APPROVED BY SENATE
09/19/2016

ILLINOIS
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Proposal to the Senate Educational Policy Committee

PROPOSAL TITLE: Establish a Doctor of Medicine Professional Degree Program (MD) in the Carle Illinois College of Medicine.

SPONSORS: Interim Provost Ed Feser, feser@illinois.edu, 217-333-6677

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COLLEGE CONTACT: Interim Provost Ed Feser, Feser, feser@illinois.edu, 217-333-6677

BRIEF DESCRIPTION:

The Carle Illinois College of Medicine (CICOM) seeks to establish a professional degree program in the College for the degree of Doctor of Medicine (MD). The MD degree is the initial and foundational degree to be offered by the new CICOM whose creation was approved by the Senate on February 9, 2015 and subsequently approved by the Board of Trustees on March 12, 2015. The proposed MD degree is a four year program that integrates engineering concepts with the traditional pillars of medicine, namely the basic health sciences and clinical training. The program will produce students who are trained and equipped to incorporate analytical and quantitative techniques, modeling and computation, innovation, and human systems approaches to advancing and delivering high-quality healthcare. The curriculum emphasizes professional, compassionate, and ethical care and the utilization of team-based approaches to transform healthcare delivery and improve health outcomes through the continuum of care: preventive medicine through acute care. Graduates are expected to become highly professional, passionate, and compassionate physician leaders and innovators who are creative problem-solvers. Graduates are also expected to challenge status quo, to drive and implement technology, and be comfortable in working in teams to create non-traditional solutions to challenges in health care.

The MD degree program is designed to meet Liaison Committee for Medical Education (LCME) accreditation requirements and prepare students to succeed on all parts of the required United States

Medical Licensing Examinations. The case-driven, active learning curriculum includes professional training elements, fundamental knowledge instruction, small team-based, problem-based learning, core coursework, required clinical rotations and electives that allow the student to pursue individual areas of clinical and engineering interest. Performance in all courses and rotations will be assessed on a pass/fail basis, as is common practice in many peer schools of medicine. Students who successfully complete all requirements will graduate with an MD degree. Students who show excellence throughout the program will graduate with Honors. Students who excel and elect to pursue an optional MD research thesis as part of their course work will be able to graduate with High Honors.

The MD degree program has been designed to span 179 weeks with an increased emphasis on clinical work, research, and innovation. This exceeds the 130 total minimum weeks of instruction required by the LCME.

The program includes:

- A core component covering the health sciences, engineering, professional and clinical basics spanning 1.5 years; which includes a minimum of 40 hours of professional development coursework;
- A minimum of ten months of required clinical rotations;
- A minimum of 15 months of elective rotations that will include eight months of clinical rotations, four months of engineering/innovation rotations, and three months during which a student may pursue any specific avenue.

The LCME requires that all MD curriculum elements taken by students be specifically designed to be consistent with the objectives and mission of the College degree program. In addition, LCME expects students to have a uniform experience in completing a given track (of which we have only one). As such, no previous University of Illinois Urbana-Champaign graduate-level coursework can be transferred and applied to this degree program.

See Appendix A for a detailed overview of the curriculum framework of the MD degree.

JUSTIFICATION:

There is no public research university in the country better positioned to leverage the convergence of engineering with medicine and be a leader in the transformation of health care research, education, practice and delivery than the University of Illinois at Urbana-Champaign. The Urbana-Champaign campus already has the assets, including one of the nation's top five engineering schools and the National Center for Supercomputing Applications. All of the top ten medical schools in the country already partner with our College of Engineering faculty members in joint research projects. Furthermore, medical delivery and innovation is increasingly dependent on the formation of interdisciplinary teams. The breadth and excellence of the campus provides an excellent opportunity for leveraging assets across the campus to further development and implementation of a program like this. In addition, the need for cross-disciplinary physician training has been emphasized by the Association of American Medical Colleges and the Howard Hughes Medical Institute, who have argued for transformative approaches to the education of future physicians that would better reflect and anticipate emerging technologies. Panelists at the 2012 First IEEE Life Sciences Grand Challenges Conference, held at the National Academy of Sciences, emphasized the need for medical education to adapt to tomorrow's medicine, including increased attention to the quantitative sciences in physician training. These panels also argued for the need to

prepare future physicians by leveraging closer collaborations between medical and engineering schools, and teaching physicians to adopt a systems view of the human body.

The numerous letters of support that were provided to support the creation of a new College of Medicine from leading medical educators, practitioners, and leaders of industry in the medical sphere attest to the transformative value of the creation of a distinct engineering-based College of Medicine (see Attachment A of EP.15.33). Although creation of the College has been approved, an MD degree program within it also is needed so the College can obtain preliminary accreditation from LCME and begin to recruit students.

As the only health system in Illinois that owns its own health plan, and one of the state's largest providers of clinical care, Carle is a leader in high-quality, cost-effective and well-coordinated patient care, and is the only fully integrated health system in the State of Illinois. Carle's unique profile allows improvements across entire systems of care, rather than focusing on one area of healthcare delivery – a capability that has led to Carle being consistently recognized as among the best in the state and the nation. In particular, the application of big data techniques and data analytics across such an integrated health system holds the promise of reducing costs and improving healthcare by tracing health trends and identifying effective prevention and treatment strategies. The MD degree program is poised to leverage Carle's fully integrated health system to position students to be at the leading edge in the quest to identify and drive improvements in cost and effectiveness of healthcare, both locally and nationally. As a physician-led and patient-centered organization, Carle will play a significant role in developing medical students who deliver care with high levels of professionalism, compassion and ethical standards.

BUDGETARY AND STAFF IMPLICATIONS:

1) Resources
    a. How does the unit intend to financially support this proposal?

        The College intends to financially support this program through tuition and fees, a major contribution of $100 million from Carle, philanthropy, and other corporate contributions. Consistent with prior commitments, the College will not request any new State General Revenue Funds. In addition, consistent with LCME expectations, no individual source of funding will account for more than 50% of total College revenue. The College will be staying within the financial resources presented in the "Business Plan to Establish a New College of Medicine in Urbana-Champaign," dated October 20, 2014 that led to approval of the College's creation.

    b. How will the unit create capacity or surplus to appropriately resource this program? If applicable, what functions or programs will the unit no longer support to create capacity?

        The College has developed plans to build-up and resource this program within the financial resources presented in the "Business Plan to Establish a New College of Medicine in Urbana-Champaign," dated October 20, 2014 that led to approval of the College's creation. The College of Medicine is a new unit and will therefore not need to consider what programs or functions it may no longer support to create capacity.

c. Will the unit need to seek campus or other external resources? If so, please provide a summary of the sources and an indication of the approved support.

The College, as an equal and peer college amongst others, is expected to collaborate with colleges across campus. In particular, the College expects to work closely with the College of Liberal Arts and Sciences and the College of Engineering to engage faculty in the new College of Medicine for teaching and research. Furthermore, The College of Engineering is already committed to housing the College of Medicine's 'JUMP Simulation and Education Center' in Everitt Laboratory, the future home of the Department of Bioengineering. Furthermore, the College of Engineering has agreed to allow much of the College of Medicine curriculum to be delivered in the revitalized Everitt Laboratory for the first two years. The configuration of Everitt is ideally suited to deliver the planned medical curriculum. Sharing the facility will also permit renovations to be completed in the Medical Science Building, which will be utilized for the delivery of a substantial portion of the curriculum delivery upon renovation completion. More than $22 million were budgeted for capital investments including building upgrades and capital equipment IT/media classroom enhancements.

d. Please provide a letter of acknowledgment from the college that outlines the financial arrangements for the proposed program.

The College like other Colleges of Medicine is the unit providing the MD degree and not a department. Thus, no letter is provided.

2) Resource Implications

a. Please address the impact on faculty resources including the changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

After careful review of other MD degree programs from peer institutions and of the growing trend towards active, small group case-based and problem-based learning approaches, it has been decided to deliver a four year degree and start with an initial class of 32 students (four small groups of eight students each) with a ramp up to 64 students per year in the steady state.

Teaching loads are expected to conform to teaching loads expected from faculty and instructors on the Urbana campus. However, these will be aligned with the distinct curriculum and curriculum delivery of a modern College of Medicine. The faculty FTE anticipated is provided in Appendix B. Estimates of these faculty numbers have been verified to be consistent with that of peer institutions through visits to two of these institutions and teleconferences with key officials at several others.

A summary of the number of students, faculty FTE and student to faculty ratio are presented in the table below. Please refer to Appendix B for the full details.

	2018	2019	2020	2021	2022
Students in Year 1	32	32	40	40	64
Total Students in College	32	64	104	144	176
Faculty FTE	8	13.5	17.1	21.3	28.3
Student/Faculty FTE ratio	4:1	4.7:1	6.1:1	6.8:1	6.2:1

b. Please address the impact on course enrollment in other units and provide an explanation of discussions with representatives of those units. *(A letter of acknowledgement from units impacted should be included.)*

The CICOM is a new, independent college that will deliver its own curriculum. As such, no impact on course enrollment in other units is anticipated.

c. Please address the impact on the University Library *(A letter of estimated impact from the University Librarian must be included for all new program proposals. If the impact is above and beyond normal library business practices, describe provisions for how this will be resourced.)*

The LCME requires library resources and services to support medical education be provided. A letter from the dean of the University Library is attached that describes how this will be resourced.

d. Please address the impact on technology and space (e.g. computer use, laboratory use, equipment, etc.)

The MD Degree Program will have three main points of operation. Everitt Laboratory, the new home of the Department of Bioengineering, will house a state-of-the-art simulation laboratory. This $10 million College of Medicine facility will be a portal to engineering and is paid for through a donor gift. As part of transition planning, Everitt will also serve to house lectures and small group problem-based learning in the first two years of operations of the College. Another key portal to the clinical world is Carle clinical network (hospital and regional clinics) where most clinical rotations will be held. Finally, with the phase-down of the regional UIC-administered College of Medicine, the Medical Sciences Building (MSB) will eventually house the dean's administrative offices as well as its main educational facilities. MSB will thus act as a portal to the basic health sciences on campus. A resource and infrastructure workgroup has developed plans for this transition into Everitt and MSB and has verified that these are adequate for the level of students anticipated in the MD program. This effort has also been supported with an

active internal planning group involving members of the campus CIO office, the University Library, and Facilities and Services. Facilities and Services has assigned a chief planner to plan for renovations and adequate associated swing space for the MSB renovations. It should be noted that the MSB that houses the current UIC Illinois College of Medicine regional campus is an LCME approved location for delivering a four-year MD degree, including 125 first year students. Planned capital and IT infrastructure resources built into the original budget will allow for significant upgrades to facilities.

For new degree programs only:

3) Briefly describe how this program will support the University's mission, focus, and/or current priorities. Include specific objectives and measurable outcomes that demonstrate the program's consistency with and centrality to that mission.

The University of Illinois at Urbana-Champaign is charged by the State of Illinois to enhance the lives of residents in Illinois, across the nation, and around the world through leadership in learning, discovery, engagement, and economic development. The University's vision is to become the pre-eminent public research university with a land-grant mission and global impact. The proposed CICOM MD program significantly advances this vision in an area of the highest national and international priority: the preparation of doctors and the conduct of research centered on the use of advanced technologies and engineering to make health care maximally effective, affordable, and accessible. The April 17, 2014 feasibility study report entitled, "Evaluating the Feasibility of a New College of Medicine in Urbana-Champaign," completed by the Tripp Umbach firm, affirmed that a new college of medicine at the University of Illinois at Urbana-Champaign would provide economic development leading to employment opportunities for Illinois residence residents and their families and would improve the health and well-being of the state's population, two core elements central to the University's mission.

The U.S. healthcare system is undergoing historic changes driven by an aging population with more chronic conditions, an influx of millions of new people into the healthcare system due to the Affordable Care Act, and a severe physician shortage. The convergence of engineering, technology and medicine is expected to lead to discoveries that will result in greater access to better healthcare at lower cost for more people. Studying how to address these new medical realities is consistent with our mission to address societal issues through research, education, and engagement. Carle's mission to serve people through high-quality care, medical research, and education complements our mission.

As with other colleges on the Urbana-Champaign campus, the MD program and CICOM will be reviewed in the University's formal review process. The Provost will review annually the college's performance and plans. Like all other colleges, the college's performance will be measured by capturing key metrics that have been identified to assess performance against the core goals identified in the university's

strategic plan. Consistent with LCME requirements, the College will assign a quality officer the task of capturing performance data to assess performance against all 12 LCME standards to assist the College leadership and its faculty in implementing a continuous improvement process and facilitating re-accreditation reporting.

4) Please provide an analysis of the market demand for this degree program. What market indicators are driving this proposal? What type of employment outlook should these graduates expect? What resources will be provided to assist students with job placement?

As extracted from, "*New and Developing Medical Schools - Motivating Factors, Major Challenges, Planning Strategies – Part 2*," authored by Michael E. Whitcomb and published in July 2013:

> *In 2006, the Association of American Medical Colleges (AAMC), in response to a growing body of evidence that the country was already experiencing physician shortages in some specialties and in some regions of the country, issued a policy statement that called for a 30% increase in medical school enrollment. The AAMC acknowledged in the statement that to increase enrollment to that degree would not only require existing schools to increase the size of their student bodies, but would also require the establishment of new schools.*

By 2013, the number of graduates from medical school had increased to only about a third of the increase called for by the AAMC. The AAMC call was also made before the passage of the Affordable Care Act which has resulted in far greater number of patients now covered to receive care. There is only approximately one seat in a medical school for every two qualified applicants.

The new proposed MD program will be the nation's first engineering-based medical college designed for the express purposes of infusing engineering and computing into medical education and therefore adding engineering to the basic biological and health sciences and clinical training. Graduates of the college will be uniquely equipped and trained to discover and/or invent the devices, approaches, and concepts that will transform medicine. In addition, the new College of Medicine will address a central workforce challenge facing Illinois, a shortage of well-trained physicians. According to a 2010 Illinois Physician Workforce report conducted by Northwestern University's Fienberg School of Medicine, the Illinois Hospital Association, and the Illinois State Medical Society, Illinois is "in danger of being unable to meet even the most pressing health care needs" due to a shortage of physicians.

The MD degree is typically followed by Graduate Medical Education (GME) in residencies where graduates are embedded in health systems. This is required for graduates to become practicing physicians. We intend for our MD graduates to have access to top tier residencies across the nation and as such, we will focus on providing career development support and advising in order to best prepare our students for

residency application and interview processes. Having said that, the skills to be provided, such as resume building, interview preparation, mock interviews, etc. will also serve those graduates who elect to join companies to advance healthcare through product and service innovations. For the latter, we may elect to work with our peer colleges to coordinate access to job fairs and corporate interview schedules.

5) If this is a proposed graduate program, please discuss the programs intended use of waivers. If the program is dependent on waivers, how will the unit compensate for lost tuition revenue?

   The MD program is requesting self-supporting status. There will be no Graduate College or BOT waivers allowed for students in this program.

DESIRED EFFECTIVE DATE: *(Proposals may not be implemented until they go through all necessary levels of approval. The Provost's office will inform the sponsors in writing when they may implement their proposal. Proposed changes may not be publicized as final on any web sites, printed documents, etc. until written confirmation of final approval is issued.)*

Fall 2018 (with a July 2018 early start).

STATEMENT FOR PROGRAMS OF STUDY CATALOG: *(All proposals must include either a new or revised version of the entry in the Programs of Study Catalog, if applicable. Entries will be published as approved by the Senate. Future changes in the statement for Programs of Study Catalog which reflect changes in the curriculum, must go through the normal review process at the appropriate levels.)*

See Appendix C.

CLEARANCES: *(Clearances should include signatures and dates of approval.* ***These signatures must appear on a separate sheet.*** *If multiple departments or colleges are sponsoring the proposal, please add the appropriate signature lines below.)*

Signatures:

College Representative: Interim Provost Ed Feser

Date: 8/24/16

Dean of Graduate Studies: Wojtek Chodzko-Zajko

Date: 8/24/16

Appendix A:
Curriculum Framework

Course Requirements Summary Table
Doctor of Medicine (Professional Degree)

Requirements	
Credit Hours	
• Minimum core coursework (excluding professional development)	75
• Minimum professional development coursework	12
• Minimum required clinical rotations	50
• Minimum elective rotations	74
Total minimum Credit hours	211
Other requirements and conditions	
Courses are all graded on pass/fail. Students must pass all courses to obtain the MD degree.	
No credit hours from any previous University of Illinois Urbana-Champaign coursework may be transferred or applied to the MD degree.	

Program Development and Administration

The courses of a MD degree program, in part due to accreditation standards and in part through the adoption of best practices, are structured differently from typical courses. The courses are organized as modules and these are in turn scheduled as a series of topical rotations. Each module consist of entire weeks of focused learning including self-discovery. Pursuing a series of modules each centered on a different organ, as the proposed MD curriculum does, is common. The curriculum workgroup for the CICOM (see Appendix E1), consisting of a mix of engineering, health sciences and accreditation faculty from the University of Illinois and physicians from Carle, many involved in the existing UIC-administered College of Medicine regional campus followed a systematic phased approach (Appendix E2) to develop the curriculum. This effort included two visits to aspirational peer institutions, numerous discussions with leaders of multiple institutions (Appendix E3) and research into the curriculum framework of several medical schools. The curriculum committee reorganized itself numerous times to form subcommittees (for an example, see Appendix E4) to tackle various aspects of the curriculum, always with the goal of developing a curriculum aligned with the distinct vision and goals of the College while keeping accreditation standards and requirements in mind. After months of effort, the curriculum committee, aided by outside consultants expert in meeting accreditation standards, have developed a curriculum framework (Appendix A) that is at the center of the proposed MD degree featuring 179 weeks of instruction, 49 more weeks than are minimally required and a set of required rotations that included all rotations required by the accreditation body (LCME) and two additional rotations viewed particularly beneficial to the goals and strengths of the College.

In keeping with accreditation standards and the active learning approach adopted by the curriculum committee, students will proceed through each course (module) in groups of eight, with each group assigned to a full-time facilitator who will help guide students through each series of lectures, case-based studies, patient interactions, simulations and other active learning experiences involving

numerous other faculty members and subject-matter experts. Embedded in each module will be professional development and engineering innovation learning objectives. Lengthy periods, as required by accreditation standards will be reserved for student self-study and individual research. Students will also be exposed to clinical experiences and physical diagnosis early in the curriculum preparing them for the required clinical rotations and electives to follow. An example of a weekly schedule is provided in Appendix F. The curriculum group also has developed a prototype that establishes the individual case structure around which all case-based elements incorporating the health sciences, engineering and clinical training can be incorporated in a systematic and consistent manner. The foundations are thus in place for the development of detailed individual course syllabi to continue and be refined as faculty and administration for the college are selected.

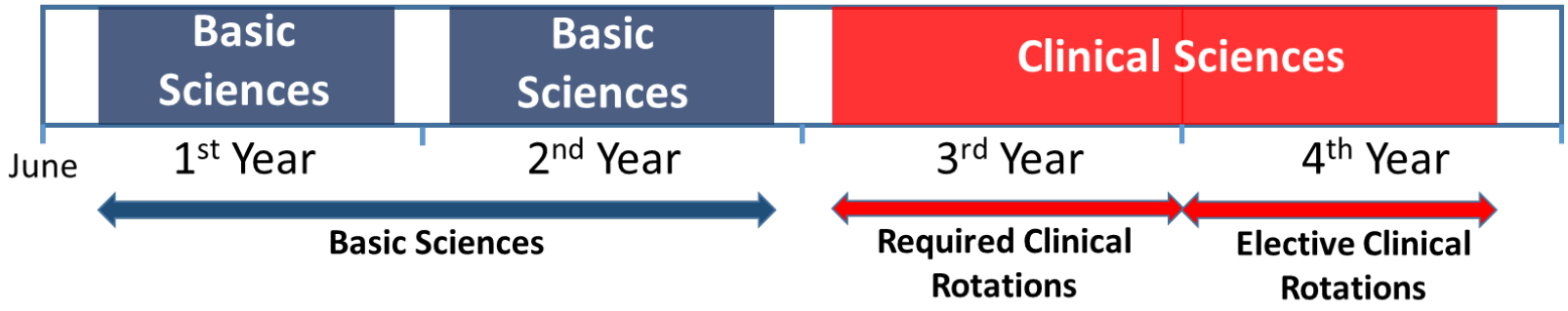
Informed by best practices of peer institutions, the curriculum group also developed a structure for delivery of the courses/modules. Each course will be assigned a course director and be subject to the oversight of this director. The director would be responsible for ensuring that the module is designed and completed to satisfy the learning objectives. The director would coordinate the selection of appropriate discipline experts for the lectures, coordinate the development of the cases to make sure that they meet learning objectives in the mapping process, integrate appropriate simulation laboratory experiences, and be responsible for student assessment for a given course. Courses directors are expected to lead multidisciplinary teams, possibly drawn from engineering, the sciences and clinical fields, to develop and improve courses over time. Facilitators are to be specifically trained to facilitate team-based and case-based learning. They themselves would not necessarily be subject matter expert but instead be experts at facilitating group learning experiences. Facilitators and other faculty involved in a course would receive direction from the course director and report to the course director. Directors would be appointed by the dean and report to the associate dean for academic affairs. Similarly, clinical rotations are to be considered courses and there would be a clinical rotation director appointed to each of the required courses who would have the responsibility to make sure that the learning objectives are completed and that student assessment and competencies are recorded and monitored. A clinical director will similarly be appointed to oversee clinical elective rotations. Research electives are expected to be supervised by a mentor. The curriculum will be under the control of the CICOM dean and faculty. They would own, refine and revise the curriculum. Directors would thus be expected to meet regularly to assess the effectiveness of courses and student progress and work with the College's curriculum committee to propose changes and improvements. The latter would in turn be brought to the College's Executive Committee for approval.

4 Year framework

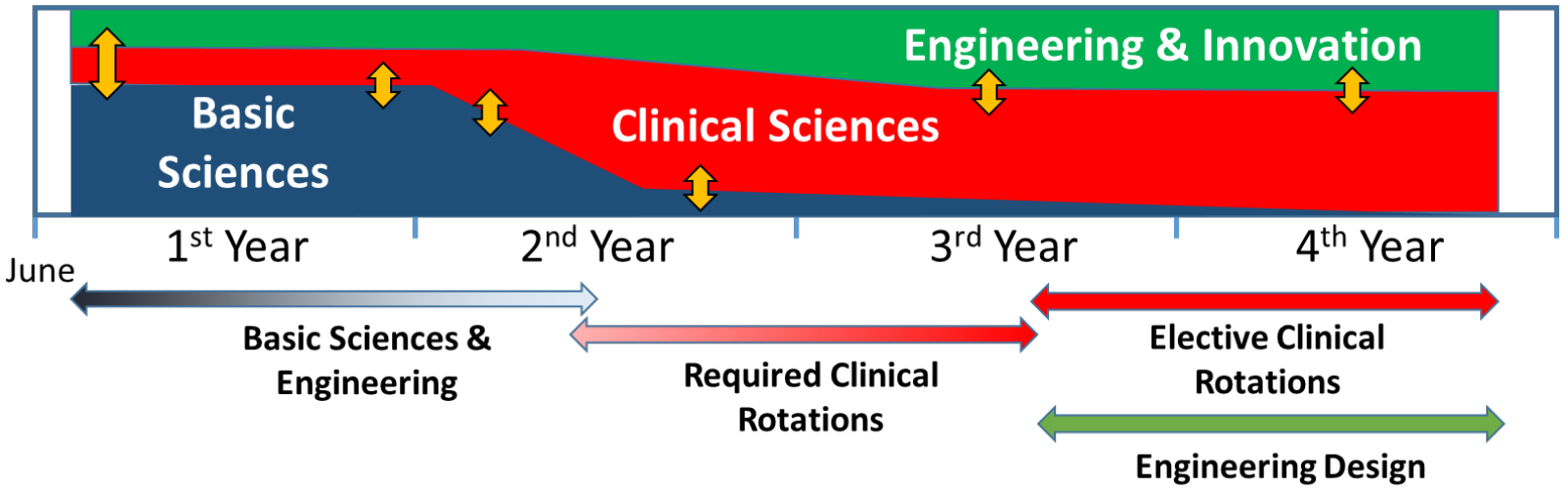
Details of the proposed four-year MD degree framework are presented in the graphical representations and tables that follow. The first page represents a high level comparative perspective between the proposed MD degree curriculum and the traditional medical school curriculum framework that goes back to the 1910 Flexnor report. The proposed MD degree is presented includes a compressed basic sciences component (with an extended tail into later years) and the introduction of clinical sciences much earlier in the curriculum. These two elements are consistent with emerging curriculum trends at peer institutions. The distinct element of our proposed curriculum is the early introduction of engineering and innovation elements with substantial growth of these elements in later years. The next two pages provide a graphical representation consistent with LCME requirements. This is followed by a graphical and tabular representations of specific engineering integration design elements including IDEA projects, capstone projects, data science projects and research options to be incorporated into the curriculum.

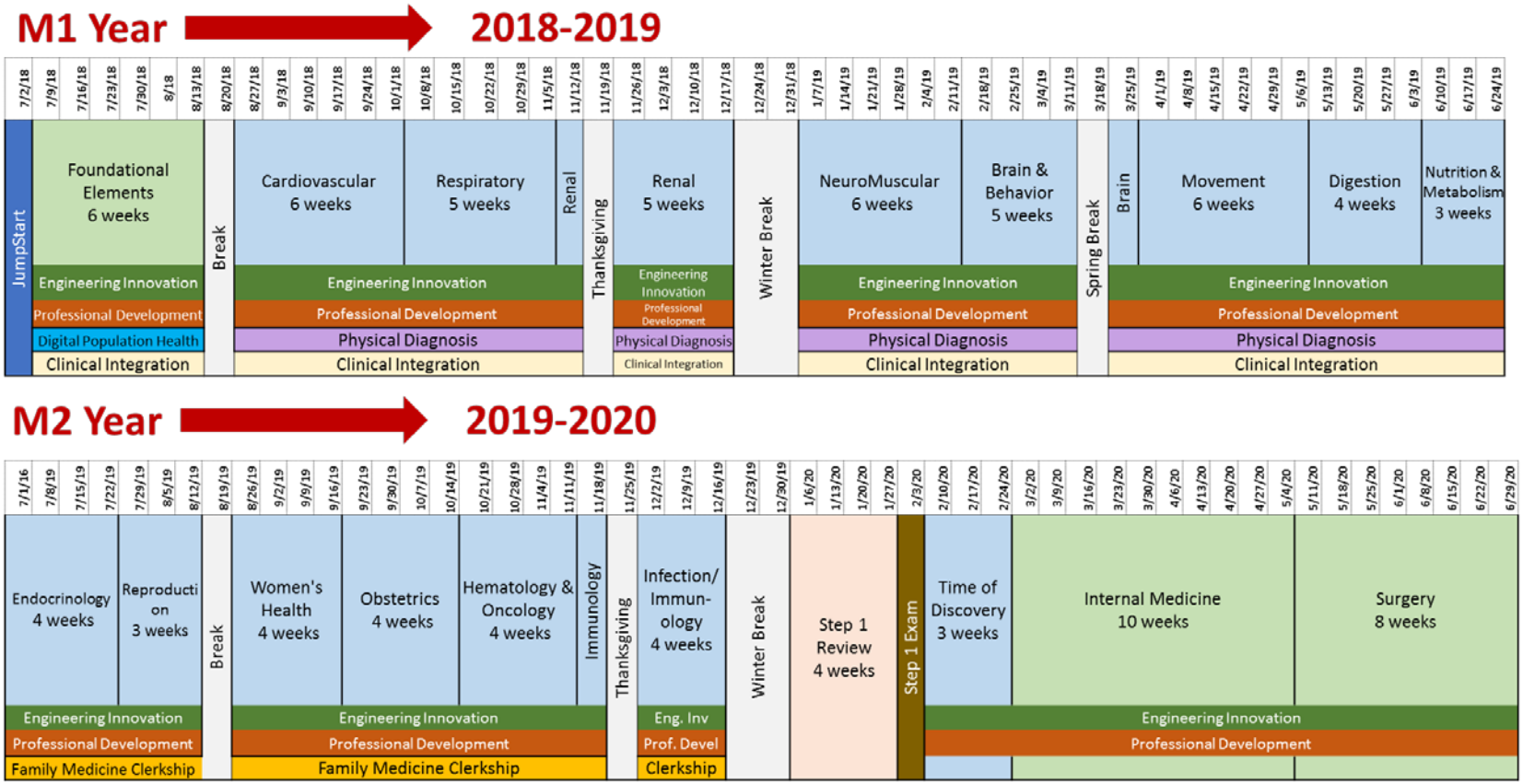
Curriculum Framework

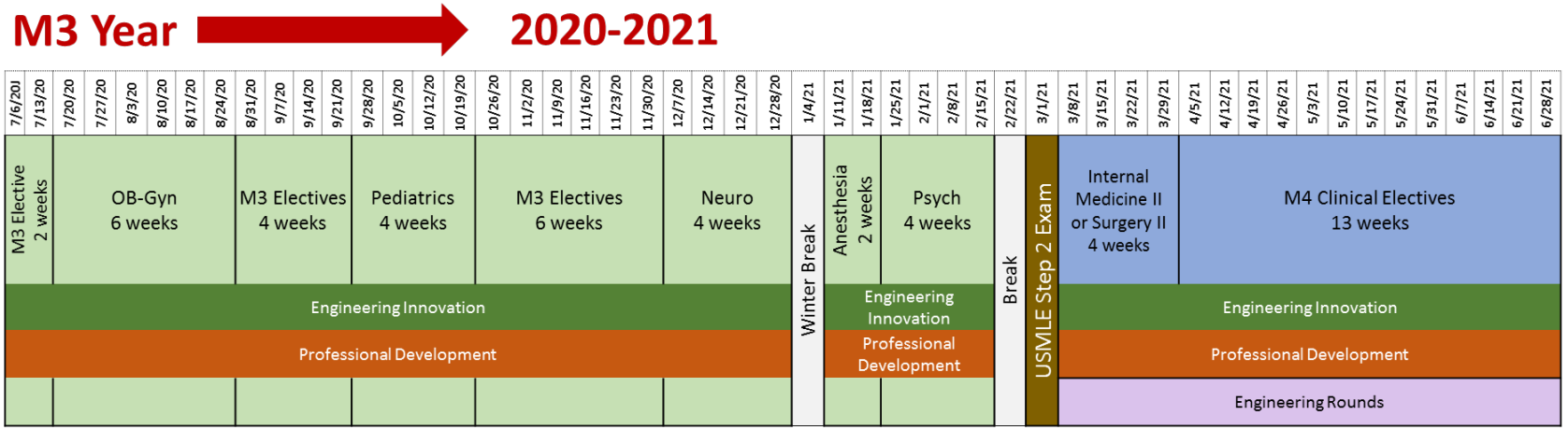
Flexner Report, 1910



Our Model, 2016




M1 Year
2018-2019
7/2/18 7/9/18 7/16/18 7/23/18 7/30/18 8/18 8/13/18 8/20/18 8/27/18 9/3/18 9/10/18 9/17/18 9/24/18 10/1/18 10/8/18 10/15/18 10/22/18 10/29/18 11/5/18 11/12/18 11/19/18 11/26/18 12/3/18 12/10/18 12/17/18 12/24/18 12/31/18 1/7/19 1/14/19 1/21/19 1/28/19 2/4/19 2/11/19 2/18/19 2/25/19 3/4/19 3/11/19 3/18/19 3/25/19 4/1/19 4/8/19 4/15/19 4/22/19 4/29/19 5/6/19 5/13/19 5/20/19 5/27/19 6/3/19 6/10/19 6/17/19 6/24/19
JumpStart
Foundational Elements 6 weeks
Break
Cardiovascular 6 weeks
Respiratory 5 weeks
Renal
Thanksgiving
Renal 5 weeks
Winter Break
NeuroMuscular 6 weeks
Brain & Behavior 5 weeks
Spring Break
Brain
Movement 6 weeks
Digestion 4 weeks
Nutrition & Metabolism 3 weeks
Engineering Innovation
Professional Development
Digital Population Health
Clinical Integration
Physical Diagnosis
M2 Year
2019-2020
7/1/16 7/8/19 7/15/19 7/22/19 7/29/19 8/5/19 8/12/19 8/19/19 8/26/19 9/2/19 9/9/19 9/16/19 9/23/19 9/30/19 10/7/19 10/14/19 10/21/19 10/28/19 11/4/19 11/11/19 11/18/19 11/25/19 12/2/19 12/9/19 12/16/19 12/23/19 12/30/19 1/6/20 1/13/20 1/20/20 1/27/20 2/3/20 2/10/20 2/17/20 2/24/20 3/2/20 3/9/20 3/16/20 3/23/20 3/30/20 4/6/20 4/13/20 4/20/20 4/27/20 5/4/20 5/11/20 5/18/20 5/25/20 6/1/20 6/8/20 6/15/20 6/22/20 6/29/20
Endocrinology 4 weeks
Reproduction 3 weeks
Break
Women's Health 4 weeks
Obstetrics 4 weeks
Hematology & Oncology 4 weeks
Immunology
Thanksgiving
Infection/ Immun-ology 4 weeks
Winter Break
Step 1 Review 4 weeks
Step 1 Exam
Time of Discovery 3 weeks
Internal Medicine 10 weeks
Surgery 8 weeks
Engineering Innovation
Professional Development
Family Medicine Clerkship
Eng. Inv
Prof. Devel
Clerkship


M3 Year
2020-2021
7/6/20
7/13/20
7/20/20
7/27/20
8/3/20
8/10/20
8/17/20
8/24/20
8/31/20
9/7/20
9/14/20
9/21/20
9/28/20
10/5/20
10/12/20
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10/26/20
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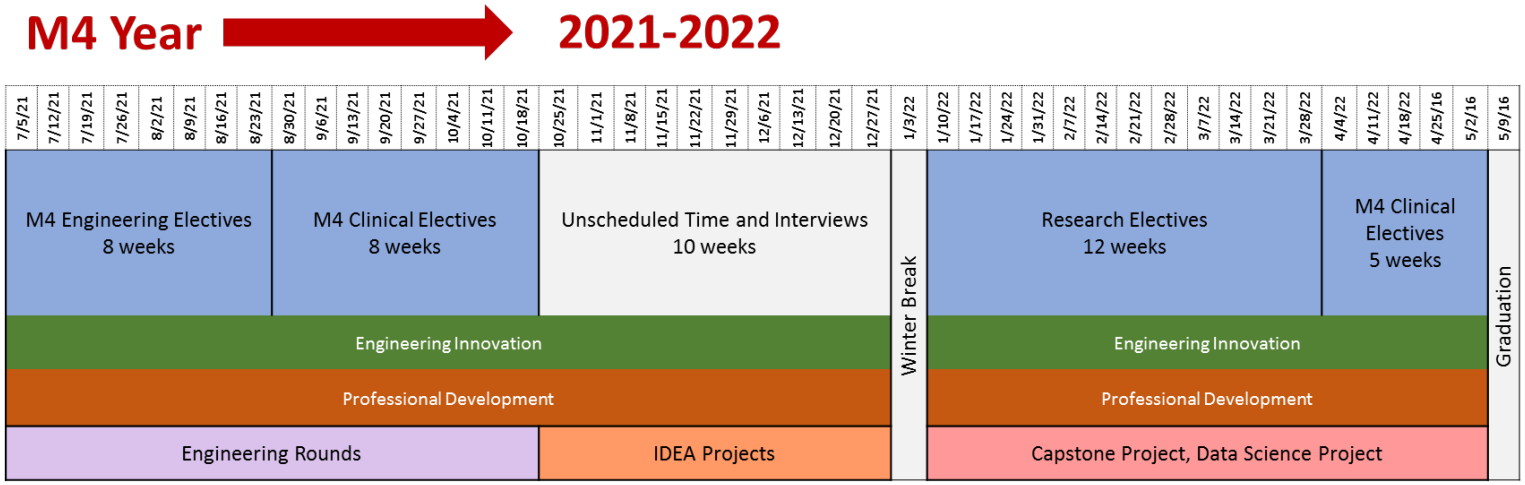
4/5/21
4/12/21
4/19/21
4/26/21
5/3/21
5/10/21
5/17/21
5/24/21
5/31/21
6/7/21
6/14/21
6/21/21
6/28/21
M3 Elective 2 weeks
OB-Gyn 6 weeks
M3 Electives 4 weeks
Pediatrics 4 weeks
M3 Electives 6 weeks
Neuro 4 weeks
Winter Break
Anesthesia 2 weeks
Psych 4 weeks
Break
USMLE Step 2 Exam
Internal Medicine II or Surgery II 4 weeks
M4 Clinical Electives 13 weeks
Engineering Innovation
Professional Development
Engineering Innovation
Professional Development
Engineering Innovation
Professional Development
Engineering Rounds


M4 Year
2021-2022
7/5/21
7/12/21
7/19/21
7/26/21
8/2/21
8/9/21
8/16/21
8/23/21
8/30/21
9/6/21
9/13/21
9/20/21
9/27/21
10/4/21
10/11/21
10/18/21
10/25/21
11/1/21
11/8/21
11/15/21
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12/6/21
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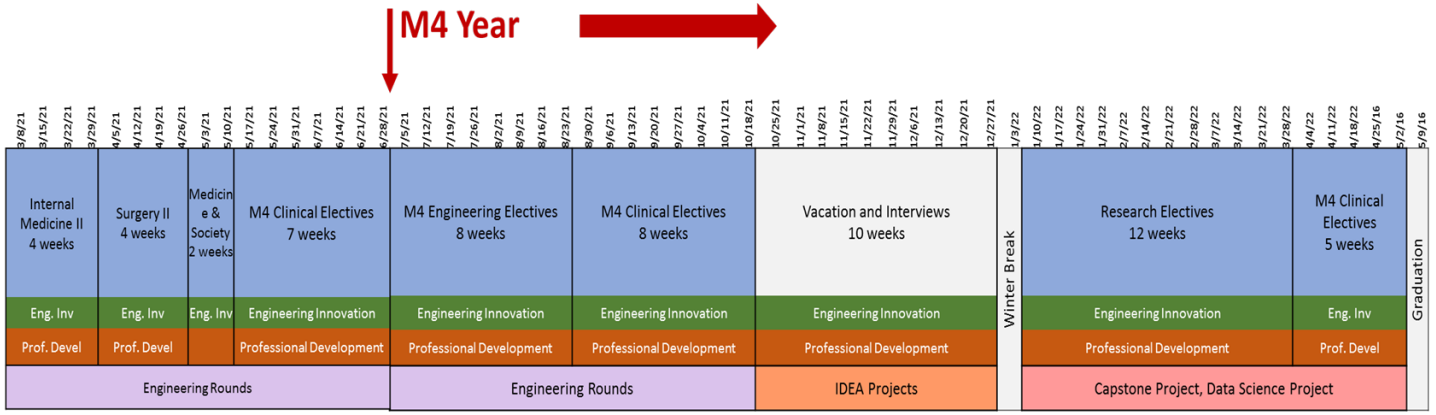
12/27/21
1/3/22
1/10/22
1/17/22
1/24/22
1/31/22
2/7/22
2/14/22
2/21/22
2/28/22
3/7/22
3/14/22
3/21/22
3/28/22
4/4/22
4/11/22
4/18/22
4/25/16
5/2/16
5/9/16
M4 Engineering Electives 8 weeks
M4 Clinical Electives 8 weeks
Unscheduled Time and Interviews 10 weeks
Winter Break
Research Electives 12 weeks
M4 Clinical Electives 5 weeks
Graduation
Engineering Innovation
Professional Development
Engineering Innovation
Professional Development
Engineering Rounds
IDEA Projects
Capstone Project, Data Science Project

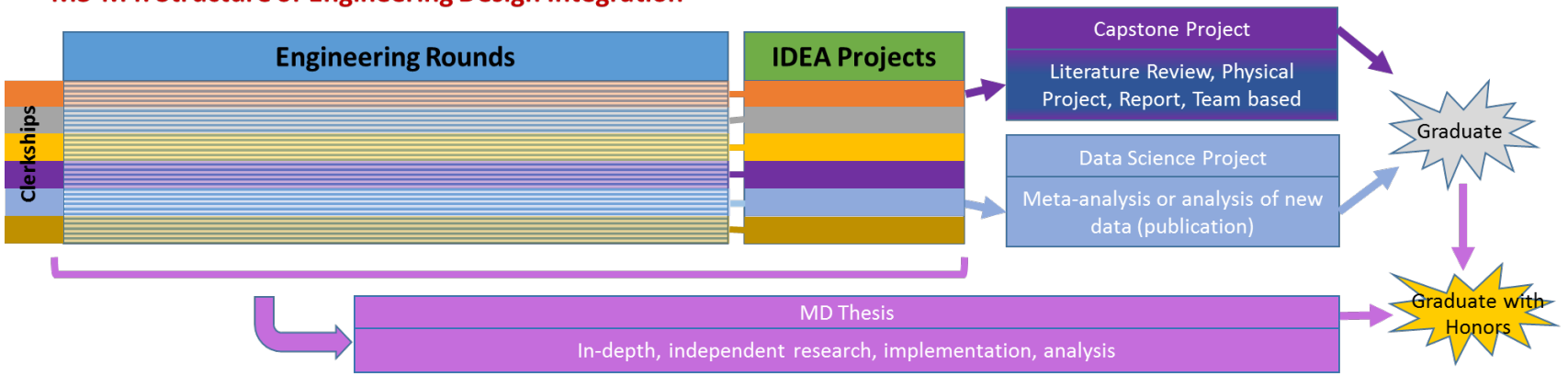
M3 - M4: Elective Rotations and Engineering

Rotation	Duration	Notes
Clinical Electives	30 weeks required	Chosen from list of approved electives
Engineering Electives	8 weeks required	Chosen from list of approved electives
Research/Innovation	12 weeks required	Capstone

Projects	Duration	Notes
IDEA project	M3 Core rotation	Applications in clinical setting – required
CAPSTONE	M4 Team Based	Focus during engineering rotations-required
Data Science Project	M4 Individual	Parallel with Capstone
MD Thesis	M2-M4 long term project	Elective Graduation with high honors



M3-M4: Structure of Engineering Design Integration



The following tables are as required by LCME to describe the MD program. The table below reports the planned number of scheduled weeks of instruction in each academic year/phase of the medical curriculum.

Table 6.8-1 Number of Scheduled Weeks per Year

Year	Number of Scheduled Weeks
Year One	47
Year Two	49
Year Three	50
Year Four	33
Total Weeks of Scheduled Instruction	**179**

The table below provides the anticipated percent of time that medical students will spend in inpatient and ambulatory settings in each required clinical clerkship.

Table 6.4-1 Percent Total Clerkship Time

	Anticipated Percent of Total Clerkship Time	
Required Clerkship	% Ambulatory	% Inpatient
Family medicine	90-100%	0-10%
Internal medicine	20-30%	70-80%
Ob-Gyn	40%	60%
Pediatrics	65%	35%
Psychiatry	50%	50%
Surgery	30%	70%
Neurology	50%	50%
Anesthesiology	10%	90%
Subinternship (choice of ONE) Medicine Surgery	 10-20% 10-20%	 80-90% 80-90%

MD students are required to complete a number of specific clinical rotations and a number of additional clinical rotation electives. Required clinical rotations and their duration are listed below:

Family Medicine (delivered longitudinally in M2)	**4 weeks**
M3 Year	
Proposed Rotation	**Number of Weeks**
Internal Medicine	10
Surgery	8
OB-GYN	6
Pediatrics (in-patient only)	4
Neurology	4
Anesthesia	2
Psychiatry	4
Required clinical rotations	38
Electives required in M3 year	12
Total scheduled weeks in M3 year	50

Clinical Elective Rotations that are expected to be available to students are provided in the following list.

ELECTIVES
Elective credit granted for MSP
Emergency Medicine
Neurosurgery
Vascular surgery
Thoracic surgery
Otolaryngology
Ophthalmology
Anesthesiology
Urology
Dermatological surgery
Dermatology
Family Medicine
Sports Medicine
Cardiology
Pulmonology
Nephrology
Orthopedic Surgery
Fetal Maternal Medicine
Oncology
Breast surgery
Oncological gynecology
Pediatric neurology
Pediatric nephrology
Infectious diseases
Pediatric surgery
Gastroenterology
Hepatology
Pathology
Radiology
Pediatric cardiology
Epilepsy

Pediatric Psychiatry
Pediatric Development
Genetics
Palliative Medicine
Geriatrics
Plastic surgery
Allergy and Immunology
Physical medicine/rehabilitation
Adolescent psychiatry
Population health
Colorectal surgery
Critical Care
Endocrinology
Diabetes
Cardiac electrophysiology
Hand surgery
Otology
Hyperbaric medicine/Wound care
Neonatology
Occupational Medicine
Trauma surgery
Pain Management
Pediatric pulmonology
Preoperative Medicine
Rheumatology
Sleep Medicine
Spine Surgery
Retinal surgery
Bariatrics
Joint replacement Orthopedics
Community Health Center

The table that follows provides a listing of courses including their corresponding weeks of instruction.

WEEKS OF INSTRUCTION

The following provides a listing of courses and a brief description of topics to be covered in each course. The "Weeks" column represents the number of weeks over which the course will be delivered. The "Unique" column is a count of distinct weeks adding to the total number of weeks in the curriculum. Thus the Orientation (Jumpstart) is delivered over 1 week and counts as a week for the curriculum. *Population Health* is delivered over 6 weeks but these weeks are not unique – they correspond to the same weeks over which *Fundamental Elements* is being taught.

Course Number	**Course Name**		**Weeks**	**Unique**
	YEAR 1			**47**
MED XXX	Orientation (Jumpstart)	Life skills for med school: sleep, nutrition, under-standing self, emotional intelligence, New vocabulary, Clinical reasoning, thinking like a doctor and an engineer, resource review, problem solving, design, Future patient care, systems, regulations	1	1
MED XXX	Fundamental Elements		6	6
		Instruction on fundamental elements serving as a baseline for the rest of the curriculum. Topics to be covered include anatomy, cell biology, histology, physiology, integration of engineering science, systems, microbiology, pharmacology, genetics, behavioral science		
MED XXX	Population Health		6	
		Concepts to be covered include concepts of populations, social behavior, chronic disease, health care team, patient safety, statistics, big data, PCMH, palliative care, quality, compensation, mobile health technologies		
MED XXX	Clinical Integration I		45	
		Exposure and instruction on fundamentals of clinical work including office support with basic history, vitals, understanding the team, communicating with patients, observing health care roles and		

Course Number	**Course Name**		**Weeks**	**Unique**
		processes. Complete basic life support. Working with physician mentor in primary care.		
MED XXX	Physical Diagnosis		44	
		Topics include concepts of history and physical assessment, includes H&P, preoperative assessment, routine physicals		
MED XXX	Cardiovascular		6	6
		Topics include ischemic heart Dx, Cardiomyopathy/CHF, Aortic stenosis, Atrial fibrillation, Peripheral vascular disease, Pediatric ASD		
MED XXX	Respiratory		5	5
		Topics include asthma – peds, COPD, Pulmonary Fibrosis, Respiratory failure, Pulmonary vasculitis		
MED XXX	Renal		5	5
		Topics include UTI with pyelonephritis, Urinary obstruction-BPH, Acute renal failure-toxic, Chronic renal failure-DM, Polycystic renal disease-peds		
MED XXX	NeuroMuscular		6	6
		Topics include PMR, Multiple sclerosis, Muscular dystrophy, Peripheral neuropathy-DM, Polymyositis, Carpal Tunnel Syndrome		
MED XXX	Brain		5	5
		Topics include stroke, Seizure, Brain injury, Schizophrenia, depression, Glioblastoma, Depression		
MED XXX	Movement		6	6
		Topics include femoral fracture, Osteogenic imperfecta, Osteoporosis, Back pain, Rheumatoid arthritis, SLE, Cervical fracture		
MED XXX	Digestion		4	4

Course Number	**Course Name**		**Weeks**	**Unique**
		Topics include GERD with stricture/Barretts, Crohn's Disease, Peptic ulcer disease w hemorrhage, Chronic Diarrhea, Pyloric stenosis – peds		
		Hepatitis C		
		Colonic polyposis		
MED XXX	Nutrition & Metabolism		3	3
		Topics include malabsorption syndrome, Vitamin D deficiency, G6PD deficiency, TPN, Obesity		
	YEAR 2		**49**	**49**
MED XXX	Endocrinology		4	4
		Topics include Diabetes – Type II, Ketoacidosis, Hypothyroidism, Hyperthyroidism, Adrenal insufficiency, Cushings Syndrome, Diabetes insipidus		
MED XXX	Reproduction		3	3
		Topics include Hypogonadism – male, Erectile dysfunction, Testicular torsion, Infertility, Sexual orientation, BPH		
MED XXX	Women's Health		4	4
		Topics include Dysmenorrhea, Menorrhagia, Polycystic ovarian disease, Cervical Dysplasia, Menopause – vasomotor, Pelvic pain		
MED XXX	Obstetrics		4	4
		Topics include Normal delivery, Breach, Multiple gestation, Medical illness of pregnancy – Diabetes, Placenta previa		
MED XXX	Hematology/Oncology		4	4
		Topics include Lung cancer, Colon cancer, Breast Cancer, Renal cancer, Prostate cancer, Pancreatic cancer, Iron Deficiency Anemia, Sickle Cell Anemia, Lymphoma- Non-Hodgkin, Acute myelocytic leukemia, Chronic Lymphocytic		

Course Number	**Course Name**		**Weeks**	**Unique**
		leukemia, Idiopathic Thrombocytopenia		
MED XXX	Infection/Immunity		4	4
		Topics include Pneumonia, Sepsis UTI – Pyelonephritis, Cellulitis, HIV Anaphylaxis, Allergic dermatitis, Myocarditis Encephalitis		
MED XXX	Step 1 Review		4	4
		Review for Step 1 Board Exams		
	Step 1 Exam and rest		1	1
MED XXX	Time of Discovery		3	3
		Topics include Design, innovation, problem solving, entrepreneurship, IP, Capstone Projects, Team leadership		
MED XXX	Core Rotations M3		18	18
		Core rotations include required clerkships and are distributed over 2nd and 3rd years. These include		
	YEAR 3		**50**	**50**
MED XXX	Core Rotations M3		20	20
		Core M3 rotations include required clerkships.		
	Step 2 Exam and rest		1	1
MED XXX	M3 Elective Rotations		12	12
		M3 rotations will include clinical electives (16 weeks)		
MED XXX	M4 Rotations		17	17
		M4 rotations will include clinical electives (13 weeks) and required 4 weeks of Internal Medicine II or Surgery II.		
	YEAR 4		**33**	**33**
MED XXX	M4 Rotations		33	33
		M4 rotations will include Engineering rotations (8 weeks), Research/Innovation (MD Thesis or capstone, 12 weeks), Clinical electives (13 weeks).		
	TOTAL			***179***

Appendix B:
Student Numbers and Faculty FTE

The number of students planned for each of the first two (2) years is based on creation of four small teams of eight students for case-based learning. This is ramped up to 40 students (five teams of eight students) for each of the following two cohorts, and then increased to a steady state of sixty-four students (eight teams of eight students) for each subsequent cohort.

The resulting faculty FTE required to deliver the curriculum was then estimated based on the method of delivery for various components of the curriculum. Estimates of faculty FTE and student to faculty FTE ratio are provided on the next page. These estimates do not include time to be contributed by volunteer clinical faculty. The latter are expected to easily include more than 100 individuals.

FTE Planning

	2018	2019	2020	2021	2022
Yr 1	32 students	32 students	40 students	40 students	64 students
Yr 2		32 students	32 students	40 students	40 students
Yr 3			32 students	32 students	40 students
Yr 4				32 students	32 students

Total students	**32**	**64**	**104**	**144**	**176**
	Yr. 1: 32 students • 4 FTE Facilitators • 2 FTE Sci/Engr Faculty • 2 FTE Clinical Faculty • 1 technical Lab staff	Yr. 1: 32 students • 4 FTE Facilitators • 2 FTE Sci/Engr Faculty • 2 FTE Clinical Faculty • 1 technical Lab staff	Yr. 1: 40 students • 5 FTE Facilitators • 2 FTE Sci/Engr Faculty • 2 FTE Clinical Faculty • 1 technical Lab staff	Yr. 1: 40 students • 5 FTE Facilitators • 2 FTE Sci/Engr Faculty • 2 FTE Clinical Faculty • 1 technical Lab staff	Yr. 1: 64 students • 8 FTE Facilitators • 4 FTE Sci/Engr Faculty • 4 FTE Clinical Faculty • 2 technical Lab staff
		Yr. 2: 32 students • 1 FTE Facilitators • 3 FTE Sci/Engr Faculty • 1.5 FTE Clinical Faculty • 0.5 technical lab staff	Yr. 2: 32 students • 1 FTE Facilitators • 3 FTE Sci/Engr Faculty • 1.5 FTE Clinical Faculty • 0.5 technical lab staff	Yr. 2: 40 students • 1 FTE Facilitators • 3 FTE Sci/Engr Faculty • 1.5FTE Clinical Faculty • 0.5 technical lab staff	Yr. 2: 40 students • 1 FTE Facilitators • 3 FTE Sci/Engr Faculty • 1.5 FTE Clinical Faculty • 0.5 technical lab staff
			Yr. 3: 32 students • 2 FTE Sci/Engr Faculty • 0.6 FTE Clinical Faculty	Yr. 3: 32 students • 2 FTE Sci/Engr Faculty • 0.6 FTE Clinical Faculty	Yr. 3: 40 students • 2 FTE Sci/Engr Faculty • 0.6 FTE Clinical Faculty
				Yr. 4: 32 students • 4 FTE Sci/Engr Faculty • 0.2 FTE Clinical Faculty	Yr. 4: 32 students • 4 FTE Sci/Engr Faculty • 0.2 FTE Clinical Faculty
Total Faculty	• 4 FTE Facilitators • 2 FTE Sci/Engr Faculty • 2 FTE Clinical Faculty • 1 technical lab staff	• 5 FTE Facilitators • 5 FTE Sci/Engr Faculty • 3.5 FTE Clinical Faculty • 1.5 technical lab staff	• 6 FTE Facilitators • 7 FTE Sci/Engr Faculty • 4.1 FTE Clinical Faculty • 1.5 technical Lab staff	• 6 FTE Facilitators • 11 FTE Sci/Engr Faculty • 4.3 FTE Clinical Faculty • 1.5 technical Lab staff	• 9 FTE Facilitators • 13 FTE Sci/Engr Faculty • 6.3 FTE Clinical Faculty • 2.5 technical Lab staff
Total Faculty FTE	8 Faculty FTE	13.5 Faculty FTE	17.1 Faculty FTE	21.3 Faculty FTE	28.3 Faculty FTE
Student/Faculty FTE Ratio	4:1	4.7:1	6.1:1	6.8:1	6.2:1

Appendix C:
Academic Catalog Programs of Study Entry

Medicine (Professional Program: MD)

Mailing Address:
Carle Illinois College of Medicine
Admissions
190 Medical Sciences Building (MC-714)
506 South Mathews
Urbana, IL 61801

Contact Information:
Campus Location: 190 MSB
(217) xxx-yyyy
email: admissions@medicine.illinois.edu
website: www.medicine.illinois.edu

Administration:
Dean: dean@medicine.illinois.edu
Associate Dean for Student Affairs: studentaffairs@medicine.illinois.edu

The University of Illinois at Urbana-Champaign MD program is conducted on the Urbana Campus in the Carle Illinois College of Medicine. The college offers a professional, four-year MD degree program that integrates engineering concepts with the traditional pillars of medicine, namely the basic health sciences and clinical training, and prepares students for postgraduate medical education programs. This curriculum produces students who are trained and equipped to incorporate analytical and quantitative techniques, modeling and computation, innovation, and human systems approaches to advancing and delivering high quality healthcare. The curriculum emphasizes professional, compassionate, and ethical care and the utilization of team-based approaches to transform healthcare delivery and improve healthcare outcomes through the continuum of care: preventive medicine through acute care. In addition to required courses, elective rotations provide opportunities for students to explore specialized areas of interest. Students have the option to complete a research thesis that may lead to the award of an MD degree with High Honors.

The educational program spans four (4) years. Students are exposed to extensive clinical training, professional development and scientific and engineering education through a case-driven active learning curriculum.

The college selects applicants with the best combination of academic and extracurricular achievement, maturity, integrity, and motivation. Selection of students is based on an assessment of all available data and an evaluation of skills and aptitude. The quality of work in all subject areas is considered, with an emphasis on quantitative methods, breath of education, and experiences that demonstrate initiative, creativity and interest in compassionate patient care.

For more information about the University of Illinois at Urbana-Champaign MD program, please consult the following websites:

Admissions: http://www.medicine.illinois.edu/admissions

Financial Aid: http://www.medicine.illinois.edu/finaid

MD Program: http://www.medicine.illinois.edu/prospective_students/

Appendix D:
Letters of Support

- Dean of University Library
- Dean of College of Engineering
- Dean of Liberal Arts and Sciences
- Dr. Li

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

University Library
Office of Dean of Libraries
and University Librarian
230 Main Library, MC-522
1408 West Gregory Drive
Urbana, IL 61801

August 22, 2016

Edward Feser
Interim Vice chancellor for Academic Affairs and Provost
217 Swanlund Administration Building
601 E. John Street
MC 304

Dear Ed:

I have received substantial briefs on plans for the Carle Illinois College of Medicine during the past year. In fact, I have been pleased to see the University Library be invited to participate in the planning process around the emerging College of Medicine. Our participation has resulted in a greater confidence that the resources budgeted in the planning process for library support for the College will be sufficient. These needs include:

- $90,000 Medical Librarian salary (projected start in Spring 2018)
- $40,000 Support personnel (projected to start in summer 2018)
- $500,000 One-time for acquisitions (for FY19)
- $500,000 Recurring annually for acquisitions (starting in FY19)

The availability of these resources will ensure that necessary library materials and support services are available by the time the inaugural class begins its activities. Given the figures provided in the initial estimates and sufficient support in corresponding programs, the University Library can establish a comprehensive set of research library services for the College; they will also provide the foundation necessary for us to cooperatively assess the ongoing needs of what is envisioned as being a unique and leading medical college in the coming years.

The plans to support the library needs of the College are creative and well suited to a modern college of medicine. They build on our current outstanding University Library collections and services as well as on the resources for which the College has budgeted.
We are confident that we will be able to create first-class research library services for the College. Those services will also provide the foundation necessary for the University to assess the ongoing needs of what will surely be a unique and leading medical college.

As I indicated at the time consideration was being given for the creation of a new college of medicine on the Urbana campus, if additional services or materials are required as the program develops, I will be happy to work with the College's leadership and campus administration to plan around those requirements.

Sincerely,

John P. Wilkin
Juanita J. and Robert E. Simpson
Dean of Libraries and University Librarian

c: Normand Paquin
Thomas Teper

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

College of Engineering
Office of the Dean
306 Engineering Hall, MC-266
1308 West Green Street
Urbana, IL 61801
217-333-2150

August 22, 2016

Senate Educational Policy Committee

Dear Chair Francis and Members of the Committee:

I am writing in support of the proposed Doctor of Medicine (MD) curriculum in the Carle-Illinois College of Medicine. The College of Engineering is a committed partner to the new College, and we look forward to its innovative curriculum to significantly advance the use of technology and data science in the practice of healthcare, and to grow and diversify biomedicine, bioengineering, bioinformatics, and health and wellness research and teaching opportunities across the College of Engineering and in collaboration with other Colleges across the Campus.

The fusion of engineering with medicine will transform the delivery of healthcare and improve healthcare outcomes for the people of Illinois, the nation and the world. The University of Illinois is uniquely positioned to lead this transformation. The proposed MD degree curriculum is as transformative as one could have hoped for in the manner that it truly infuses engineering concepts, approaches and technologies in a synergistic manner with the basic and health sciences and clinical training throughout the four years of the program. As such, the College of Engineering is enthusiastic about working with the College of Medicine to address the resource needs of the faculty within the College of Engineering who will participate in the delivery of the curriculum. Engineering faculty members are excited to participate in and co-supervise the proposed 'engineering rounds' as part of clinical rotations, mentor the MED-IDEA projects with medical students, and assist in the development and delivery of an innovative, case-based, active-learning curriculum in the first two years. We are delighted that the future home of the Department of Bioengineering, Everitt Laboratory will host the College of Medicine's Jump Simulation Laboratory and thus act as an important portal, both in the short and longer term, between the two colleges, through which ideas and innovation can emerge and blossom.

Some of the very best student candidates will come to the Carle-Illinois College of Medicine. They will become the partners our engineering students and students from other colleges will want to work with to initiate new interdisciplinary biomedical advances for better health outcomes. These future students must have access to the excellent research facilities and interdisciplinary research institutes across our Campus. As such, in addition to offering space, as needed, in Everitt Laboratory for the delivery of the

MD degree curriculum for the first two years of the new College until renovations in the anticipated future home of the College of Medicine, namely the Medical Sciences Building, are completed, we are excited at the prospect of an active presence of medical students and faculty in our research facilities in the decades ahead.

Through this active presence and engagement, more avenues of collaboration and the pursuit of mutually beneficial opportunities will arise. We will be eager to continue to coordinate with the Carle-Illinois College of Medicine on a range issues, including courses and instructional needs, joint faculty appointments, and space for interdisciplinary research.

Sincerely,

Andreas C. Cangellaris
Dean and M.E. Van Valkenburg Professor
in Electrical and Computer Engineering

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Office of the Dean
College of Liberal Arts and Sciences
2090 Lincoln Hall
702 S. Wright Street
Urbana, IL 61801-3631

Tuesday, August 23, 2016

Senate Educational Policy Committee

Dear Chair Francis and Members of the Committee:

I am writing in support of the proposal to establish a Doctor of Medicine (MD) in the Carle Illinois College of Medicine. The College of Liberal Arts and Science continues to support the College of Medicine and the opportunities the College and new curriculum will provide to advance the research and teaching of biomedical research in LAS and in other areas of campus.

LAS is committed to working with the College of Medicine to address the resource needs of the faculty within LAS who will participate in the delivery of the curriculum. We are willing and eager to continue to coordinate with the College of Medicine on a range issues that include but are not limited to course and instructional needs, space for research laboratories and other LAS resources that may be required.

Sincerely,

Brian H. Ross
Executive Associate Dean
College of Liberal Arts and Sciences

phone 217-333-1350 • *fax* 217-333-9142

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Office of the Dean
Graduate College

204 Coble Hall, MC-322
801 S Wright St
Champaign, IL 61820
217 333-6715 *office*
e-mail: wojtek@illinois.edu
www.grad.illinois.edu

To: Faculty Senate Educational Policy Committee

From: Wojtek Chodzko-Zajko, PhD
Dean, Graduate College
Shahid and Ann Carlson Khan Professor

Date: 8/24/16

Re: Proposal to Establish a Doctor of Medicine Professional Degree Program (MD) in the Carle Illinois College of Medicine

Colleagues;

The Graduate College has been pleased to participate in the process for developing a proposal to establish a doctor of medicine professional degree in the Carle Illinois College of Medicine. Due to the fact that a Dean has yet to be named for the new College of Medicine and a College of Medicine Educational Policy Committee has yet to be formulated, the Graduate College was pleased to be able to assist with the review and preparation of the proposal.

We have worked hard to ensure that the proposal for the MD degree is as consistent with graduate college and campus guidelines as possible, while recognizing that the special nature of the degree and its educational programs may require a slightly different approach than is typical for graduate programs on our campus.

Initially, the highest priority is the establishment of the MD degree. However, we understand that eventually, dual degree options such as the MD/PhD or MD/MS degrees are likely to be developed. The staff of the Graduate College is excited to assist with the development of such opportunities.

Please feel free to call on us if there are any questions about the current proposal, or if we can assist in any other way.

Wake Forest™
School of Medicine

KING C. LI MD, MBA
Senior Associate Dean for Clinical and
Translational Research
Director, Translational Science Institute
Deputy Director, Comprehensive Cancer Center
Isadore Meschan Distinguished Professor of
Radiology, Biomedical Engineering, Cancer Biology
and Translational Sciences
p 336.716.1195
kingli@wakehealth.edu
Medical Center Boulevard
Winston-Salem, NC 27157

September 5, 2016

University of Illinois at Urbana-Champaign
Bettina Francis, Chair
Senate Educational Policy Committee
Office of the Senate
228 English Building, MC-461
608 South Wright Street
Urbana, IL 61801

Dear Professor Francis and Members of the Committee:

I write to express my enthusiastic support for the proposed Doctor of Medicine (MD) curriculum in the Carle Illinois College of Medicine. Having reviewed the curricular proposal, I am supportive of its content and structure. I appreciate the work the Carle Illinois College of Medicine Curriculum Committee has put into this highly innovative curriculum, and I believe the proposed MD curriculum you have before you does an excellent job of incorporating engineering, informatics and innovation with the traditional medical education elements of health sciences and clinical training.

I look forward to the opportunity to lead this college and coordinate with the existing campus academic units and faculty, Carle Health Systems and the physicians there, and with the many key stakeholders and contributors to this endeavor from across the state. Thank you for your time and consideration in reviewing the MD curriculum proposal.

Sincerely yours,

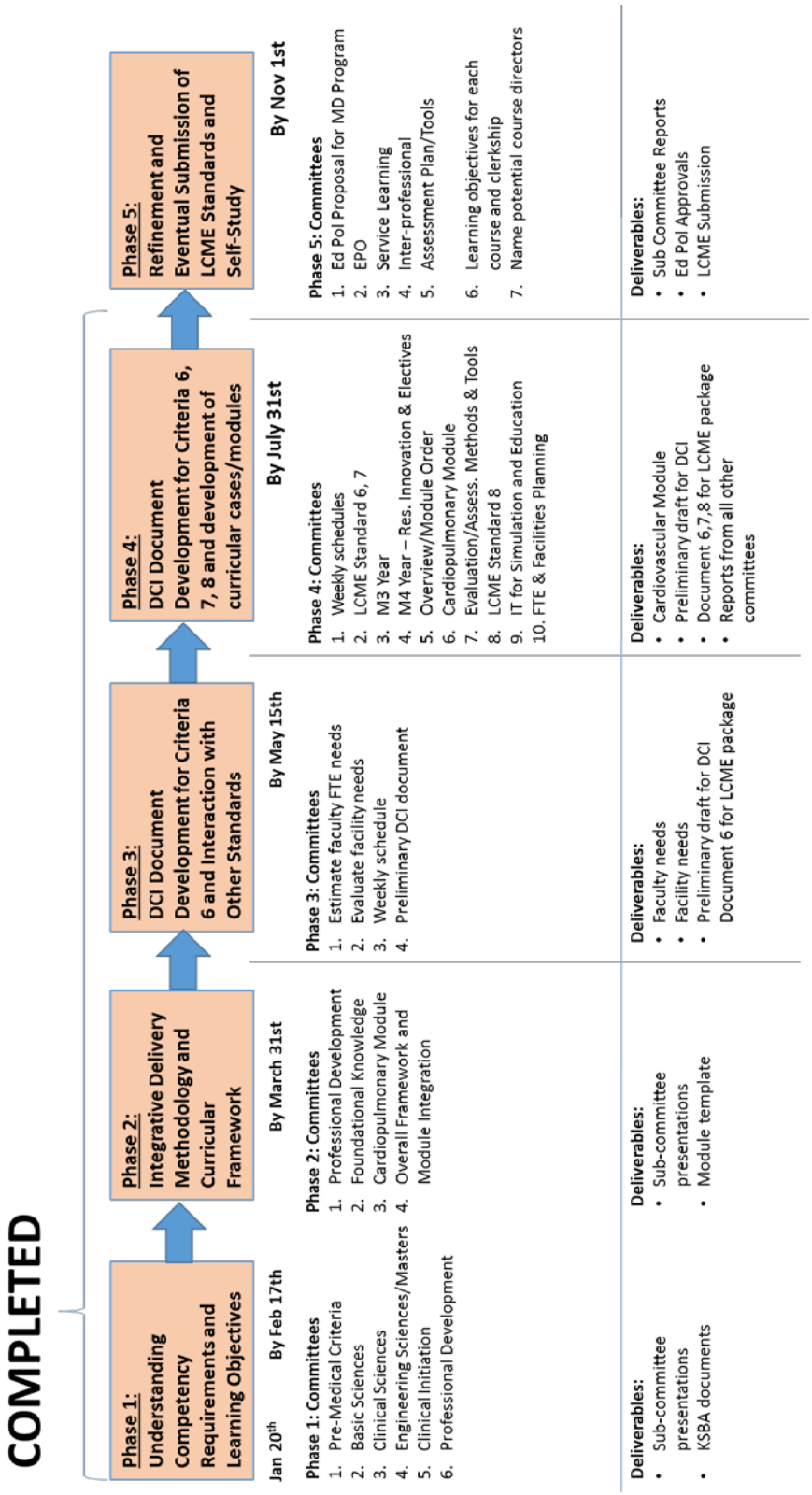
King Li

King C. Li, M.D., M.B.A.

Appendix E: Program Development

E1: Members of the curriculum committee

E2. Process Overview – Phases of Development



E3. Peer Analysis

Site Visits

- Vanderbilt University
- University of California at San Francisco

Multiple phone consultations

- Cleveland Clinic and Lerner College
- Heritage College
- University of Texas at Austin
- Harvard Medical School
- Southern Illinois University
- Mayo Clinic College of Medicine
- University of South Carolina

Weekly schedules - year 1/half of year 2
Aldridge, Brian
Cohen, Neal
Hill, Malcolm
Kesavadas, Kesh
Sinha, Saurabh
Sutton, Brad - Chair

M3 Year
Amos, Jenny
Good, Robert
Jokela, Janet – Chair
Welch, Gerald
Wise, Phyllis

M4 Year - Research Innovation and Electives
Boppart, Steve - Chair
Jokela, Janet
Kesavadas, Kesh
Sinha, Saurabh
Sutton, Brad
Welch, Gerald
Singer, Andy *
Taylor, Jed *

Cardiopulmonary Module	
Adoni, Naveed	Hill, Malcolm
Aldridge, Brian - Chair	Kesavadas, Kesh
Amos, Jenny	Miller, Gay
Cranston, Bob	Morrissey, Jim
Els, Willem (Callie) *	Sinha, Saurabh
Good, Robert	Sutton, Brad

IT for Simulation and Education	
Kesavadas, T. Kesh (Chair)	Saurabh Sinha
Cohen, Neal	Towns, John *
Henderson, Mark *	Polk, et al *
Olsen, Michelle	Vozenilek, John *

FTE needs and Facilities Planning
Bashir, Rashid
Good, Robert
Miller, Gay
Paquin, Normand
Wise, Phyllis

LCME Standard 6, 7
Minehart, Meredith
Amos, Jenny (Chair)
Cranston, Bob
Jokela, Janet
Morrissey, Jim
Welch, Gerry

Module Order
Cohen, Neal
Good, Robert (Chair)
Jokela, Janet
Morrissey, Jim
Olsen, Michelle
Wise, Phyllis

Evaluation/Assessment Methods/Tools (& IT needs)	
Aldridge, Brian (co-chair)	Martinis, Susan
Amos, Jenny (co-chair)	Miller, Gay
Bashir, Rashid	Sutton, Brad
Boppart, Steve	Bashir, Rashid
Cohen, Neal	Welch, Gerry
Cranston, Bob	

LCME Standard 8
Minehart, Meredith
Amos, Jenny (Chair)
Cranston, Bob
Jokela, Janet
Martinis, Susan
Miller, Gay

Appendix F:
Weekly Schedule Example: Year 1 during a Cardiovascular Case