The Michigan State University College of Engineering is getting a new academic department. The Department of Biomedical Engineering (BME) was approved by the MSU Board of Trustees on Oct. 24, 2014, opening the door for collaborative healthcare related research between the college and rest of campus.

The effective date for the new unit will be Jan. 1, 2015.

The first graduate level courses in the new department will be offered in Spring 2016.

Initially, the BME department will include only a graduate program. While an undergraduate program may be developed, it is likely several years away. Currently, students may pursue biomedical concentrations in six of the college's 10 majors (biosystems engineering, chemical engineering, computer engineering, electrical engineering, materials science and engineering, or mechanical engineering.) Each major approaches biomedical issues a bit differently, as the focus of each discipline varies.

Provost June Pierce Youatt said the new department will become a focal point for technological innovations in healthcare technology applied to the medical needs identified by physicians, nurses, and health scientists in hospital, clinic, and home settings. The department will be uniquely positioned to bring technological innovations to the vast state-wide network of healthcare providers served by the University.

Biomedical engineers will work in concert with a variety of MSU colleges, including:

- Human Medicine,
- Osteopathic Medicine,
- Nursing,
- Natural Science,
- Social Science, and
- Communications Arts and Sciences.

Advantages will include:

- leveraging expertise from diverse disciplines across campus,
- working together to provide cost efficiencies,
- mutually advancing emerging health science discoveries,
- and helping to improve health care accessibility.

Samples of neuro-electrical interfaces include:

- support neuroscience research and therapy,
- imaging enhancement technologies,
- robotics for physician assistance, and
- sensors to assess the health of patients in home settings.

Leo Kempel, dean of the College of Engineering, said MSU’s new department will become a lightning rod between the
college and the rest of campus. “This will allow the expansion of translational research at MSU and provide a framework for expanding our collaborations in translational health care,” he explained.

Many of the new department’s activities will be centered in the MSU Bio Engineering Facility, currently being built on the south side of campus. The almost $61 million project has four stories and around 130,000 square feet.

Faculty members are expected to start moving into the new structure in summer or early fall 2015. Its primary tenants will be faculty members from MSU’s colleges of Engineering, Human Medicine, and Natural Science.

Kempel said a search for the new chair of the Department of Biomedical Engineering will begin in the near future. “It will take three-to-five years to get this rolling, but we anticipate hiring new faculty as early as fall 2015. The department will start with master’s degree and doctoral students. An undergraduate program could follow once the department and its faculty are firmly established.”

MSU Engineering currently has biomedical focused study at the undergraduate level in biosystems engineering, chemical engineering, computer engineering, electrical engineering, materials science and engineering, and mechanical engineering.

Kempel noted that among undergraduates, around 40 percent of BME students go to medical school, 40 percent go to graduate school and around 20 percent enter the active workforce.

It is the first new academic department in the MSU College of Engineering since the Department of Computer Science and Engineering was established in 1969.

NOTE: Information on undergraduate majors with concentration in biomedical engineering is available at http://www.egr.msu.edu/undergraduate/academic/degree-programs. The "Degree Requirements" link for each of program will list the courses required for the concentration. Students wishing to speak with an advisor should select the advisor for the major they are considering. Contact and scheduling information for advisors is available at: http://www.egr.msu.edu/undergraduate/academic/advisors. For additional information, contact: Amanda Idema, Ph.D., assistant dean for undergraduate student affairs, agidema@egr.msu.edu