Maintain and update the *Genes to Society Curriculum* website at: http://www.hopkinsmedicine.org/som/curriculum/genes_to_society
- Coordinate LCME Self-Study; maintain LCME website at: http://restricted.hopkinsmedicine.org/LCME/

E. Office of Assessment and Evaluation

Mission. The mission of the Office of Assessment and Evaluation (OAE) is to enhance the educational programs in the Johns Hopkins University School of Medicine (JHUSOM) through evidence-based best practices in the assessment of learners and the evaluation of programs. OAE partners with JHUSOM faculty and staff members, administrators, and learners to design, launch, and maintain assessment and evaluation initiatives in graduate biomedical education, postdoctoral education, undergraduate medical education, graduate medical education, and continuing medical education. As part of its core mission, OAE:

- Supports the assessment of learners and the evaluation of programs through the selection, design, and implementation of assessment and evaluation tools (e.g., rubric design, writing multiple-choice questions, survey design)

- Facilitates understanding of the assessment of learners and the evaluation of programs through the analysis, reporting, and use of related data (e.g., statistical analysis of quantitative data, thematic content analysis of qualitative data)

- Conducts faculty development activities in areas related to learner assessment and program evaluation (e.g., validity, reliability, exam blueprints, standard setting, test, and item analysis)

As a secondary aim, OAE also provides consultation in research design, statistical analysis and interpretation, and manuscript preparation intended for scholarly reports in medical and biomedical education, as projects relate to assessment and evaluation initiatives in JHUSOM.

F. The Office of Information Technology

Mission. The mission of the Office of Information Technology (OIT) is to improve medical and graduate education through the prudent use of technology. This unit supplies core technology and

services, including curriculum support to faculty and students, and operation of student computing facilities and classroom equipment.

Services Provided to Faculty:

- Methods for integrating active learning methods into bio-medical education
- Software Services—including support for OASIS and Blackboard
- Armstrong AV support
- Armstrong room reservation at http://armstrong.som.jhmi.edu/
- Purchasing computer hardware
- Wireless Support Service
- Connecting Services

Specific to the Curriculum, OIT is charged with oversight of OASIS, Blackboard Learning Management Software, Dropbox for curriculum materials, and Online Testing Services.

The OIT has created short tutorials on using Educational Technology for learning. These online tutorials are available at the OIT website at: http://OIT.med.jhmi.edu/ittutorial/

G. The Office of Online Education

Mission. The mission of the Office of Online Education (OOE) is to improve medical and graduate education through good instructional design, robust faculty support, and the use of tools to enable high-quality online and hybrid education. This office provides instructional design consulting, assistance with online course site building, guidance on online education best practices, tools and infrastructure for creation of online course assets, and Universal Design for Learning principles to ensure accessibility for all learners.

Services Provided to Faculty:

- Instructional design consulting
- Assistance with site building on the Learning Management System (LMS)
- Training on the use of tools to support online and hybrid education including Blackboard, Panopto, Examsoft, and others
- Guidance on the application of Universal Design for Learning (UDL) principles to ensure equitable access for all learners
- Use of recording studios to produce high quality recorded course material
- Assistance with preparing, building, and formatting course materials for use in recorded lectures
- Course support for online and hybrid courses

H. Simulation Center

The Johns Hopkins Medicine Simulation Center (JHMSC) is a state-of-the-art medical training facility that if fully accredited by the Society for Simulation in Healthcare. It incorporates many modalities of simulation including high-fidelity human patient simulators, partial task trainers, virtual reality, standardized patients, and physical examination teaching associates. The JHMSC is used extensively throughout the JHUSOM curriculum, including Clinical Foundations of Medicine, Anatomy, Genes to Society, Transition to the Wards, the Core Clinical Clerkships and TRIPLE.

The JHMSC has two locations: JHOC 8 and Blalock 7. While any simulation activity may be conducted in either space, JHOC 8 generally houses standardized patient events, while manikin and procedural skills course are more concentrated in Blalock. As events can be scheduled in either space, it is vital for faculty to note which location is

assigned for your activities.

Simulation Center Scheduling

Many different groups use the JHMSC, and scheduling is a complex process that must balance the needs of all users. No one group has priority for scheduling in the JHMSC, and no user is more important than another. For recurring annual events, School of Medicine users are generally permitted to schedule before other users, in light of the complexity and inflexibility of the academic calendar for this group. However, it is important to emphasize that this does not mean that SOM events take precedence over others, nor does it mean that late requests or date changes will necessarily be accommodated. Once recurring annual SOM events are scheduled, the JHMSC calendar is filled with activities for other users, and these will not be canceled or moved to accommodate late or altered SOM requests.

For ***existing*** SOM simulation activities, the scheduling process is as follows:

1. After the academic calendar is released by the Office of the Registrar, course and clerkship directors/coordinators have ***two weeks*** to submit Simulation Center requests for their recurring activities.
2. Requests submitted after this deadline will only be considered after all other requests have been fulfilled for both SOM and non-SOM users, and likely will not be accommodated.
3. Simulation Center requests should be submitted via email to simcenter@jhmi.edu, using the JHMSC Repeating Course Request Form. Or designated form sent to you by the JHMSC scheduling team.
4. Once all SOM requests are submitted, they will be entered into the JHMSC calendar. The scheduling team will reach out to individual users to address conflicts or concerns. This process takes several weeks, and it is important to recognize that no activities are considered confirmed during this time.
5. Once all conflicts and concerns are addressed, the JHMSC scheduling team will provide confirmation of all activity dates and locations. This will generally occur 4-6 weeks after the scheduling deadline.
6. After existing SOM events are scheduled, the JHMSC team will schedule events requested by non-SOM users. This will typically fill the calendar, leaving very little flexibility for changes or additions after the deadline. That said, if additional dates or date changes are needed, please contact simcenter@jhmi.edu to discuss.

For new SOM simulation activities, the planning process is as follows:

1. As soon as you develop an idea for a new course or activity, complete the JHMSC New Course Request Form to begin the application process. No new activities will be planned or scheduled without completion of this form. If you have questions about the form, please contact simcenter@jhmi.edu.
2. Your request will be reviewed by the JHMSC team and will be assigned to a staff member to coordinate. JHMSC staff have the experience and expertise to assist with all aspects of the planning process, and faculty will work closely with them in developing new activities.
3. Please note that the JHMSC is booked to capacity much of the time, and it will not always be possible to accommodate new activities. Please also note that it will never be possible to schedule a new activity with less than 8 weeks advance notice, and much more may be required based on budgetary and resource needs.
4. Timeline for new activity planning:
    a. As early as possible: complete the New Course Request Form and work with JHMSC staff on course planning.
    b. By January 15 of the academic year preceding your desired start time: submit budget requests to cover costs associated with your course. Many JHMSC activities are “free” for SOM users, but there

are costs associated with standardized patient wages and any equipment beyond the basic items stocked in the Simulation Center, and these must be borne by the user.

c. Within two weeks of the release of the academic calendar: submit requests for specific dates/times/rooms to be added to the JHMSC calendar. The remainder of the scheduling and confirmation process will be as per existing activities, above.

Conflict Resolution

Conflicts between users regarding times, rooms, and resources are a common and inevitable part of the scheduling process. As no one group has priority over another, it is essential for *all* users to be flexible, generous, and creative when approaching conflict resolution. The process works as follows:

1. Both users will be contacted by the JHMSC team and asked if they can alter their plans to accommodate the other.
2. If neither user is willing to voluntarily change plans, the conflict will be referred to the Associate Director of the JHMSC, who will reach out to both parties to discuss potential solutions.
3. If the conflict remains unresolved, the matter will be arbitrated by the Associate Dean for Curriculum, in consultation with the Associate Director of the JHMSC.
4. Arbitration will inevitably involve denying the request for one party, so it is in the best interest of all parties to work collaboratively with one another and the JHMSC team to resolve conflicts amicably.

All questions can be referred to simcenter@jhmi.edu - the JHMSC team will be happy to help! Further information about staff and planning an educational event in the Simulation Center can be obtained from the JHMSC website at: http://www.hopkinsmedicine.org/simulation_center/

Section II: Design and Structure of Courses

The Genes to Society Curriculum http://www.hopkinsmedicine.org/som/curriculum/genes_to_society/

The Genes to Society (GTS) curriculum, implemented in 2009, is the result of a 5-year curriculum development process that included over 100 faculty, administrative staff and students. The curriculum development process addressed a variety of forces advocating for change in the way we prepare physicians in the 21st century. The curriculum begins with a grounding in what we've learned from the Human Genome Project about human variability, risk and the ability to modulate disease presentation and outcomes. We have also brought in a wealth of knowledge in the social and behavioral sciences, as well as public health and policy content, with an aim toward improving societal health outcomes. Students will experience an integrative approach to health from the first week of medical school. Other innovations include a strong career preparation course with a scholarly project, a longitudinal ambulatory clerkship, translational science courses, transition courses at milestones in the curriculum, and improved assessment and evaluation.

To meet the educational objectives for the institution, which are listed at the beginning of this manual, the curriculum architecture consists of *vertical courses*, such as "Anatomy," "Clinical Foundations," and "Foundations of Public Health," which are time-limited, and *Horizontal Strands*, which weave throughout the 4-year curriculum.

The new (2018) Horizontal Strand organization includes three core themes:

Biological Mechanisms (Joann Bodurtha and Susan Michaelis)

- Genomics and Genetics
- Pharmacology and Therapeutics
- Food and Nutrition
- Neoplasia

- Aging

Health Systems Science (Amit Pahwa)

- Health Policy
- Biomedical Informatics
- Patient Safety

Culture of Medicine (Gail Geller and Carolyn Sufrin)

- Ethics
- Professionalism
- Cultural Competency/Humility
- Disparities and Inequities in Health and Health Care

The previous Horizontal Strands were divided into those pertaining to Biomedical topics and those to Social and Behavioral topics.

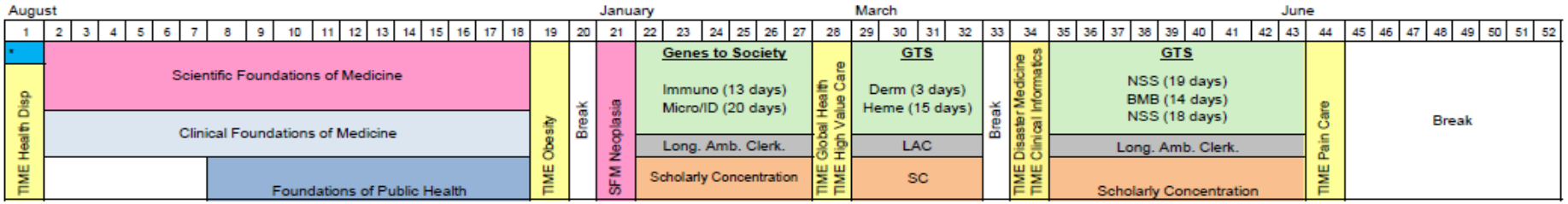
Biomedical Strands (led by Joann Bodurtha):

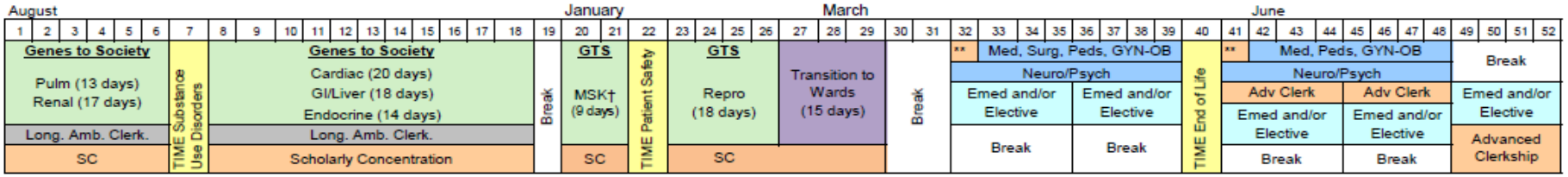
- Anatomy (Jonathan Perry)
- Embryology (Se-Jin Lee)
- Genomics/Proteomics (Joann Bodurtha)
- Imaging (Donna Magid)
- Informatics (Harold Lehmann)

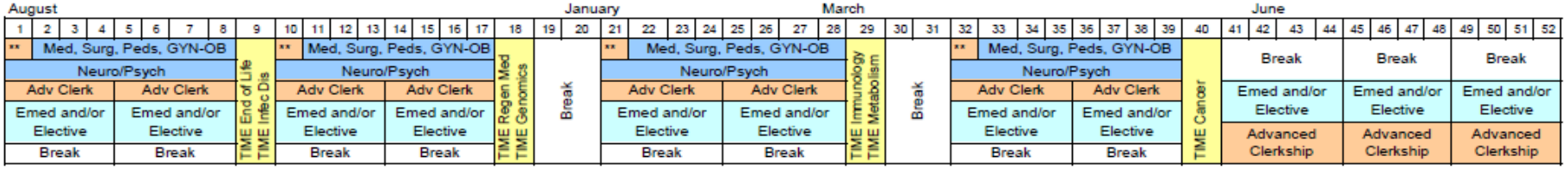
Social and Behavioral Strands (led by Gail Geller):

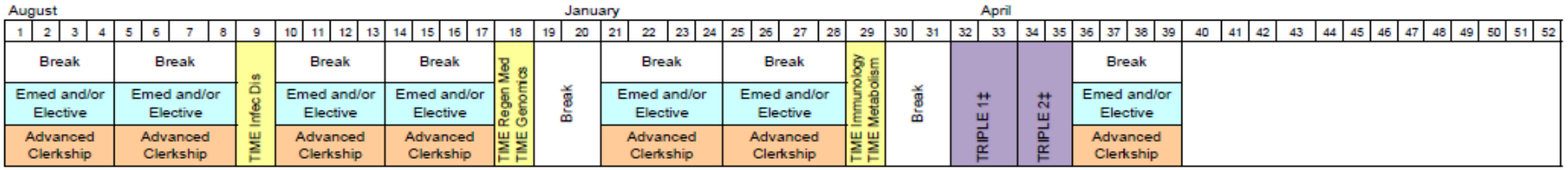
- Communication (Mary Catherine Beach)
- Cultural Competence (Eloiza Domingo-Snyder)
- Epidemiology (Steve Sozio, Raquel Greer)
- Ethics & Professionalism (J. Mostwin, G. Geller)
- Health Disparities (Kim Gudzune)
- Health Policy (Amit Pahwa)
- Life Cycle: Aging (Jessica Colburn)
- Life Cycle: Growth & Development (Anna Maria Wilms Floet)
- Nutrition (Paul Watkins)
- Pain (Jennifer Haythornthwaite)
- Patient Safety (Hanan Aboumatar)

Four-Year Schematic of Courses









* Transition to Medical School
** Preclerkship Education Exercises
NSS=Nervous System & Special Senses
BMB=Brain, Mind & Behavior
†Musculoskeletal
‡Half class in TRIPLE at a time

ACADEMIC YEAR 2021-2022

CURRICULUM COURSE DATES - Year 1

Course/Section	AY20-21	AY21-22	Inclusive Dates AY2021-2022	Exam Dates	Holidays and Notes
Transition to Medical School (TTMS), Orientation, and Registration	3	3	8/11 - 8/13	No Exam	CAP 8/12 (1:30pm-5pm) OMSC Academic Wellness 8/13 (9am-8am-5pm
TIME: Disparities and Inequities in Health and Health Care (DIHHC)	3	3	8/16-8/18	No Exam	
SFM: Human Anatomy	35+1	35+1	8/19 – 10/8	9/8, 9/23, and 10/8	Labor Day 9/6 Rosh Hashanah 9/7-9/8 Yom Kippur 9/16
Clinical Foundations of Medicine (CFM)	16 wks	16 wks	8/23– 12/9	11/29, 12/1, 12/2, 12/6, 12/8, and 12/9	
	CFM GUTA prep session: 10/28 (will be additional to regular M/W dates, but a shorter session) CFM GUTA weekend dates: 10/30, 10/31, 11/13, 11/14 (1/4 of the class each date)				
Foundations of Public Health: *Epidemiology, Ethics, & Health Care System (FPHEEHCS)	10 wks +1	10 wks +1	9/28-12/14	12/14 Tues	Stethoscope Ceremony 10/5
Basic Life Support Training Dates: 10/19/21 (5-6:00pm) and 10/29/21 (8-9:00am; 9:30-10:30am; 11-12:00pm)					
Interprofessional Education (IPE) Event #1 (YR1) Optional Social Event	1	1	10/12 Tues	No Exam	6pm-7:30pm
Scientific Foundations of Medicine (SFM) Course Dates: 10/11 – 1/7					
SFM: Macromolecules	4+1	4 +1	10/11 – 10/15	10/15 Fri	
SFM: Cell Physiology	8+1	8+1	10/18-10/28	10/28 Thurs	
SFM: Histo/Path	9	9	10/18-10/28	No exam	
-Transition to Medical School / Refresher (30 mins) -Opioid Training (60 mins) -OMIM Intro (30 mins) - Scholarly Concentrations Intro (2 hrs)	1	1	10/21 Thurs	No Exam	11:30am–5pm
SFM: Genetics	6+1	6+1	10/29 – 11/8	11/8 Mon	Diwali 11/4
SFM: Metabolism	7+1	7+1	11/9 – 11/18	11/18 Thurs	Thanksgiving 11/25
Fall Break: 11/20 Sat – 11/28 Sun (returning to class on 11/29 Mon)					
SFM: Pharmacology	7+1	7+1	11/19 – 12/7	12/7 Tues (online/paper)	online exam and paper exam
SFM: Histo/Path	7+1	7+1	11/19 – 12/7	12/7 Tues	

Course/Section	AY20-21	AY21-22	Inclusive Dates AY2021-2022	Exam Dates	Holidays and Notes
*Epidemiology (FPHEEHCS)	4+1	4+1	12/8 – 12/14	12/14 Tuesday	
TIME: Obesity, Nutrition, & Behavior Change	3	3	12/15 – 12/17	12/17 Fri	8am-1pm
Scholarly Concentrations	3	3	12/14 – 12/16	No Exam	2pm-5pm; 12/16 Thurs 2pm–3:50pm
CAP	1	1	12/16 Thurs	No Exam	4pm–5pm
Winter Break: 12/18 Sat – 1/3 Mon (returning to class on 1/4 Tues)					
SFM: Neoplasia	3	3	1/4-1/7	1/7 Fri morning exam	8am-1pm
Longitudinal Ambulatory Clerkship (LAC)	21 wks	21 wks	1/6-6/3	5/31, 6/2, and 6/3*	Orientation 1/6 Thurs (1pm-5pm)
GTS: Immunology	11+1	11+1	1/7-1/25 1/7 course starts in the afternoon	1/25 Tues	MLK Holiday 1/17 1/7 afternoon: asynchronous events
GTS: Micro/ID	18	18+1	1/26-2/21	2/21 Mon	
Medical Student Research Symposium (MSRS)	1	1	2/4 Fri	No Exam	2/4 Fri (12pm-5:30pm) / (2/5 Sat snow day)
TIME: Global Health	3	3	2/22-2/24	No Exam	8am-1pm
TIME: High Value Care	3	3	2/22-2/24	No Exam	8am-1pm
Scholarly Concentrations	3	3	2/22-2/24	No Exam	2pm-5pm; 2/24 Thurs 2pm-3:20pm
CAP	1	1	2/24 Thurs	No Exam	3:30pm-5pm
GTS: Dermatology	3	3	2/25-3/2	3/2 Wed morning exam	8am-1pm
GTS: Hematology	13+1	12 +1	3/2-3/18 3/2 course starts in the afternoon	3/18 Fri morning exam	Match Day 3/18 starts at 11:30am 3/2 afternoon: asynchronous events
IPE Event #2 (YR1) Roles and Responsibilities	1	1	3/8 Tues and 3/10 Thurs	No Exam	5:15pm-8pm
Spring Break: 3/19 Sat – 3/27 Sun (returning to class on 3/28 Mon)					
Course/Section	**AY20-21**	**AY21-22**	**Inclusive Dates AY2021-2022**	**Exam Dates**	**Holidays and Notes**
TIME: Disaster Medicine	4	4	3/28–3/31	3/31 Thurs afternoon exam	8am-1pm
TIME: Clinical Informatics	4	4	3/28-3/31	3/31 Thurs afternoon exam	8am-1pm

Scholarly Concentrations	3	3	3/28–3/30	No Exam	2pm-5pm
GTS: Nervous System and Special Senses (NSS) Course Dates: 4/1 – 6/6					
GTS: NSS (Neuroanatomy)	6+1	6+1	4/1-4/11	4/11 Mon	
GTS: NSS (General Sensory & Motor)	12+1	12+1	4/12-5/2	5/2 Mon	BMB starts on 4/14**
GTS: Brain, Mind, & Behavior (BMB)**	13+1	13+1	4/14-5/12**	5/12 Thurs	Good Friday/Easter 4/15-4/17 Passover 4/15-4/22 White Coat Ceremony 5/6
GTS: NSS (Special Sensory & Motor)	8+1	8+1	5/10-5/23	5/23 Mon	BMB Exam 5/12 Thurs
GTS (Optional) Cumulative Exam				5/13 Fri	2pm-5pm
GTS: NSS (Multi-System Diseases)	8+1	8+1	5/24 - 6/6	6/6 Mon	Memorial Day 5/30
LAC Exams*				5/31, 6/2, and 6/3*	
TIME: Pain Care	4	4	6/7-6/10	6/10 Fri afternoon exam	8am-1pm; 6/9 Thurs 8am-12pm
Scholarly Concentrations	3	3	6/7-6/9	No Exam	2pm-5pm; 6/9 Thurs 1pm-3:20pm
CAP	1	1	6/9 Thurs	No Exam	3:30pm-5pm

*LAC has written exams in AMEB on 5/31 & 6/2; LAC has SP exams on 5/31, 6/2, & 6/3 in SIM Center

**BMB course runs concurrently with NSS during the designated period. Due to integration with NSS, some BMB days counted are actually only one event occurring along with NSS learning activities

Yellow highlight indicates dates and/or times are pending (TBD)

Blue highlight indicates changes for AY21-22

CURRICULUM COURSE DATES - Year 2

Course/Section	AY20-21	AY21-22	Inclusive Dates AY2021-2022	Exam Dates	Holidays and Notes
Registration	1	1	8/13 Fri		
GTS: Pulmonary	12 + 1	12 +1	8/16-9/1	9/1 Wed	
Longitudinal Ambulatory Clerkship (LAC)	15w Tues 15w	15w Tues 15w Thurs	8/19-12/16	12/14, 12/15, 12/16*	Orientation 8/19 Thurs (1:30pm-4:30pm)
GTS: Renal	15 + 1	15+1	9/2-9/24	9/24 Fri	Labor Day 9/6 Rosh Hashanah 9/7-9/8 Yom Kippur 9/16
TIME: Substance Use Disorders (SUD)	3	3+1	9/27-9/29	10/1 Fri @ 2pm	8am-1pm 10/1 Fri afternoon exam @ 2pm
Scholarly Concentrations	3	3	9/27-9/29	No Exam	2-5pm

CAP (TIME SUD session)	1	1	9/30 Thurs	No Exam	2-3:30pm
GTS: Cardiovascular	19+1	19+1	9/30-10/27	10/27 Wed	
CFM GUTA weekend dates			10/9, 10/10, 10/16, 10/17 (1/4 of the class each date) / unable to do them during CFM this past fall		
IPE Event #3 (YR 2) Team and Team Building	1	1	11/1 Mon and 11/4 Thurs	No Exam	5:15pm-8pm
GTS: GI/Liver	16+1	16+1	10/28-11/19	11/19 Fri	Diwali 11/4 Thanksgiving 11/25
CAP Intro to Career Planning			11/10		5:30pm-7:30pm
Fall Break: 11/20 Sat – 11/28 Sun (returning to class on 11/29 Mon)					
GTS: Endocrine	13+1	13+1	11/29-12/16	12/16 Thurs	
LAC Exams				12/14, 12/15, 12/16*	
GTS (Optional) Cumulative Exam				11/29 Mon @ 3pm	
Winter Break: 12/18 Sat – 1/3 Mon (returning to class on 1/4 Tues)					

Course/Section	AY20-21	AY21-22	Inclusive Dates AY2021-2022	Exam Dates	Holidays and Notes
GTS: Musculoskeletal	8+1	8+1	1/4-1/14	1/14 Fri	MLK Holiday 1/17
TIME: Patient Safety	3	3+1	1/18-1/20	1/21 Fri @ 2pm	8am-1pm 1/21 Fri afternoon exam @ 2pm
Scholarly Concentrations	3	3	1/18-1/20	No Exam	2-5 pm
CAP Advising	1	1	1/27 Thurs	No Exam	1:30pm-4pm
GTS: Reproduction	16+1	15+1	1/21-2/11	2/11 Fri	
GTS (Optional) Cumulative Exam				1/28 Fri @ 2pm	
Medical Student Research Symposium (MSRS)			2/4 Fri		2/4 Fri (12pm-5:30pm) / (2/5 Sat snow day)

IPE Event #4 (YR 2) Communication and Conflict Resolution	1	1	2/8 Tues	No Exam	12:45pm-3:30pm; and 3:15pm-6pm
Transitions to the Wards (TTW)	15	15	2/14-3/4	No Exam	8am–5pm
CAP	1	1	*CAP dates/times are pending TTW course schedule* *2/17 Thurs 1pm-2:3pm = Sabin* *2/21 Mon 3:30pm-5pm = Thomas* *3/2 Wed 1pm-2:30pm = Nathans* *3/2 Wed 3:30pm–5pm = Taussig*		Match Day 3/18
Spring Break: 3/5 Sat – 3/20 Sun (returning to class on 3/21 Mon)					

*LAC has written exams in AMEB on 12/14 & 12/16. LAC has SPEX exams on 12/14, 12/15 & 12/16 in Sim Center

CURRICULUM COURSE DATES - Year 3 and Year 4

Course/Section	Inclusive Dates AY21-22	PRECEDE Dates	Exam Date 4	Exam Date 8 weeks	Holidays and Notes
Quarter 1	8/16-10/11				
First Half	8/16-9/10	8/16, 8/17, 8/18	9/10 Fri		Labor Day 9/6 Rosh Hashanah 9/7-9/8 Yom Kippur 9/16
Second Half	9/13-10/11	9/13, 9/14	10/8 Fri	10/11 Mon	
TIME / Translational Science (TS) Courses					
TS Infectious Disease	10/12-10/14		No Exam		
TIME End of Life/Palliative Care	10/12-10/14		10/14 Thurs Take-Home Exam		
CAP	10/14 Thurs		No Exam		3:30pm-5pm
ACCC/AAC/EMed (4.5 weeks)					
First Half	8/16-9/15		9/15 Wed		
Second Half	9/16-10/15		10/15 Fri		
Quarter 2	10/18-12/13				
First Half	10/18-11/12	10/18, 10/19, 10/20	11/12 Fri		Thanksgiving 11/25 Fall Break

Second Half	11/15-12/13	11/15, 11/16	12/10 Fri	12/13 Mon	11/25 Thurs - 11/28 Sun
Translational Science (TS) Courses					
TS Regenerative Medicine	12/14-12/16		12/16 Thurs (Quiz 2:30pm-		
TS Genomic Medicine	12/14-12/16		No Exam		
CAP	12/16 Thurs		No Exam		2pm-3:30pm
ACCC/AAC/EMed (4.5 weeks)					
First Half	10/18-11/17		11/17 Wed		
Second Half	11/18-12/17		12/17 Fri		
Winter Break: 12/18 Sat – 1/3 Mon (returning to class on 1/4 Tues)					
Quarter 3	1/4-2/28				
First Half	1/4-1/28	1/4, 1/5, 1/6	1/28 Fri		MLK Holiday 1/17
Second Half	1/31-2/28	1/31, 2/1	2/25 Fri	2/28 Mon	
Translational Science (TS) Courses					
TS Immunology	3/1-3/3		No Exam		
TS Metabolism	3/1-3/3		No Exam		
CAP	3/3 Thurs		No Exam		2pm-3:30pm

Course/Section	**Inclusive Dates AY21-22**	**PRECEDE Dates**	**Exam Date 4**	**Exam Date 8 weeks**	**Holidays and Notes**
ACCC/AAC/EMed (4.5 weeks)					
First Half	1/4-2/2		2/2 Wed		
Second Half	2/3-3/4		3/4 Fri		Match Day 3/18
Spring Break: 3/5 Sat – 3/20 Sun (returning to class on 3/21 Mon)					

Quarter 4	3/21-5/16				
First Half	3/21-4/15	3/21, 3/22, 3/23	4/15 Fri		Good Friday/Easter 4/15-4/17 Passover 4/15-4/22 SOM Convocation 5/25 Wed
Second Half	4/18-5/16	4/18, 4/19	5/13 Fri	5/16 Mon	
TIME / Translational Science (TS) Courses					
TS Cancer	5/17-5/19		No Exam		
TIME End of Life/ Palliative Care	5/17-5/19		5/19 Thurs Take-Home Exam		
CAP	5/19 Thurs		No Exam		3:30pm-5pm
ACCC/AAC/EMed (4.5 weeks)					
First Half	3/21-4/20		4/20 Wed		
Second Half	4/21-5/20		5/20 Fri		
TRIPLE: Session I	3/21-4/1		No Exam		TRIPLE: MSIV Graduating Students Only
TRIPLE: Session II	4/4-4/15		No Exam		
Summer Quarter	5/23-7/15				
Period I	5/23-6/17	5/23, 5/24, 5/25	6/17 Fri		Memorial Day 5/30 Eid al-Fitr 5/2-5/3 Independence Day 7/4
Period II	6/21-7/15	6/21, 6/22	7/15 Fri	7/15 Fri	
ACCC/AAC/EMed (4.5 weeks)					
Period I	5/23-6/17		6/17 Fri		
Period II	6/21-7/15		7/15 Fri		Juneteenth 6/20
Period III	7/18-8/12		8/12 Fri		

COURSE DIRECTORS AND CONTACTS AY 2021-2022

FIRST YEAR CURRICULUM

GTS Course Director: Hank Fessler hfessler@jhmi.edu / Co-Director: Mike Borowitz mborowit@jhmi.edu
First Year Curriculum Coordinator: Sherrie Fornoff, AMEB 331, Office 410-502-6075, sfornoff@jhmi.edu

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Genes to Society I (GTS) *(inc. Immunology, Micro/ID, Dermatology & Hematology)*	Sherrie Fornoff sfornoff@jhmi.edu	Henry Fessler hfessler@jhmi.edu Michael Borowitz mborowit@jhmi.edu
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Topics in Interdisciplinary Medicine: Clinical Informatics	Susan Shultz sshultz@jhmi.edu	Steve Miller smill132@jhmi.edu
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Genes to Society II (GTS) *(inc. BMB & NSS)*	Sherrie Fornoff sfornoff@jhmi.edu	Henry Fessler hfessler@jhmi.edu Michael Borowitz mborowit@jhmi.edu
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Brain, Mind, Behavior (BMB)	Sherrie Fornoff sfornoff@jhmi.edu	Dean MacKinnon dfm@jhmi.edu Jennifer Leah Goetz jlgoetz@jhmi.edu
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Interprofessional Education (IPE) – Year 1	IPE coordinator: Paula David pdavid@jhmi.edu	Rachel Salas rsalas3@jhmi.edu

SECOND YEAR CURRICULUM

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Second Year Curriculum Coordinator: Terri Hennel, AMEB 331, Office 410-614-3684, **thennel1@jhmi.edu**

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Genes to Society III (GTS) *(inc. Pulmonary, Renal, & Cardiovascular)*	Terri Hennel thennel1@jhmi.edu	Henry Fessler hfessler@jhmi.edu Michael Borowitz mborowit@jhmi.edu
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Topics in Interdisciplinary Medicine: **Substance Use Disorders**	Susan Shultz sshultz@jhmi.edu	Dean MacKinnon dfm@jhmi.edu Karin Neufeld kneufel2@jhmi.edu
Scholarly Concentrations – 2nd year Afternoons of the TIME Courses	Delena Dodd / 410-614-7056 ddodd5@jhmi.edu	Mary Catherine Beach mcbeach@jhmi.edu
Genes to Society IV (GTS) *(inc. GI/Liver, Endocrine, Repro, & Musculoskeletal)*	Terri Hennel thennel1@jhmi.edu	Henry Fessler hfessler@jhmi.edu Michael Borowitz mborowit@jhmi.edu
GI/Liver	Terri Hennel thennel1@jhmi.edu	Robert Bulat rbulat1@jhmi.edu Ruhail Kohli rkohli5@jhmi.edu Kevan Salimian ksalimi1@jhmi.edu
Endocrine	Terri Hennel thennel1@jhmi.edu	Aniket Sidhaye asidhay1@jhmi.edu David Cooke dcooke@jhmi.edu
Musculoskeletal	Terri Hennel thennel1@jhmi.edu	Allan Gelber agelber@jhmi.edu Aaron James awjames@jhmi.edu
Reproduction	Terri Hennel thennel1@jhmi.edu	Jenny Robinson jrobin87@jhmi.edu Ann Lawler alawler@jhmi.edu Amin Herati aherati1@jhmi.edu
Topics in Interdisciplinary Medicine: **Patient Safety**	Susan Shultz sshultz@jhmi.edu	Hanan Aboumatar habouma1@jhmi.edu
Transition to the Wards	Terri Hennel thennel1@jhmi.edu	Greg Prokopowicz gprokop@jhmi.edu Jules Jung jjung@jhmi.edu
Interprofessional Education (IPE) – Year 2	IPE Coordinator: Paula David pdavid@jhmi.edu	Rachel Salas rsalas3@jhmi.edu

TOPICS IN INTERDISCIPLINARY MEDICINE (Year 2 and Year 3)

COURSE	CONTACT	COURSE DIRECTOR
End of Life/Palliative Care	Susan Shultz sshultz@jhmi.edu	Danielle Doberman ddoberm1@jhmi.edu Louise Knight schlero@jhmi.edu Renee Boss rboss1@jhu.edu Mark Hughes mthughes@jhmi.edu

TRANSLATIONAL SCIENCE COURSES (Year 3 and Year 4)

COURSE	CONTACT	COURSE DIRECTOR
Infectious Disease	Susan Shultz sshultz@jhmi.edu	Brendan Cormack bcormack@jhmi.edu
Regenerative Medicine	Susan Shultz sshultz@jhmi.edu	Elias Zambidis ezambid1@jhmi.edu Robert Stevens rstevens@jhmi.edu
Genomic Medicine	Susan Shultz sshultz@jhmi.edu	Nara Sobreira nsobrei2@jhmi.edu Joann Bodurtha jbodurt1@jhmi.edu
Immunology	Susan Shultz sshultz@jhmi.edu	Michael Chattergoon chattergoon@jhu.edu (also TS Course Directors UMEPCC Representative)
Metabolism	Susan Shultz sshultz@jhmi.edu	Steve Gould sgould@jhmi.edu
Cancer	Susan Shultz sshultz@jhmi.edu	Albena Dinkova-Kostova adkostov@jhmi.edu

REQUIRED CORE CLERKSHIPS

Medicine	Jennifer Weaver jsauer4@jhmi.edu	Danelle Cayea dcayea1@jhmi.edu Bruce Leff bleff@jhmi.edu
Surgery	Misty Grimes misty@jhmi.edu	Alodia Gabre-Kidan agabrek1@jhmi.edu Clint Cappiello ccappie1@jhmi.edu
Women's Health	Rebecca Slattery rslatte1@jhmi.edu	Silka Patel spatel87@jhmi.edu (SP is Clerkship Director GTSIC representative) Jensara Clay jclay10@jhmi.edu
Pediatrics	Rebekah Reisig rreisig1@jhmi.edu	Christopher Golden cgolden@jhmi.edu Amit Pahwa pahwa@jhmi.edu
Psychiatry	Shanetha Thomas shanethatomas@jhnmi.edu	Dr. Vinay Parekh vparekh1@jhmi.edu Dr. Avi Gerstenblith tgerste1@jhmi.edu
Neurology	Bernadette Clark mclark44@jhmi.edu	Rachel Salas rsalas3@jhmi.edu Doris Leung dleung8@jhmi.edu
Emergency Medicine	Pamela McCann pmccann3@jhmi.edu	Julianna Jung jjung@jhmi.edu Sharon Bord abord1@jhmi.edu

REQUIRED ADVANCED CLINICAL ROTATIONS

COURSE	CONTACT	COURSE DIRECTOR
Sub-I (Medicine, Pediatrics, Surgery, etc.)	Various (Departmental)	Various (Departmental)
Advanced Critical Care Clerkship (ACCC)	Catherine Weaver cweaver7@jhmi.edu	Bo Soo Kim bkim38@jhmi.edu Jed Wolpaw jwolpaw@jhmi.edu
Advanced Ambulatory Clerkship (AAC)	Susan Shultz sshultz@jhmi.edu	Sharon Dlhosh sdlhosh1@jhmi.edu

GRADUATION REQUIREMENTS

Transition to Internship and Residency and Preparation for Life (TRIPLE)	Delena Dodd, 410-614-7056 / ddodd5@jhmi.edu	Sharon Bord sbord1@jhmi.edu Emily Frosch efrosch@jhmi.edu
CCSE *(graduation requirement / not a course)*	Pamela McCann pmccann3@jhmi.edu	Julianna Jung jjung@jhmi.edu

ACADEMIC TRACKS

Primary Care Leadership Track	Lindia Holmes lholme10@jhmi.edu	Colleen Christmas cchristm@jhmi.edu
Global Health Leadership Track	n/a	Grace Chen cchen127@jhmi.edu

Organizing Your Course

At a minimum, every course in the GTS curriculum must have three well-defined components:

1. Learning objectives
2. Educational strategy (what content and methods will be used to help students achieve the learning objectives)
3. Evaluation plan: How will students be assessed, i.e., How will we know the learning objectives have been met? How will the course and faculty be evaluated?

The Student Assessment and Program Evaluation (SAPE) committee of the UMEPCC systematically reviews each of the courses and clerkships in the curriculum to ensure that these components are present. The Office of Medical Student Curriculum staff is happy to work with course directors on refining their course organization. A brief introduction to these elements follows.

Organization has a tremendous impact on the quality of curricular elements and students are very sensitive to the level of organization seen in their coursework. To help our course and section leaders, a timeline for course/section development and implementation is included to facilitate timeliness of preparation and optimal use of support staff.

Writing Objectives

Learning objectives focus on the curriculum content and inform learners of what is to be achieved. Assuming that the goal of a curriculum or educational program is the achievement of competence in some area of health care, defining that competence usually includes a description of the requisite *knowledge*, *attitudes* and/or *skills* that the learner will need to acquire. Learning objectives then are categorized into three types: cognitive (knowledge), affective (attitudes) and psychomotor (skills or behaviors), often described as the "KAS" framework. In addition, the LCME requires that the school demonstrate that its courses support achievement of the institutional objectives, and these should be kept in mind when writing objectives. Course directors will be asked to "map" their course objectives to these institutional objectives; it is tremendously helpful if the course objectives are presented to the students in that framework.

Within each type of objective, there is a hierarchy of complexity and achievement. This is most famously described for the cognitive objectives with Bloom's Taxonomy of objectives. Bloom's Taxonomy lists six levels of cognitive objectives, which describe not only a level of knowledge obtained, but also imply the steps of learning required to reach that level. There have been multiple revisions of this taxonomy over time; one of the most recent versions uses the following descriptors of mental tasks: to remember, understand, apply, analyze, evaluate, and create. For medical education objectives, for instance, *remembering* factual knowledge (anatomical names for the heart) would be a "low" level cognitive objective, whereas *analyzing* an electrocardiogram tracing and the underlying pathophysiology of rhythm disorders would be a "higher" level objective. Course directors should write the highest expected level of achievement for the learner, otherwise known as the terminal objective. For each event in the course, the objective may describe an enabling objective for this terminal objective. In the example above, the Cardiovascular Block course for medical students may have as a learning objective that students will be able to interpret electrocardiogram tracings. A lecture objective within this course may be that learners will be able to explain the normal electrophysiology of the heart.

To ensure that objectives are specific and measurable, it helps to have a template structure for writing the objective. One behavioral method[1] is to structure the objective statement so that it answers the question, "Who will do how much/how well of what by when?" The verbs ("will do") in the objectives describe the behaviors expected of the successful learner and the nouns ("what") describe the content of the educational program.

1 Curriculum Development in Medical Education: A Six-Step Approach. Thomas PA, Kern DE, Hughes MT, Chen BY. 3rd ed. Baltimore, MD: The Johns Hopkins University Press; 2015.

For additional assistance in writing learning objectives: IEE Developing Objectives Handouts

Writing SMART Objectives

1. **S**pecific

2. **M***easurable/observable*
3. **A**ttainable for learner within scheduled time and specified conditions
4. **R**elevant and results-oriented
5. **T**argeted to the learner and to the desired level of learning

Anatomy of a SMART Objective:
By the **time frame, the training level** student will **verb to what degree what** as measured by **assessment.**

Educational Strategies

The educational strategy details how learners will achieve the learning objectives for the course, lecture, etc. It usually details 1) content (taken from the nouns in the objectives) and 2) methods. In planning educational methods, educators should think carefully about maintaining congruence between the behaviors in the learning objectives and the learning methods. It is also important to remember that most learning is contextual, and the best curricula will approximate the context in which the learning will be used. As an example, a student may "learn" the pathophysiology of congestive heart failure by attending a lecture, but not recognize that pathophysiology when seeing a patient in clinic. Effective teaching methods often present material in the same context in which the learner will need this learning. Attention to the verbs used in the learner objectives is again helpful here.

General guidelines for choosing methods of instruction are:

1. Instructional methods should be consistent with principles of learning.
2. Instructional methods should be congruent with learning objectives.
3. Multiple instructional methods are better than a single instructional method.
4. Instructional methods can impact the learning environment and have unintended consequences.
5. The choice of methods is often driven by resource limitations.

Active Learning Strategies

When designing the GTS curriculum, the GTS Integration Committee agreed that a shift of pedagogy to more active learning methods was critical to the success of the curriculum, and set as a goal, *that 40% or less of formal curricular time would be lecture-based*. Course directors are urged to look at lecture events and consider alternative methods of delivering content. The GTS faculty retreats have offered opportunities to explore other methods and many of these workshops are available on the IEE Website as listed below at https://improveteaching.med.jhmi.edu:

- Advanced PowerPoint
- Flipping the Classroom (eLecture combined with one of the active learning strategies below—Advice for Creating and Utilizing an e-Lecture attached)
- Lecturing in the TBL Age
- Case Method Teaching
- Team Based Learning: Why Do It, How It Works

The OMSC staff have created short handouts (available on request) for:

- Use of Clickers
- Preparing a PowerPoint Presentation for optimal learning
- Use of OASIS
- Use of Clerkship Monitoring Database

Online tutorials are available at the OIT website at: https://oit.med.jhmi.edu/

Further information on curriculum development can be found in the textbook, Curriculum Development in Medical Education: A Six-Step Approach. Thomas PA, Kern DE, Hughes MT, Chen BY. 3rd ed. Baltimore, MD: The Johns Hopkins University Press; 2015.

The Office of Faculty Development was created to assist course directors. This office is directed by Dr. Rachel Levine. In addition, there are frequent faculty development activities in curriculum development (longitudinal and shorter workshops) offered through the Bayview Faculty Development Program

https://www.hopkinsmedicine.org/johns_hopkins_bayview/education_training/continuing_education/faculty_development_program/index.html

Advice for Creating and Utilizing an E-Lecture

Introduction and Overview

Electronic lectures (e-lectures) are a valuable component of the Genes to Society curriculum. E-lectures can be used to emphasize core material, to reduce the number of standard lectures in a course and promote increased interaction between learners and faculty.

This document outlines a straightforward plan to select, prepare, record, and edit material. Suggestions for post-e-lecture activities are also provided.

General Guidelines for Creation of E-Lectures

1. **Topic Selection for Lecture**
    - Choose a topic whose general information is unlikely to change in the near future (i.e., core principles)
    - Target existing lectures that are already high quality – based on student feedback, evaluations, content test scores, etc.
    - Target existing lectures that already have associated small group or post-lecture activities
    - Choose a topic that you are excited about
    - Target lectures/topics that are conceptual and not dense recitations of facts
    - Ask your course director for assistance in the selection of topics/lectures

2. **Designing the Post-Lecture Activity – "Flipping the Classroom"**
    - Small group discussions
    - VM sessions
    - Assignment to do in advance of small group session
    - Multiple choice questions to be completed in class (i.e., audience response questions)
    - Online discussion forum (students can ask questions or post assignments related to the lecture; students can also comment on each other's questions/assignments)
    - Full class discussions
    - Simulation activities
    - Computer-based simulations
    - Clinical-pathologic Correlations (CPCs)

3. **Tips for lecture creation**

    Take advantage of the resources in the Office of Information Technology
    Tech advisor: Mark Dodd (mdodd@jhmi.edu)

    - Define clear objectives for the lecture and post-lecture activity
    - Choose the style of e-lectures: video of actual lecturer with splicing of slides, voiceover of slides, etc.
    - Include images, figures, videos, tables; **avoid all-word slides when possible**
    - Do not use overly complicated figures
    - Be succinct! Focus on the main points. Avoid minutiae and personal research interests unless they apply directly to the material being covered
    - Avoid acronyms and alphabet soups of genes/proteins that are beyond the scope of the material
    - Know your audience – approach the lecture with the right level of difficulty
    - **Target 15 minutes or less for your e-lecture.** If your material will not fit into 15 minutes, cut

non- essential material, or divide the topic into multiple e-lectures
- Add pauses or breaks to ask questions, encourage students to think about the material, or transition to a new topic
- When talking over your slides, annotate the slides to focus the viewer's attention
- Review main points at the end of the lecture

4. **Resources**
   - Platforms with links to helpful sites:
     i. Powerpoint - https://support.office.com/en-au/article/Add-narration-to-a-presentation-0b9502c6-5f6c-40ae-b1e7-e47d8741161c
     ii. Voicethread - https://jhu.voicethread.com
     iii. Camtasia - https://www.techsmith.com/video-editor.html
     iv. GoAnimate - https://goanimate.com
   - Useful resources at JHU: OMSC, interested students, IEE: https://improveteaching.med.jhmi.edu
   - Other online guidelines: http://www.faculty.londondeanery.ac.uk/e-learning/e-learning-in-clinical-teaching-1

Communicating to Students

Prior to the Course:

We have learned that students appreciate frequent orientations and communications. One week or so prior to the start of the course, send an email welcoming students to the course and directing them to information about textbooks, orientation, meetings, etc. Use the communication function in Blackboard for all course-related communication. Contact your course coordinator for assistance.

All GTS courses and clerkships must use the Standardized Syllabus Template (available on the OMSC website, Faculty Resources section) that includes information that students have requested about courses. The template is in this manual (see below). Each course syllabus is posted on Blackboard.

Orientation Materials

At the beginning of the course, all students should receive the following information (note that the syllabus template will prompt you to include this content):

1. Learning Objectives
2. Educational events (usually presented as a calendar or link to OASIS).
3. Learning resources: Textbooks, reserved textbooks, external links on Blackboard, etc.
4. Planned student assessments; when students will get feedback; how the grade for the course will be determined.
5. Policy statements from the UMEPCC: UMEPCC has determined that these policies should be distributed to students at the start of *every* course:
   a. Teacher Learner Conduct (Student Mistreatment) Policy
   b. Attendance Policy* (EPCC approved Attendance Policies for Courses and Clerkships are attached; if courses have stricter attendance policies, they should be publicized at the start of courses).
   c. Accountability Policy (attached)
   d. Grading and Remediation Policies (attached)

***[NOTE: If an educational event has been scheduled as a required event for attendance, reports can be generated from the Office of Medical Student Curriculum (OMSC). Please notify the OMSC course coordinator of any required curriculum events to track attendance. Required events for attendance need to be tagged in OASIS when the room reservation is made.

How to Communicate Assignment Deadlines

Deadlines and due dates for assignments need to be communicated to Office of Medical Student Curriculum (OMSC) course coordinators for uniform posting in OASIS. Please see the Accountability Policy (attached) to learn how we will help students who have difficulty meeting these deadlines. http://www.hopkinsmedicine.org/som/students/policies/

Presentations, Notes, and Course Materials for Students

The UMEPCC has come to a consensus that beginning with the Class of 2019, handouts will no longer be printed. **All materials must be sent to the course coordinator no later than 48 hours prior to the lecture or learning event for posting on Blackboard and the curriculum JHU Dropbox with the correct naming convention.**

It is STRONGLY RECOMMENDED that **syllabus documents (presentations, lecture notes, workshop powerpoints)** for the course, should be submitted one week prior to the *start of the course (or weekly materials for longer courses)*. The GTS Integration Committee has agreed that all courses use a standardized template for this syllabus, which is located below. A brief checklist for what you should have ready as you assemble the syllabus is:

a. Orientation content described above
b. Course-specific policies, e.g., expected laboratory procedures, etc.
c. Course specific assessment plans, describing how the grade will be generated.
d. PowerPoint presentations
e. Lecture notes with learning objectives, keywords, or concepts, and ideally, self-assessment questions for each lecture or event.
f. Notification of the following UMEPCC curriculum policies: Teacher-Learner Conduct, Attendance, Accountability, and Grading and Remediation.

Communicating to Course Faculty – Preceptors, Lecturers and Small Group Leaders

Ensure course faculty are familiar with course objectives and how their contribution fits in the context of the entire course. Direct faculty to online faculty development resources on IEE website.

Please feel free to share this manual with all lecturers and small group leaders. It may be helpful to give more succinct guidance to lecturers and other faculty prior to the start of the course. At a minimum, the faculty should receive the syllabus and access to Blackboard course materials so that teaching can be consistent and sequential.

- **Lecturers: PLEASE NOTE THE FOLLOWING**:

1. Every lecture should have a **faculty disclosure slide**
2. Every lecture should have one slide of **learning objectives** for the lecture
3. No lecture should have more than 50 slides (1 slide per minute)
4. Presentations should be emailed to the course coordinator **at least one week in advance of the session**.
5. *If the lecturer has last minute updates, please make sure that the updated lecture is forwarded to the course coordinator for posting on Blackboard.*

Lecture Document Standards

The following guidelines apply for posting content on Blackboard/Dropbox

In the event a student(s) chooses to print any lecture materials on their own, please follow the preparation guidelines below.

All course materials must be sent to the coordinator for posting on Blackboard.

- Please do not use dark backgrounds for lecture slide presentations. White background is always the best choice for students to easily add notes

- **Submit all lecture slide presentations in PowerPoint format to the course coordinator and Instructional Designer**:
  - First Year Courses: Sherrie Fornoff (sfornoff@jhmi.edu) Lindsay Ledebur (lindsay.ledebur@jhmi.edu)
  - Second Year Courses: Terri Hennel (thennel1@jhmi.edu) Sara Burns (sara.burns@jhmi.edu)
  - TIME and Translational Science Courses: Susan Shultz (sshultz@jhmi.edu) Megan Thorne (mthorne7@jhmi.edu)

- Save lecture PowerPoints in **PDF slide format** with **1 slide/page**.
  - PDF is a universally compatible format.
  - Students will be able to download smaller file sizes and view them on any platform.
  - PDFs are more secure.

- Save *lecture slides* with the file name format:

  YYYYMMDD_ProfessorLastName_LectureTitle
  - Use the date the lecture will be presented.
  - This ISO time format allows software to automatically sort lecture files in chronological order.
  - Students will be able to easily search for a given lecture by the date it was presented, the presenter's last name, or the title of the lecture.

- Save *lecture notes* with the file name format:

  YYYYMMDD_ProfessorLastName_LectureTitle_Notes
  - Use the same lecture title for lecture slides and lecture notes
  - This will ensure that accompanying notes will pair with the appropriate lecture

Tips for creating quality lecture slides:

- Instructional Designers will re-format slides into standard template and will ensure accessibility standards are met.

Important Student Policies

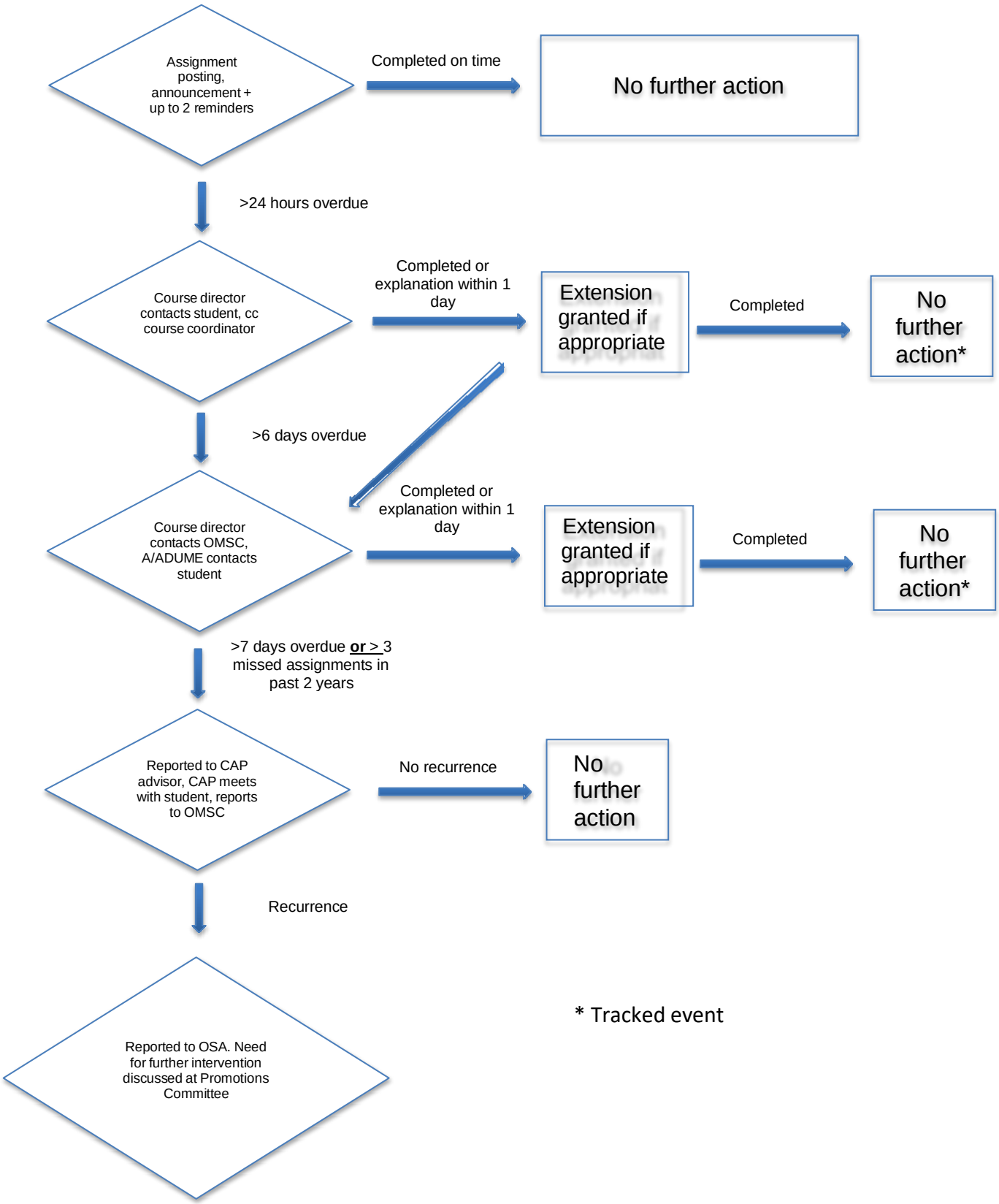
Current versions of all student policies may be found at Hopkins Policies Online/Undergraduate Medical Education:

https://hpo.johnshopkins.edu/som/?event=manual&manualid=886

Policies of particular relevance to curriculum leaders:

- Policy on Conduct in Teacher/Learner Relationships and Learner Mistreatment Policy
- Non-Clerkship Student Attendance Policy
- Clerkship Curriculum Student Attendance Policy
- Remediation and Make-Up Exams Policy (covers policies and procedures in case of failed examinations in Year 1-2 and in case of need to make up an exam missed due to absence)
- Grading Policy
- Grade Appeals Policy
- Summative Assessment Policy
- Medical Student Accountability Policy (see process flow diagram below)

Process flow diagram



* Tracked event

Timeline for Course/Section Implementation:

Time	Task List
By August 1 of current Academic Year	Review course objectives: revise and clarify if necessary. Identify and confirm lecturers. Review most recent SAPE or SCRT review for potential improvements to the course. Prepare draft of course schedule and send edits to the Office of Medical Student Curriculum course coordinator. Send the course schedule to the course coordinator with the following items for each event: • Title of Event • Event Learning Objectives • Instructor(s) (lecturer or small group leaders) • Educational Method (lecture, small group, VM teaching lab, TBL, etc.) • Optimal location (Teaching Lab, lecture hall, Learning Studio, etc.) • Horizontal Strands that you think might be addressed by this event • Review last year's exam: Does it map to current course objectives? Should items be dropped or modified? Can new items be added to improve reliability?
By August	Course coordinator will reserve AMEB rooms and Simulation Center times and dates for PRECEDE & Clerkships
4 weeks prior to start of course	• Confirm presenters that need to record lectures so that the Instructional Designer can contact them to obtain PowerPoint slides for formatting and begin planning for lecture recording. If no new lectures, let OOE and OMSC know. • Lectures may be recorded using Panopto, an application that allows you to record on your personal computer. • New lecture recordings in Panopto are to be finished and submitted to OOE Instructional Designer for closed captioning. • Remind lecturers of required slides: Disclosure and Objectives • Obtain lecture presentations and send to Office of Online Education and Office of Medical Student Curriculum for uploading to Blackboard
4 weeks prior to start of course	Review Syllabus for accuracy: contacts, objectives, evaluation, and grading. Send the final syllabus document to the course coordinator.
4 weeks prior to start of course	Strategize with small group and lab leaders how to maximize small groups. Do you need a written Instructors' Manual for small group leaders? Encourage small group leaders to attend or review lecture content. Plan meetings of small group leaders before or after to prepare for teaching and debrief small groups.
2 weeks prior to start of course	Although the paperless initiative has been implemented starting with the Class of 2019, any printed materials should be finalized and must be submitted to the course coordinator.
2 ½ weeks prior to start of course	Final course schedule is due 2 ½ weeks prior to the start of the course. • *Required events will not be allowed to change or be added to OASIS after the 2 ½ week deadline. If a required event is changed, (ex: if changed from not required to required, or event time is changed), after the deadline, it will be scheduled as "not required".*
1 week prior to start of course	Start communicating with students. Welcome students to the course, and offer contacts, helpful resources, etc.
48 business hours prior to learning event	Last opportunity to add updated presentations to Blackboard. Materials must be sent to the coordinator for labeling with the title convention and uploading.
5 business days prior to Exam	Final version of the course/section exam and tags for any new items should be sent to Celeste Stratton at cstratt6@jhmi.edu. The exam will be uploaded into testing software; a final proof will be sent to course/section leader at least 48 hours prior to exam. ***If the exam is not ready, the previous year's exam will be used.***

Exam day	Confirm that you or a section leader will be available in AMEB 327 to answer questions. (Course leaders are scheduled to proctor exams located in AMEB OMSC Conf Room 327during the exam).
Exam day	Review results of exam and item analysis when they are returned to you. There are often recommendations about dropping poorly performing items from the exam, which requires a recalculation of the score. Make those decisions as quickly as possible so students will know their final scores.
2 weeks after end of course	Confirm final grades with the course coordinator, who will prepare and submit grade sheets for the Registrar, and post grades to Blackboard gradebook.

OASIS®

OASIS (Online Access Student Information Software) is the curriculum mapping and management tool for the GTS curriculum. All faculty and students have access to OASIS through the JHED authentication system.

In order to have best possible information in the OASIS system, course/section leaders are asked to send OMSC coordinators before the start of the academic year:

- A complete course schedule of educational events
- Start times and end times
- Instructor names
- Event learning objectives
- Link event objectives to overall course objectives
- Instructional method
- Assessment method identified
- Keywords
- Horizontal strands
- Resources

NOTE: ALL CHANGES in OASIS TO THE COURSE SCHEDULE OF EVENTS MUST BE DONE BY the Office of Medical Student Curriculum course coordinators. If Year 1, Year 2, or TIME faculty wish to edit objectives, make schedule changes, or faculty changes, please contact the OMSC coordinators.

OASIS allows faculty and course directors to see the calendar of events, view individual events (who is teaching, what is the content, etc.) search for content and keywords across the curriculum.

> To access the curriculum mapping and course schedule management tool OASIS, click on the URL link: http://oasis.med.jhmi.edu. Use your JHED ID and password to enter OASIS. Please e-mail Mark Dodd (mdodd@jhmi.edu) if you are unable to log into OASIS.

Mark Dodd (mdodd@jhmi.edu) provides technical support to course/clerkship directors and coordinators for OASIS.

OASIS Instructions

View the Calendar

1. Login to https://oasis.med.jhmi.edu using your JHED password
2. Go to “calendar”
3. Select the date your course begins by scrolling on the calendar icon to the right of the date
4. Make sure you have selected the correct year on the left-hand buttons: GTS 1, GTS 2: otherwise, you will see all years together.

Searching Events

1. Login to https://oasis.med.jhmi.edu using your JHED password
2. Courses > Select Course
3. Select the academic year you want and press “reselect year”
4. Choose the appropriate department (All courses in the GTS curriculum are "interdepartmental.")
5. Choose any course

6. Click “Enter Course”
7. Go to Manage > Event-Based Courses > Search Events
8. Choose the fields you wish to search

Printing a Range of Weeks

1. Follow steps 1-6 above.
2. Go to Manage > Events-Based Courses > Multi-Week Print.
3. Select the weeks you want to print and enter your e-mail address. A pdf will be e-mailed to you.
4. If you cannot access this, email Sherrie Fornoff or Terri Hennel.

Blackboard Learn™

JHUSOM uses Blackboard online course management software to communicate with students, present learning materials, conduct surveys and for some online testing. The online delivery of course materials is done with Blackboard software, which is managed by the Office of Information Technology. As of July 2009, JHUSOM moved to the Enterprise version of Blackboard, which is accessed through JHED authentication.

Regarding student enrollment, the registrar's office will be providing the Office of Online Education a course list a few days before the start of a course. This information will be imported by OOE into Blackboard upon receipt. Your course administrator is also able to add and delete students to your course at any time.

For faculty enrollment, please notify the OOE or the OMSC of the faculty who should have access to the course. This generally includes lecturers (who may want to link material to content before and after their lecture), and all small group facilitators.

Blackboard Course Organization

The Genes to Society Integration Committee has asked that course directors use a standardized organization in setting up the Blackboard courses. This is particularly helpful to students trying to locate necessary information. The left-hand navigation bar for each course should have the following tabs:

BLACKBOARD FOLDER TEMPLATE for Year 1, Year 2, and TIME Courses

- Welcome to [Course Name here]
- Announcement
- Syllabus & Schedule
- Goals & Objectives
- Course Content
- Questions and Answers
- Additional Resources
- Horizontal Strands
- Workshop Materials (GTS only)
- Readings and References

Resources:

- Communications
- Exam Reports
- Grades
- Blackboard Tools
- Mediasite
- Prodensity APP
- OASIS
- JHU SOM Policies
- GTS Course Contact List and Course Dates

BLACKBOARD FOLDER TEMPLATE for Clerkships

- Announcements
- Syllabus
- Goals & Objectives
- Horizontal Strands
- Schedule
- Course Materials
- Exams
- My Grades
- Course Evaluations
- Communications

The Office of Online Education will create these courses in Blackboard with this structure.
Course directors and coordinators should not alter this organization. We have consolidated all the SFM and GTS courses into five courses: SFM, and GTS 1- 4. All other courses on Blackboard are unaffected. If you have concerns about your course/section, please contact the Office of Online Education for assistance.

Additional Blackboard Resources

Blackboard also house two additional sites available to all faculty and students:

1. Transition to Medical School (general materials and instructions provided to students during August orientation)
2. Horizontal Strands (contains list of HS leaders and their contacts, along with goals and four-year objectives for each horizontal strand)
3. Learning Skills Resources (prepared by our learning specialist, Ellen Kaplan)

There is a Blackboard site for Horizontal Strands (HS). The aim is to serve as an initial resource for understanding the basic goals and objectives of each horizontal strand and provide a brief overview of where each strand is addressed in the curriculum. This resource should also be helpful in more robust integration of the HS in individual courses. The site can be accessed using the following guest login:

JHMI faculty
username: jhmifaculty@outlook.com
password: jhmifac16

For each individual Horizontal Strand, the site contains overall curriculum goals and objectives, and a timeline of formal learning activities in the 4-year curriculum associated with each strand. The timeline was compiled by the HS leaders after hours of meetings with course directors, a survey in the spring of 2018 of all course directors, and review of Blackboard and OASIS materials. Even with all this effort, it is likely the teams have underestimated existing learning activities associated with many of the strands, so additional feedback to the individual Horizontal Strand Leaders is appreciated. The new HS core theme leaders will review each strand every two to three years to ensure integration.

The *Transition to Medical School Blackboard site* (listed below the HS site on BB) is primarily a repository for information highlighted during Year 1 orientation. It will be repopulated and updated annually prior to orientation in August.

For additional training or questions regarding Blackboard, contact the **Office of Online Education** (Robert Kearns robert.kearns@jhmi.edu).

ExamSoft®

Course/Section Leaders who wish to create knowledge-based examinations should refer to the section, Creating Examinations in this document.

ExamSoft® is the proprietary software used for internal examination purposes in the curriculum. All internal knowledge-based examinations that count towards grade evaluations should be deployed in ExamSoft®. The software allows for assigning multiple tags to items, rapid psychometric analysis, and quality control of examinations. Tagging exam items will ensure the learning goals, course content, and assessments are aligned, thus testing content effectively and comprehensively. Tagging will also make exam setting efficient as course directors can select the number of items on given topics for the exam. Once students submit an examination, results and immediate feedback are available to the students. Students have access to an ongoing record of their examination scores and their longitudinal performance on tags and course directors will be provided with reports on student, item, and topic performance. Examinations can be administered in AMEB or off-campus per the policy for individual courses.

Course and section directors will be sent the previous year's examination by Celeste Stratton, Instructional Designer in the Office of Medical Student Curriculum. Course/section leaders should send back any edits, additions, or deletions of items, based on the exam performance from the previous year and any changes to the curriculum. New items should be tagged with content keywords and/or biomedical or social/behavioral horizontal strands. Additional tags that may be used include competencies and Bloom's Taxonomy. The examination will then be created in ExamSoft by Celeste Stratton. Since each step requires time, we ask that course and section leaders comply with timelines as specified in the Summative Assessment Policy.

New Innovations (NI)

NI is a secure encrypted online evaluation system and medical education management platform which has recently replace E*value at Johns Hopkins for use in UME preclinical (where appropriate) and clinical student assessments and program evaluations, as well as GME and GBME. The system does allow collection of course evaluations, and offsite preceptor evaluations, so is used as well in some small group evaluations in the pre-clerkship courses and in the Longitudinal Clerkship.

There are multiple programs in NI that are administered by separate clinical departments, primarily for residency and fellowship trainees.

New Innovations offers additional functions and an improved user interface and allows for completion of evaluations through mobile phone browser.

JHUSOM TEAM NI HELP:

- SOM has its own dedicated help desk at TeamNI@jhmi.edu. Be as specific as possible about the issue.
- There is also a companion website http://HelpNI.jhmi.edu that has help and information specific to SOM.

New Innovations Support Team:

- Leroy Evans levans40@jhmi.edu
- Lorraine Spencer lspencer@jhmi.edu
- Paul Andrulonis pandrul1@jhmi.edu

Anne and Mike Armstrong Medical Education Building

https://www.hopkinsmedicine.org/som/curriculum/armstrong.html

ARMSTRONG BUILDING TEACHING SPACES

Meeting Room	Max	Notes
PreFunction Area (1st Floor Lobby)	160	
150 East: Y1 Lecture Hall	170	
150 West: Y2 Lecture Hall	170	
220: Large Group	20	Classroom
226: Large Group	20	Classroom
260: Learning Studio	76	8 Tables with 8 Chairs Each
270: Meeting Room	40	Classroom
320: Large Group	20	Classroom
326: Large Group	20	Classroom
341: Teaching Lab	36	Computer Room (Card Reader)
342: Teaching Lab	36	Computer Room
343: Teaching Lab	36	Computer Room
344: Teaching Lab	36	Computer Room
345: Teaching Lab	36	Computer Room
370: Large Group	30	Classroom
381: Small Group	10	Circle (Large Table)
382: Small Group	10	Circle (Large Table)
383: Small Group	10	Circle (Large Table)
384: Small Group	10	Circle (Large Table)
385: Small Group	10	Circle (Large Table)
402: Case Study	80	Auditorium Style
420: Large Group	20	Classroom
426: Large Group	20	Classroom
441: Anatomy Lab	15	Lab (Card Reader)
442: Anatomy Lab	15	Lab (Card Reader)
443: Anatomy Lab	15	Lab (Card Reader)
444: Anatomy Lab	15	Lab (Card Reader)
445: Anatomy Lab	15	Lab (Card Reader)
470: Meeting Room	20	Square Table - Classroom
481: Small Group	10	Circle (Large Table)
482: Small Group	10	Circle (Large Table)
483: Small Group	10	Circle (Large Table)
484: Small Group	10	Circle (Large Table)
485: Small Group	10	Circle (Large Table)

Smart Board Instructions

NOTE: THOUGH THE USE OF DRY ERASE PENS ON THE SMARTBOARD WILL NOT DAMAGE THE SMARTBOARD, THEIR USE IS NOT ENCOURAGED.

I. To use the smart board as a white board
   a. Choose a colored pen to draw
   b. Use the eraser to erase
   c. To clear writing
      i. Return all pens to their cradle
      ii. Tap the screen with your finger
      iii. Select "Close Ink LAYER"

II. To use the Smart Board as a mouse pad
   a. Return all pens
      i. Use your finger as a mouse to manipulate icons on the screen
      ii. If you have not Closed Ink LAYER, a menu will appear asking you to close the ink layer before proceeding.
      iii. The Keyboard icon on the menu bar or on the pen tray will display a keyboard. (ESC key does not seem to work)

III. To show a PowerPoint Presentation
   a. Double click the Powerpoint icon with your finger
   b. Open the appropriate file
   c. Start your Powerpoint presentation as normal
   d. Either use the navigation tool bar (which is movable by selecting and dragging its blue menu bar) or touch twice on the screen to advance slides. If you touch right, then left you will go back.
   e. If you accidentally close the navigation window:
      i. Click the mouse button icon which is in the right menu bar
      ii. Touch the screen
      iii. Select End show
      iv. Restart the show as normal

IV. To draw on a Powerpoint slide
   a. Start Powerpoint show as described above
   b. Use a pen to draw; note there is a slight delay
   c. Use eraser to erase
   d. To erase all
      i. Return all pens
      ii. Touch the screen
         1. To undo erase – use blue curled arrow in right menu bar

V. To end your Powerpoint Presentation
   a. Touch the mouse icon located in the right menu bar
   b. Touch the screen
   c. Select End Show
   d. To save your annotations (if any)
      i. Answer yes to "Would you like to add your drawings to your presentation?"
      ii. When quitting, save as to permanently store your annotations as part of a new presentation.

USING THE SMARTBOARD NOTEBOOK

I. Anything you display or write on the Smartboard can be saved in a program called “notebook”
II. Each sheet works like a slide in powerpoint—the notebook can be displayed a page at a time like a slideshow
III. When using the Smartboard as a whiteboard, every time the ink layer is closed it automatically snaps a picture of the entire board and puts it in the notebook (you will hear a click).
    a. To save what you have written, click on the camera icon in the upper right-hand corner of the screen
    b. The notebook can also be accessed by clicking on the “page” icon in the menu bar on the right or, if in Powerpoint, in the navigation bar in the center.
IV. The first time the Smartboard saves an image; the notebook program will open and appear on the taskbar. You may switch to the notebook at any time by clicking on the taskbar.
V. You can copy a slide from any application by clicking on the camera icon in the upper right-hand corner
VI. When open, each slide in a notebook can be annotated with the pens as with any other application.
VII. Before ending a session, you can save your notebook file; this will save all the images you captured, and any annotation you have made.
VIII. There are many other features that can be used with notebook.

Websites for further instruction:
http://OIT.med.jhmi.edu/ittutorial/

SMART Board basics
http://downloads01.smarttech.com/media/services/quickreferences/pdf/english/nbbasic_resource.pdf.

Using the SMART Board with PowerPoint
http://downloads01.smarttech.com/media/services/handsonpractices/pdf/english/hopnb10inkawarepowerpoint.pdf

Patient and Guest Lecturers

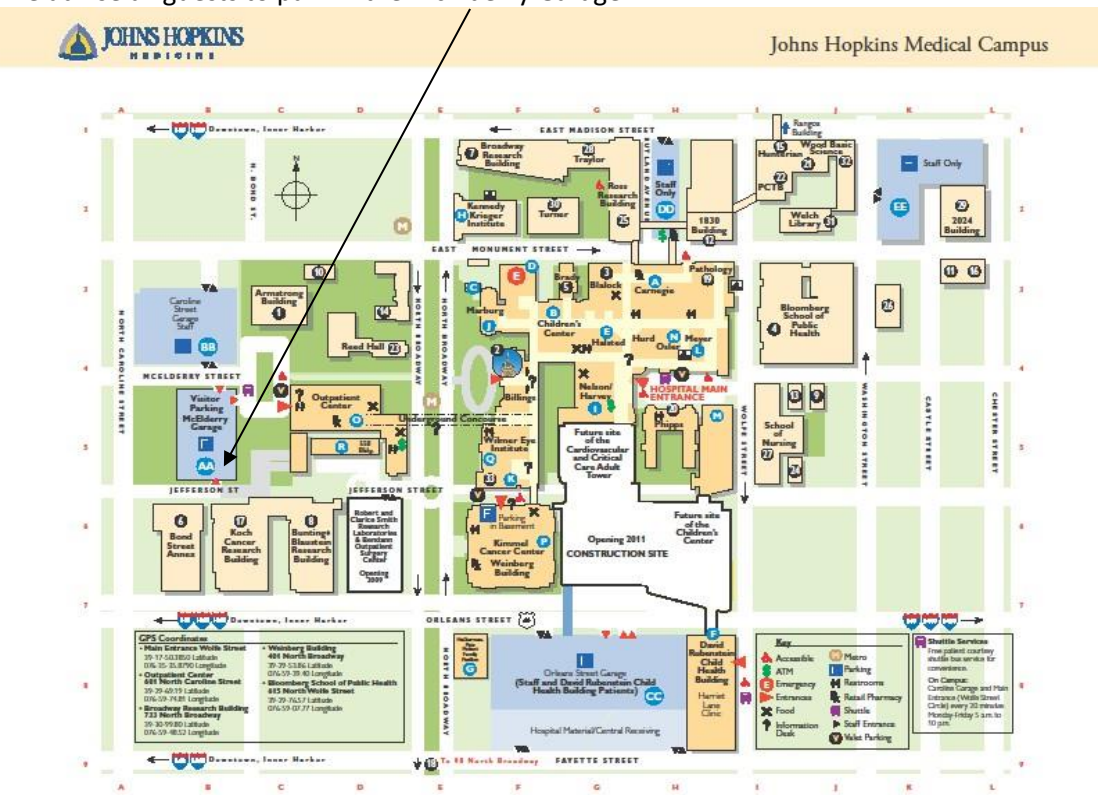
The curriculum frequently involves patients and family members or guest lecturers, especially in the first 2 years of the curriculum. If you are planning such an activity in your course, please notify the Office of Medical Student Curriculum, which can help with the following:

1. All events with guests or patients **require attendance** from students. The OMSC course coordinator will ensure these events are labeled in OASIS as required events with a patient / guest present, so that students are aware of the nature of the session.
2. Please remember that the schedule for required events must be finalized no later than 2 weeks prior to the start of the course.
3. Assist with orientation to the building. If we know your guest is arriving, we can help arrange for someone to greet them.
4. Please contact your OMSC course coordinator if you are planning to provide parking vouchers to your patient or guest.
5. If you have guests who are disabled, please let the course coordinator know at least one week in advance so arrangements can be made for easy access/valet parking, as appropriate.
6. Thank you. We would like to send a note of thanks to your guests, recognizing their contribution to the curriculum.

   Please send the following information to: officeofcurriculum@jhmi.edu:

   i. Name of patient or guest
   ii. Number in party (family members, etc.)
   iii. Address or contact
   iv. Date and time of event

We advise all guests to park in the McElderry Garage.



Student Assessment, Tests, and Grading

The *Genes to Society* curriculum has been designed with a strong developmental focus. As students proceed through the curriculum, they will have multiple opportunities to gauge whether they are meeting the milestones expected in an array of knowledge and skills. Students should receive feedback not only on performance in written examinations, but also from small group facilitators and peers on their contributions to discussion, from clinical skills faculty and "standardized patients" on their professionalism, interpersonal skills and clinical reasoning skills, and from their peers on their teaching, public speaking and professionalism skills. The curriculum also emphasizes the growth of self-assessment and reflection, a key attribute of the master clinician.

Small group narrative feedback

SFM and GTS courses provide students with narrative feedback whenever a small group leader meets a sufficient number of times to make individualized observations on most of the students. This is provided through a New Innovations form that each small group leader must complete on all students in their group within one week of course completion. These narratives focus on communication and professionalism, including whether students were prepared for sessions. We will notify the section leader if small group faculty in the section needs to do this. Section leaders will prepare small group facilitators to expect to complete these evaluations and will assist in assuring completion.

Exam Conduct

For an exam administered in person or an exam administered remotely with a single start time (not a flexible start time within a range), any student who arrives more than **15 minutes late** for an exam will need to take a makeup exam and will receive an incomplete. Students may not take any personal materials other than a pen/pencil and blank paper to the exam station. Notes taken during the exam must be placed in the designated box as the student exits the exam room.

Early Warning System

We have in place a tripartite early warning system to alert us to students that are having difficulty with academics, teamwork, or professionalism. The elements include:

1. Sharing exam results with CAP program leaders so that any student with an exam failure or near failure can be supported by their CAP advisor with a check in to assess wellness and student circumstances.
2. The narrative feedback from small groups described above.
3. A spreadsheet of missed deadlines and assignment due dates. This is covered by the accountability policy.

College Advisors are an important resource and can meet and help determine the source of a problem and work toward a solution, in collaboration with OMSA dean(s) as needed. The emphasis is on helping the students.

Relevant policies on examinations, grading, and processes in case of examination failure:
Grading Policy
Remediation and Make-Up Exams Policy
Promotions Policy

"The Boards" – USMLE Step 1 and Step 2

See Policy on the Timing and Passing of the USMLE

Creating Examinations

Educating future physicians requires instilling a love of life-long learning and along with strategies for long-term learning, using assessments that require higher order questions that promote long term learning for patient care. Therefore, the goal for writing exam items should be to minimize knowledge recall items and aim for higher order questions involving application, analysis, and evaluation of concepts.

A useful resource for writing multiple choice items is Paniagua, MA & Swygert, KA (2019). Constructing written test questions for the basic and clinical sciences: Third edition revised. Philadelphia: National Board of Medical Examiners. This item-writing manual is available for download free from the NBME or is available at the OAE (SOM_OAE@jhmi.edu). An abbreviated item writing tip sheet is also attached.

The goal for exam length should be 75-100 questions. Use a simple item blueprint when building your exam that charts the types of items and the content you are testing. This will help ensure that you are adequately testing for understanding as well as factual knowledge. Examination questions can be reused, but adjust the question based on the previous year's item analysis or a change in the objectives or teaching materials.

For short answers, essays, patient write-ups, and reflections that will become part of the overall grade, course directors are asked to prepare a grading rubric when creating the assessment. Course directors are also asked to ensure that students receive grade/feedback on all written assignments/assessments. The feedback may be in the form of a score, the rubric, or faculty/peer discussion.

The Office of Medical Student Curriculum will provide item analysis for all online exams. Please contact Celeste Stratton in the OMSC for more information.

All summative examinations that count toward grade decisions will be given online through ExamSoft; some quizzes may be administered via Blackboard. Celeste Stratton in the Office of Medical Student Curriculum or an Office of Online Education team member creates exams in the appropriate software. In addition, exam items are tagged and collected in an exam pool for the curriculum. Please refer to the Summative Assessment Policy for specifics regarding creation and deployment of online examinations.

Grading

See the Grading Policy. The *Genes to Society* curriculum has a pass / fail model for grading in the *Foundations*, *Genes to Society* courses, Longitudinal Ambulatory Clerkship, TTW, TIME, Translational Science courses, and TRIPLE. The core clerkships and advanced clerkship grading model is described in the Grading Policy, which also describes what changed due to the COVID-19 pandemic.

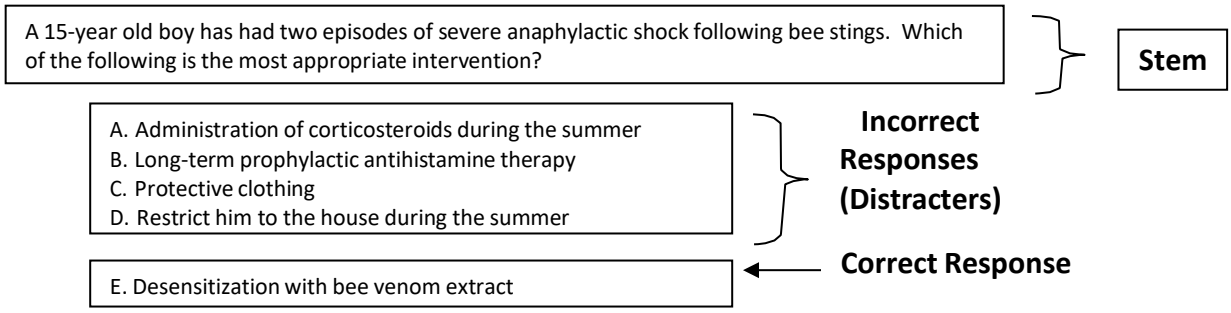
Course grading for the clinical curriculum is currently Pass/Fail.
Prior to the pandemic, the course grading for the clinical curriculum had 4 tiers: Honors, High Pass, Pass and Fail. The Students have the right to appeal against a grade decision. See the Grade Appeal Policy.

Item Writing Tip Sheet

Based on the NBME's Item Writing Manual*

An online tutorial: www.nbme.org/IWTutorial

Anatomy of a multiple-choice item



In General

- Each item should be aligned with a course or lecture objective
  - Exam performance will reflect how well students meet objectives
  - Will reduce students complaining about testing trivia
- Each item should only have one correct or best answer on which experts would agree
- Each item should assess one idea; otherwise consider breaking into two or more items
- Include items that require reasoning and analysis, not just recall
- Avoid groups of questions in which knowing the first is required to answer the others

Stem

-Students should be able to answer the question before reading the options (i.e., the options should not set the frame of reference)

- Use clear and unambiguous wording
- Avoid the following: is *associated with, is useful, is important, may, could be*, etc.
- Avoid negative wording (*not, except*), if unavoidable, CAPITALIZE the negative word(s)
- Avoid items that contain a frequency term (*usually, often*, *frequently* are interpreted variably)
- Longer stems with shorter options are preferred over shorter stems with long options
- If using a completion item, do not leave the blank at the beginning or in the middle of the stem
- Make sure the stem of one item does not cue the correct answer to another item

Distracters

-Distracters should not cue students to the correct response

- Must be plausible (if no one is choosing the distracter then it needs to be replaced)
- Should be similar to the correct answer in terms of:
  - Construction
  - Length
  - Grammar
- For numerical data, the options need to be consistent and range non-overlapping.
- Avoid 2 mutually exclusive responses; correct answer MUST be one of them

- Avoid *never* and *always*; response is always wrong, and students never choose it

- Avoid excessive use of *none of the above* or *all the above*. Students need only remember some of the information to answer all the above (e.g., only need to know at least 2 options are correct) or to exclude none of the above (e.g., just need to know 1 option is true)

Multiple-Choice Questions – Additional Tips from Office of Assessment and Evaluation and NBME Guide

Top Five Practices to Implement:

- Clinical Vignettes
  Use long clinical vignettes to test application of basic science and clinical knowledge rather than simple recall of facts.
- Stem
  The question stem and lead-in should be clear and complete so that students can form an answer even before reading the response options (pg. 17).
- Response options
  Use five response options (pg. 51) and list in a logical order (pg. 24) or alphabetical order.
- Parallel form for response options
  Response options should be homogenous (e.g., diagnoses, findings) so that students can rank order the options along a single dimension from least likely to most likely (pg. 17).
- Grammar
  Correct grammar in both the stem and response options is important; incorrect grammar can create ambiguities and/or cue test wise students.

Top Five Practices to Avoid:

- Absolute terms in response options
  Absolute terms such as "always" and "never" should not be included in response options; testwise students are cued by absolute terms. Response options should be concise (pg. 20).
- Vague terms in response options
  Vague terms such as "rarely" and "usually" should not be included in response options; even experts rarely agree on consistent interpretations of frequency terms (pg. 27-29).
- True/False questions
  True/false questions should not be used (pg. 18).
- Negative questions
  Negatively phrased questions (e.g., "Which of the following statements is NOT correct?", "Each of the following is correct EXCEPT:") should not be used (pg. 18).
- None of the Above
  "None of the above" should not be used as a response option (pg. 25).

Including Patient Information (pg. 57)

- Including a patient's name and/or initials is superfluous information. Simply identify the patient as, for example, "a 62-year-old man".
- Do not use quoted words or phrases from the patient or physician.
- Only include truthful facts or statements; do not include 'claims' or contradictions, etc.

For a concise list of best practices see page 33 (reference below)*
For a concise list of item flaws see page 26.
For valuable item templates see Pages 38-40, 61, 63, 64-65.

*Paniagua MA, Swygert KA. (2016). *Constructing written test questions for the basic and clinical sciences: Fourth edition revised.* Philadelphia: National Board of Medical Examiners. www.nbme.org/publications/item-writing-manual.html

Program Evaluation

JHUSOM tracks a number of student and program outcomes for its curriculum, such as internal assessments and course evaluations, board scores, AAMC Graduation Questionnaires, Program Director surveys and alumni surveys. The up-to-date guideline for Continuous Quality Improvement outlines the active participation of relevant stakeholder groups, the purpose of CQI relative to program evaluation, and resources available to carry out CQI.

The Office of Medical Student Curriculum will collate online course evaluations by students and communicate these with course directors during annual course debriefs. The OAE is available to help any course director in preparation of program evaluation data for a course review.

In order to comply with the LCME regarding central monitoring of the comparability of our students experience on clerkships, the OIT has developed a website with a dashboard for ease of monitoring. Each required clerkship is required to download data at the end of each quarter for review by the OMSC. Data includes Site / End of Clerkship surveys / Professional Environment surveys (all with standard questions), Documentation of individual midclerkship feedback, documentation of duty hours compliance, and documentation of clinical experience log completion. The clerkship directors and OMSC review the data quarterly to determine if any immediate actions are required or to investigate validity of flagged data. The dashboard results are presented to the UMEPCC twice yearly where recommendations are discussed.

Year 1 and 2, and TIME Course Program Evaluations

We require evaluations from a rotating sample of 25% of the class. Other students will always have the option of submitting an evaluation if they choose. This will reduce the overall burden of surveys and produce more representative opinions. There will be no extra credit for completing the evaluation as this is part of medical student professional responsibility.

The **Student Assessment and Program Evaluation (SAPE)** committee is a subcommittee of the Undergraduate Medical Educational Policy and Curriculum Committee and is composed of seven faculty members from the School of Medicine with support from the Offices of Curriculum and Assessment and Evaluation. The mission of the SAPE committee is: 1) to provide a system of continuous quality improvement within the JHUSOM M.D. curriculum that results in a curriculum of highest quality and that is responsive to the changing needs of students, faculty and institutional objectives; 2) to support clerkship and course directors by identifying resource needs and opportunities for collaboration and scholarship; and 3) to provide peer review of educational scholarship and inform Department Directors of quality and impact of course/clerkship directors' educational administration. The SAPE Committee is charged with rigorous review of the undergraduate M.D. curriculum, by reviewing each course/clerkship approximately every two to three years and providing recommendations to the UMEPCC. When the school developed a new curriculum, *Genes to Society* (*GTS*), each core curricula component was evaluated after initial deployment with subsequent reviews conducted as indicated, but not less frequently than three years.

The SAPE process is described as follows. Each course/clerkship director completes a course or clerkship review questionnaire, which details course objectives, methods and assessments. This documentation is sent to the SAPE committee, as well as most recent data from the Office of Assessment and Evaluation (such as item analysis and score reports for examinations). The SAPE committee conducts independent observations of the course/clerkship followed by a meeting with the course director, and his/her appropriate supervisors (Department Director and/or Vice Chair for Education in Department).

Concurrent student surveys are conducted for each of the courses and clerkships as well as individual meetings with students. To ensure that student opinions provided to the committee are representative of the student body as a whole, a "jury system" is used. Students from each class are assigned to a jury by random numbers generation. Each student is

responsible for no more than three reviews each year. Students are expected to gather data from their colleagues and to present this and their own opinions to the SAPE committee. Additional external review may be solicited. A report is then produced by the SAPE review panel and presented to the Course Director. The SAPE chair then presents the report to the UMEPCC for discussion and comment by the course or clerkship director. The final report and UMEPCC recommendations are sent to the Course Director/Department Director and are noted in the UMEPCC minutes. Written response from the Course Director within 90 days is requested, and when necessary short cycle re-reviews or interim reports are conducted and the SAPE review cycle repeated.

The SAPE reviews have been effective in identifying both strengths and opportunities for improvement in the educational experience at JHUSOM. All courses and clerkships have submitted a short-cycle response that has been effective in instituting changes and improvements. The most notable improvements have been in learning objectives, methods and validity of assessment, and in areas of institutional commitment such as faculty development. All SAPE reports and responses are posted on the UMEPCC website at: https://www.hopkinsmedicine.org/som/curriculum/epcc.html

Student Curriculum Review Team

In AY13, students established the Student Curricular Review Team (SCRT). SCRT is composed of Year 1 and Year 2 students, who are interested in reviewing themes from end of course evaluations (end of course evaluations are routinely implemented by OMSC for every course/section) and organizing and running a Town Hall meeting to which all students in the class are invited. The Town Hall meeting is designed to provide clarification on themes in the end of course evaluations, and to generate ideas on potential updates to courses. The SCRT team uses information gathered during these Town Halls to prepare a brief report that is first discussed with SCRT faculty advisor(s), and then with the relevant faculty course leaders and the Associate and/or Assistant Deans for Undergraduate Medical Education. The SCRT team also manages a real-time reporting platform to capture any instances of potential bias or other issues that would benefit from being addressed prior to the end of the course. On a related note, students are also able to contact course directors or OMSC staff during a course for issues that need quick follow up, via email, stopping by the OMSC, or submitting a question in the Blackboard discussion board (which can be done anonymously). The SCRT report is finalized and shared with the students, course, and section leaders, the appropriate Deans, and the Student Assessment and Program Evaluation (SAPE) Committee. Unlike SAPE reviews which are scheduled for every required course and clerkship approximately once every 3 years, SCRT reviews take place whenever fewer than 80% of students rate the overall quality of the course as Excellent or Very Good, or when the SCRT real-time reporting platform gathers data and SCRT leaders deem that a report would be helpful.

JHU SOM Undergraduate Medical Education Policy and Curriculum Committee (UMEPCC)
Student Assessment and Program Evaluation (SAPE) Sub-Committee
Course Review Questionnaire

The following questions will help complete the course review process. Questions are organized around the major criteria in the EPC policy and LCME standards.

PREAMBLE
Please provide a brief update regarding the SAPE recommendations at your last review, if one has previously been conducted. Address by having the SAPE recommendation followed by the current status.

1. An explanation of the student goals for the course and congruence with institutional objectives, methods of instruction, and assessment.

   Keep in mind that course goals are written in broad, general terms. Courses usually have between 4-6 goals. Course objectives are derived from course goals and are written in a manner that they can be objectively and specifically measured.

   An example of a goal for the Anatomy Course might be:
   Students will learn the developmental embryology, structure and function of 5 major human anatomical areas.

   An example for an objective within the Anatomy Course might be:
   By the end of this lecture, students will be able to identify the sequence of embryologic events in the first 8 weeks following conception.

   1.1. List the current course goals, and links to the institutional objectives
   1.2. Are objectives specified for each instructional session? Yes/No
   1.3. How are and when are students informed of the course goals and objectives?
   1.4. How and when are course faculty informed of the course goals and objectives?
   1.5. The table below should be completed for the main goals of the course.

Goals	Which Learning Method(s)is/are used to address the Goal	Assessment	
		Which assessment method(s) is/are used to address the goal	What is the relative weight given to each assessment?
Goal 1:			
Goal 2:			
Goal 3:			

Examples of Methods of Instruction include:

- Educational Method
- Lecture
- Team-based learning
- Laboratory
- Small group

- Patient contact
- Other (Specify)

Examples of Assessment Methods:

	Assessment Method
	Multiple choice, true/false, matching, written test
	Fill-in short answer question
	Essay question or paper
	Oral examination
	Problem-solving exercise
	Presentation
	Other (Describe)

2. A description of the course content, structure and management

2.1. Describe how the course fits into the curriculum year.
2.2. Has course information in *Oasis* been entered and updated?
2.3. Give a brief description of the major content areas of the course.
2.4. How were these major areas selected for inclusion? How does this compare to national criteria or criteria from other institutions?
2.5. What is the course length (weeks/hours) during the last review period?
2.6. What is the number of hours (or proportion of hours) allocated to each content area?
2.7. How is workload for the course monitored?
2.8. How is the quality and appropriateness of course content monitored?
2.9. Has new content been introduced since the last review? If so, describe.
2.10. What steps are taken to coordinate the content of the course to minimize omissions and redundancies?
2.11. What steps are taken to coordinate content with other courses during its instructional block or during the academic year?
2.12. What independent learning activities (outside of class) are regularly scheduled for learners? How are these assigned?
2.13. Does the course include the following educational methods:
Opportunities to demonstrate critical judgment based on evidence
Opportunities for medical problem-solving
Opportunities to develop understanding of societal needs
Required laboratory experiences/ or opportunities to collect and analyze data
2.14 Please describe any content you have provided outside of this course to assist in the GTS curriculum across the years of medical school.
2.15 List the number of formal sessions in this course devoted to the following topics:

Content Area	# of Structured Sessions Where Content is Covered
Alternative medicine	
Biostatistics	
Clinical pathology	
Communication skills	
Community health	
Diagnostic imaging	
End-of-life care	
Epidemiology	
Evidence-based medicine	

Family violence/abuse	
Medical genetics	
Geriatrics	
Health care systems	
Health care quality review	
Home health care	
Human development/life cycle	
Human sexuality	
Medical ethics	
Medical humanities	
Medical jurisprudence	
Medical socioeconomics	
Multicultural medicine	
Nutrition	
Occupational health/medicine	
Pain management	
Palliative care	
Patient health education	
Population-based medicine	
Practice management	
Preventive medicine	
Rehabilitation/care of the disabled	
Research methods	
Substance abuse	
Women's health	

3. An analysis of the methods of instruction.

    3.1. What are the different learning methods? Check if used and provide hours for all that apply:

Educational Method	Hours
Lecture	
Laboratory	
Small group	
Patient contact	
Other (Specify)	

    3.2. How are these methods appropriate to meeting the course goals / student outcomes?
    3.3. Have new educational methods been introduced since the last review? If so, please describe.
    3.4. What faculty development activities are in place for teachers of this course?
    3.5. If graduate students or residents are involved in teaching, how are they prepared for their teaching role?
    3.6. What measures are you taking to ensure small group sessions and/or VM sessions are run consistently across groups with different facilitators?

4. A description of the assessment system used to determine student success in meeting the intended course goals, including data that support this success.

4.1. What (different) assessment tools are used during the course? Check all formats that are used in examinations or other evaluations that students must take in order to pass the course:

	Assessment Method
	Multiple choice, true/false, matching, written test
	Fill-in short answer question
	Essay question or paper
	Oral examination
	Problem-solving exercise
	Presentation
	Other (Describe)

4.2. How many formal examinations are given throughout the course?
4.3. Is a final examination given and is it comprehensive?
4.4. Have internal examinations been tested for reliability and validity? What was the reliability index for the last 2 administrations of the examination? If applicable, what actions have been taken to improve examination reliability?
4.5. Are there extra banked examination items, for students who need to take a remediation examination?
4.6. Are there other means used to assess student progress? Describe.
4.7. What is the relative weight given to each examination or assessment?
4.8. Are students provided with a formal mid-course evaluation of their progress? What is that process?
4.9. Is a narrative submitted with each student grade? If so,
    4.9.1. Please provide examples (approximately ten) of narrative feedback given to students taking the course in the last year. Please do not provide any identifiers.
    4.9.2. Please provide any examples of faculty development relating to the provision of narrative feedback. If none, so indicate.

4.10. How are assessment procedure results checked for alignment with course objectives and institutional objectives, as well as the reliability of these results?
4.11. Please provide an exam blueprint.
4.12. How is information about student performance collected and conveyed to the course director?
4.13. What external assessment measures have you used to calibrate student success (USLME, Shelf Exams)? Include this data.

5. Course outcomes, student performance

As part of the SAPE review process, each course will be provided with a distribution of overall grades and as appropriate internal and external examination scores for the last 5 years.

5.1 Please comment on whether or not course grades and/or examination scores in your course are different for the two groups of students overtime.

5.2 Please comment on whether or not your course grade distribution is substantially different from other course grade distributions.

5.3 Please comment on the relationship between performance in your course and later performance on the USMLE Step 1.

6. A description of the methods used for course evaluation.

6.1. Describe the different methods used for evaluating the successfulness of the course.

6.2. Provide student and if available faculty evaluations of the course
6.3. How is this information used? How is it conveyed to participating faculty?
6.4. Summarize key messages from the student evaluations for the course over the past review period.
6.5. What other sources of course evaluation data do you use (i.e. EPC course review committee, AAMC exit survey, student focus groups or surveys from previous classes)? Please provide these, when applicable
6.6. What happens when faculty receive consistently poor evaluations?

7. Do you feel you had adequate resources for this version of the course? What if anything would you need to make it more successful?

8. With respect to the above, a clear statement of the vision for the course during the next review cycle, including any outstanding barriers to the successful delivery of the course.

9. An overview of any educational scholarship activities (research, presentations, etc.) conducted during the previous review period and ideas or formal proposals if any, for conducting future scholarship activities during the upcoming review cycle.

Attach:

I. Results of Student Performance in the Course
II. Results of Course Evaluations (each year since last review, Include SCRT if available)
III. Examination Item Tagging Report from ExamSoft
IV. Examination Blueprint (relates to 4.11 above)

JHUSOM Educational Policy & Curriculum Committee

SAPE Subcommittee Checklist for Courses

	Exceeds Expectation	Meets Expectation	Below Expectation	Comments
1. Objectives				
There are specific, measurable written objectives for the clerkship. EE: Objectives meet criteria and include more than medical knowledge. ME; Objectives include who, what, when and by what measurement				
The objectives support the medical education program objectives and development of student core competencies. EE; As above, table should include objective, medical education program objective, and measurement (see below for educational method). More competencies than medical knowledge. ME: Table with appropriate medical knowledge and patient care matched				
The objectives are effectively communicated to students, and faculty EE: Some form of personal communication, i.e., face-to-face, videoconference with faculty/students, to occur <u>in proximity to the course, during the course, and immediately after the course for key faculty.</u> Must also have written, enduring and accessible objectives, i.e., Blackboard, handout ME: Annual personal communication with faculty, also in written form. Orientation meeting with each group of students, written/public availability.				
2. Educational Methods				

Educational methods are congruent with clerkship objectives. ME: Educational methods used are	N/A			

expected to achieve the learning objectives				
A variety of educational methods are used. EE: Educational experience includes more than lecture and at least two additional methods as appropriate for objectives. ME: Structured learning experience (lectures) and one additional educational method.				
Educational methods support the development of lifelong learning habits EE: More than one experience where self-directed learning opportunities occur. For example, problem-based learning, portfolio, presentation, journal club ME: At least one self-directed learning project				
Course content is monitored for redundancies and omissions. EE: Year committee/ Department/Division has educational committee consisting of more than course director and coordinator who meet more than annually to review the section/course and make suggestions for improvement. Sections of course must meet with overall course director and year meeting. ME: Course director monitors course experience				
Faculty development is documented. EE: Faculty development occurs through an annual educational retreat, or an organized educational program provided through the department or university where more than the course director participates.				

ME: Course director and/or faculty development activities are documented.				
If used for teaching or supervision, graduate students are prepared for teaching roles. EE: Some form of personal communication, i.e., face-to-face, videoconference with graduate or teaching assistants occurs, in immediate proximity and following the course. Some dedicated effort to improving teaching skills should be included. Evidence that student comments are included in graduate student teaching assessment is ideal. ME: Annual personal communication with graduate students including roles and responsibilities, including teacher – learner contract.				
3. Assessment and Evaluation				
Assessment and evaluation methods are congruent with educational objectives. EE: See objectives above. Table includes objectives, institutional objectives, instructional methods, and assessments in more than medical knowledge and at least two additional competency domains. ME; As above with medical knowledge.				
Assessment includes validity evidence EE: Course director provides validity evidence through either psychometric analysis of written test, reliability evidence of clinical performance measures or other validity evidence. Efforts to improve psychometric test reliability if internal examinations are used. ME: Course director collects information				
Multiple measures of student performance are taken.				

EE: Course director utilizes more than written examinations (or equivalent) and at least two additional methods of assessment. ME: Written examination (or equivalent) plus one additional modality.				
Assessment of multiple competencies is made: e.g., professionalism, life-long learning, communication, etc. EE: Course director utilizes more than written assessment as above EE to assess more than medical knowledge and at least two additional competency components. ME: Course director assesses more than medical knowledge.				
Mid-course feedback occurs. EE: Individual student feedback occurs and is documented. ME; Student feedback occurs.				
Grade includes a narrative. Not applicable- Yes or NO (circle one) EE: Narrative comments on multiple competencies, is specific and individual to the student experience. ME: Narrative noted for all students.				
Grades are reported within six weeks of completion of the course. ME: All grades reported to the registrar within 6 weeks. Students should be informed of written test results within 2 weeks.	N/A			
4. Resources				
Course director perceives he/she has adequate resources to accomplish objectives (personal support, administrative support, access to				

faculty). EE; Explicit recognition of course director ME: Core Course Director= 0.25 FTE; Administrative staff (single person) = 1.0 FTE				
Faculty and students perceive they have adequate resources to support course. EE: Explicit recognition of primary teaching faculty, teaching awards ME; Adequate availability of resources.				
Facilities are adequate.	N/A			
Course director has made maximum use of institutional resources to support the course. EE: Course director has utilized the Office of Medical Education, Simulation Center, professional development, or other resources. ME: Active participation and use of clerkship directors meeting.				
5. Course Evaluation				
Students report satisfaction with course. (end of course evaluations and/or curriculum committee) Students report satisfaction with clerkship. <u>Course Survey</u>: Students receive grade points for completing survey: YES or NO (circle) EE: Students report >90% very satisfied/outstanding BE: Greater than 10% report dissatisfaction or very dissatisfied. <u>SAPE Survey:</u> EE: Students report >90% very satisfied/outstanding BE: Greater than 10% report dissatisfaction or very dissatisfied.				

Student concerns have been addressed. EE: Examples of student concerns, changes made, and positive outcomes ME; Examples given				
Teaching faculty are evaluated and receive feedback. EE: Evidence of faculty review, public recognition, departmental awards or academy, educational effectiveness part of departmental faculty review, faculty development, ME: Faculty are evaluated and receive feedback. Must be documented.				
National benchmarks of student attainment of objectives indicate effectiveness of course. Assessment not available- N/A EE: Assessment scores > 66%, or one Standard deviation above the mean ME; Within one standard deviation from the mean.				
6. Curriculum Management				
OASIS data is attached and updated. EE: Key words/events included ME: Attached				
7. Innovation & Scholarship				
Course director has introduced new content, methods or assessment. EE: Introduction of new content, and /or new educational methods and/or new assessments ME: Introduction of new content				
Clerkship director has produced scholarship from educational act ivies EE: National presentation and/or				

publication, website development, educational products				
Clerkship director has shown evidence of university educational citizenship EE: Embraces and/or develops and/or adopts institutional educational priorities ME: Actively participates and attends clerkship directors and UMEPCC				

8. Recommendations for UMEPCC regarding this clerkship: (narrative)

9. General recommendations for UMEPCC regarding the curriculum: (narrative)