

# Guiding principles behind curricular changes at Geisel—July 2017

## Overarching Charge for Curriculum

The Geisel curriculum will address the learning goals of our students by optimally meeting their specific educational and training needs. It will help each student establish a strong foundation in the biomedical sciences, and emphasize the needed preparation for clinical competence, board exam performance, and residency placement. The curriculum will be delivered with the utmost efficiency, quality, and flexibility, and evolve with changes in healthcare and healthcare education.

- The Medical Education Committee (MEC), a voting committee of the faculty with student representatives from each of the four classes and MD/PhD program must be involved in the evolution of the curriculum.
- The curriculum requires a consistent and well-defined method of evaluation over the 4-years to ensure that changes are aligned with Geisel competency based curricular objectives
- Any proposed changes are commensurate with resources available for implementation

## Optimizing the Academic Calendar

- Students benefit from beginning their clinical clerkships with timing such that the curriculum must:
  - enhance clinical competence
  - enhance hands-on application of knowledge and skills and attitudes
  - promote time for exploration of and preparation within their specialty of choice
  - aim to begin clinical clerkships earlier (for example, it may be 2 to 6 months) and concurrently maintain a robust pre-clinical curriculum
- Enhance and encourage individualized student experiences at an advanced level, including the specialty of choice, in particular in the post-clerkship curriculum
- The graduation date will allow Geisel graduates sufficient time to transition and move prior to starting residency

## Improving Pedagogy

- Apply sound, evidence-based educational principles to optimize adult learning
- Assure material is covered at the depth appropriate for a medical student and practicing physician
- Selectively planned second passes of essential materials will be revisited in pre-clinical contexts; the interleaving of topics is critical
- Foundational medical science will be integrated vertically, including recapitulation in clinical settings, to emphasize the importance and applicability of this knowledge

## Maintaining the Geisel Experience

- The curriculum should be of sufficient breadth to prepare students for entry into the practice of any field of medicine
- The preclinical curriculum schedule will foster and include time for students to attend to their personal and professional growth, for example, in extracurricular activities, service learning opportunities, and leadership experience
- The Year 1 summer provides for scholarship and career opportunity, efforts will be made to maintain the length of the summer break
- In Year 4, students will participate in dedicated capstone and residency readiness activities

# Appendix to Principles: Reflecting on Positives and Challenges

## Overarching Charge for Curriculum

The Geisel curriculum will address the needs of our students by optimally meeting their specific educational and training needs; i.e., preparation for clinical competence, board exam performance, and residency placement. The curriculum will be delivered with the utmost efficiency, quality, and flexibility, and evolve with changes in healthcare and healthcare education.

- The Medical Education Committee (MEC)\* a voting committee of the faculty with student representatives from each of the four classes and MD/PhD program must be involved in the creation and evolution of the curriculum.
  - a. POSITIVES
    - i. Engagement and buy in from key stakeholders
  - b. CHALLENGES
    - i. Reaching all groups; individuals don't have the full breadth of curricular and fiscal knowledge and experience
- The curriculum requires a consistent and well-defined method of evaluation over the 4-years to ensure that changes are aligned with Geisel competency based curricular objectives
- Any proposed changes are commensurate with resources available for implementation

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\* The MEC is Geisel's designated group for curriculum oversight. The LCME requires "Integrated institutional responsibility: Oversight by an appropriate central institutional body (commonly a curriculum committee) of the medical education program as a whole. An effective central curriculum authority exhibits the following characteristics: 1) participation by faculty, students, and administrators; 2) the availability of expertise in curricular design and methods of instruction, student assessment, and program evaluation; and 3) empowerment, through bylaws or decanal mandate, to work in the best interests of the medical education program without regard for parochial or political influences or departmental pressures. (Element 8.1)"  
*from* Functions and Structure of a Medical School: Standards for Accreditation of Medical Education Programs Leading to the MD Degree. March 2017. Available at: [http://lcme.org/wp-content/uploads/filebase/standards/2018-19\\_Functions-and-Structure\\_2017-03-22.docx](http://lcme.org/wp-content/uploads/filebase/standards/2018-19_Functions-and-Structure_2017-03-22.docx)

# Optimizing the Academic Calendar

- Students benefit from beginning their clinical clerkships with timing such that the curriculum must:
  - enhance clinical competence
  - enhance hands-on application of knowledge and skills and attitudes
  - promote time for exploration of and preparation within their specialty of choice
  - aim to begin clinical clerkships earlier (for example, it may be 2 to 6 months) and concurrently maintain a robust pre-clinical curriculum
- a. POSITIVES
  - i. Appropriate timing for completion of required clerkships to give students time to make decisions re: career choice and preparation
  - ii. Students have time for exploration of and preparation within their specialty choice
  - iii. Applications for visiting student electives open in January of Year 3, and appropriate timing can give Geisel students the opportunity and preparation to apply to these electives.
  - iv. Many Geisel electives have pre-requisites of core clerkships so timing should enable Geisel students to have opportunity to enroll in a wide range of clinical electives during their 3<sup>rd</sup> year elective time
  - v. Allows flexibility on when to take current (as of June 2017) 4<sup>th</sup> year required clerkships, GAM and Neurology (if these are not eventually integrated into the 3<sup>rd</sup> year). These may be taken in 3<sup>rd</sup> year by interested students
- b. CHALLENGES
  - i. Any move that would make clerkships begin earlier in the curriculum would mean less longitudinal preparation through On Doctoring and foundational medical sciences, so clerkships students may not be as well prepared, comparatively, when they begin
  - ii. Any move in timing would result in the old and the new academic calendars to be misaligned in the overlap year. We do not know how well this period of overlap will be handled with limited clerkship capacity. We anticipate this will be a very difficult challenge and will require significant advanced planning and preparation
  - iii. Will require substantial restructuring of the pre-clinical curriculum.
  - iv. Clerkships will need to integrate foundational medical science content and mechanisms will need to be put in place to ensure incorporation and collaboration in this regards.
  - v. This may affect the timing of when students take the USMLE Step 1 and this will need to be discussed and explored

- Enhance and encourage individualized student experiences at an advanced level, including the specialty of choice, in particular in the post-clerkship curriculum
  - a. POSITIVES
    - i. Year 4 students should be able to explore fields to make career choices within the 4 year curriculum
    - ii. Dual degrees will continue and be encouraged and tangible options
    - iii. Y4 students applying for competitive residencies will have the opportunity to do sub-Is, away rotations, and academic projects without having to take an extra year
  - b. CHALLENGES
    - i. Coordination with other dual degree programs (e.g. Tuck, TDI) about scheduling
  
- The graduation date will allow Geisel graduates sufficient time to transition and move prior to starting residency
  - a. POSITIVES
    - i. If graduation were at end of May, all students would have time to move prior to starting residency.
  - b. CHALLENGES
    - i. All students would need to complete all curricular and graduation requirements with sufficient timing for graduation at end of May. If clerkships start at the appropriate time on the front end, then this could allow completion of requirements in time for May graduation.

## Improving Pedagogy

- Apply sound, evidence-based educational principles to optimize adult learning
  - a. POSITIVES
    - i. Enhance the use of multiple and innovative educational strategies, workshops, interactive cases, experiential activities
  - b. CHALLENGES
    - i. Faculty Development education on adult learning principles
  
- Assure material is covered at the depth appropriate for a medical student and practicing physician
  - a. POSITIVES
    - i. Emphasizes key material for practice of medicine, recognizing goals also include appropriate timing for clinical education and experience
    - ii. Enhance retention and performance of the core and important material
  - b. CHALLENGES
    - i. Defining what actually is the appropriate depth needed for a medical student and practicing physician

- Selectively planned second passes of essential materials will be revisited in pre-clinical contexts; the interleaving of topics is critical
  - a. POSITIVES
    - i. Some material can be given in one pass and other material requires revisiting for a full and rich understanding
    - ii. Difficult material requires multiple passes, in particular for material that spans different organ systems
  - b. CHALLENGES
    - i. Defining which topics are essential to revisit
    - ii. Logistics of where/when/how to revisit
  
- Foundational medical science will be integrated vertically, including recapitulation in clinical settings, to emphasize the importance and applicability of this knowledge
  - a. POSITIVES
    - i. Material that requires “planned repetition” will be revisited in the clinical context rather than exclusively repeating material over separate classroom years.
    - ii. Geisel students will be well prepared for USMLE Step 2 CK and Step 3
    - iii. Decisions on which topics should be integrated across years and into which rotations can be made through collaboration between clerkship and pre-clerkship faculty and students.
  - b. CHALLENGES
    - i. Clinical settings are dispersed coast to coast and implementation will need to be done at a local level rather than centralized.
    - ii. Will take time and investment of clerkship and pre-clinical faculty to collaborate, create, and maintain curricular models.
    - iii. Keeping implementation of the material time neutral as students already have busy schedules during clerkships.

## **Maintaining the Geisel Experience**

- The curriculum should be of sufficient breadth to prepare students for entry into the practice of any field of medicine
  - a. POSITIVES
    - i. Emphasizes breadth of material necessary for practice of medicine, in any field
  - b. CHALLENGES
    - i. Defining what actually is the appropriate breadth needed for a medical student and practicing physician in all fields

- The preclinical curriculum schedule will foster and include time for students to attend to their personal and professional growth, for example, in extracurricular activities, service learning opportunities, and leadership experience
  - a. POSITIVES
    - i. These are enriching and critical experiences for citizenship and the developing physician
  - b. CHALLENGES
    - i. Maintaining a strict learning hours/classroom hours policy
  
- The Year 1 summer provides for scholarship and career opportunity, efforts will be made to maintain the length of the summer break
  - a. POSITIVES
    - i. Students continue to have meaningful experiences, produce scholarship
    - ii. Students get early exposure to clinical and research opportunities in specific fields of interest
  - b. CHALLENGES
    - i. Y1 class is dispersed for 2 months over the summer
    - ii. Some summer research opportunities require a minimum of 8 weeks which is longer than the current Year 1 summer of 7+ weeks
    - iii. With the shortened pre-clinical academic calendar, ensuring 8 weeks or close to 8 weeks for these opportunities will be even more challenging and may serve as a limit for how much we can shorten the academic calendar
  
- In Year 4, students will participate in dedicated capstone and residency readiness activities
  - a. POSITIVES
    - i. Students are focused on their upcoming residency and their priorities are focused on how to become the best intern
    - ii. Full year away and potential stressful period during clerkships; being together as a community promotes effective wellness/resilience
  - b. CHALLENGES
    - i. Coordinating and integrating multiple needs in a short timeframe