1. Description
   a. The Clinical Informatics Distinction Program (henceforth referred to in this document as the CI Program) at Western Michigan University Homer Stryker M.D. School of Medicine (WMed) will serve as a longitudinal elective co-curricular program in which eligible students may enroll in addition to their medical education to receive a distinction in “Clinical Informatics.”

   b. Biomedical Informatics (BMI) is defined as “the interdisciplinary field that studies and pursues the effective uses of biomedical data, information, and knowledge for scientific inquiry, problem solving and decision making, motivated by efforts to improve human health”. Clinical Informatics predominantly involves the role of physicians (Kulikowski et al., 2012).

   “Scope and breadth of discipline: BMI investigates and supports reasoning, modeling, simulation, experimentation, and translation across the spectrum from molecules to individuals and to populations, from biological to social systems, bridging basic and clinical research and practice and the healthcare enterprise. Theory and methodology: BMI develops, studies, and applies theories, methods, and processes for the generation, storage, retrieval, use, management, and sharing of biomedical data, information, and knowledge.

   Technological approach: BMI builds on and contributes to computer, telecommunication, and information sciences and technologies, emphasizing their application in biomedicine.

   Human and social context: BMI, recognizing that people are the ultimate users of biomedical information, draws upon the social and behavioral sciences to inform the design and evaluation of technical solutions, policies, and the evolution of economic, ethical, social, educational, and organizational systems” (Kulikowski et al., 2012).

   c. Since 2013, eligible US physicians can obtain board certification in clinical informatics by taking a board certification exam administered by the American Board of Pathology (only for those board certified in pathology) and the American Board of Preventative Medicine (for those with any other medical specialty board certification). Also, since 2013, the Accreditation Counsel of Graduate Medical Education (ACGME) began accrediting clinical informatics fellowship training programs. The ACGME is the accrediting body that oversees the accreditation of most all residencies and fellowships in the US. Since 2013, there are over 2100 physicians currently board certified in clinical informatics.

   To be board eligible to sit for the clinical informatics board certifying exam, you must have:
• Successfully completed an ACGME accredited two-year clinical informatics fellowship training program
• Have current ABMS board certification in any (at least one) of the medical specialties

Having the clinical informatics board certification indicates you have demonstrated the expertise, knowledge, and skills to work competently in the clinical informatics domain. Physicians with clinical informatics board certification work in a variety of roles including for example, chief medical informatics officer for health care organizations, academia, big pharma, government agencies, public health, and a variety of health technology companies.

d. The CI Program focuses on knowledge and skill development in the following content areas of medicine, technology, and human-social theories. Our distinction global objectives are:
   ➢ Appraise key fundamentals of decision support science and development of Clinical Decision Support rules.
   ➢ Describe use of precision medicine to personal and population health.
   ➢ Explain and apply data management theories and applications.
   ➢ Summarize research data and database regulations.
   ➢ Experiment with Clinical Informatics skills to construct and develop data sets and visualizations.
   ➢ Explore careers in Clinical informatics and explain career pathways.

e. The Program offers interested students an opportunity to:
   ➢ Expand the breadth of their knowledge across clinical informatics content areas
   ➢ Participate in research across these content areas
   ➢ Learn skills and techniques used in Clinical Informatics

2. Application Process / Eligibility
   a. Eligibility is open to all students in good academic standing at WMed.

   b. The CI Program will not discriminate on the basis of race, ethnicity/national origin, creed, color, religion, gender, pregnancy, sexual orientation, gender identity, age, disability, veteran status, genetic or family medical information, height, weight, marital status, familial status, or any other status protected by applicable law or local ordinance.

   c. The CI Program will be promoted during medical school interviews, on the WMed website, and during Transitions to Medical School.

   d. Students are eligible to apply at any point prior to the end of second year. This process will include an intent to participate form including a plan that may change
as needed. Should participants need to drop from the Program due to eligibility concerns or otherwise, they may re-apply at any time.

3. Requirements
   a. The requirements of the Program are to be met prior to graduation with some completed prior to the end of third year and a clear plan in place to finish all requirements over the following year.

In order to receive a Distinction in Clinical Informatics and demonstrate leadership in this field, students will complete the following:
   i. Complete CITI training relevant to performing human subjects research.
   ii. Data Management Practicum Elective
   iii. Virtual Data Warehouse Practicum Elective
   iv. Natural Language Processing Practicum Elective
   v. Precision Medicine and Population Health
   vi. Clinical Decision Support Elective
   vii. Biomedical Informatics Research Elective (BINF 7515/9211) resulting in a completed research project
   viii. Current Topics and Career Exploration (BINF 9410)*
   ix. Presentation at WMed Research Day, or national/international conference

* Offered as a 2-week elective

b. See attached form for schedule of Electives and objectives.

4. Oversight & Cost
   a. Shamsi Berry, PhD will be in charge of tracking the Program requirements and will work in conjunction with interested faculty willing to serve as advisors on students’ capstone projects.

b. Cost to WMed will largely consist of faculty and staff resources. Budget needs can be anticipated on an annual basis as the program develops.

5. Successful completion of program
   a. Upon successful completion of the Program as outlined in section 3, students will be awarded a certificate of distinction in Clinical Informatics. This distinction will be outlined in the student's Medical Student Performance Evaluation (MSPE or Dean’s Letter), noted in the graduation program, and presentation of this certificate will take place at an annual awards ceremony. The distinction will be listed on the transcripts and medical student performance evaluation (MSPE).