Ohio | Board of Regents
University System of Ohio

John R. Kasich, Governor
John Carey, Chancellor

INITIAL INQUIRY
REQUEST TO OFFER A NEW PROGRAM

Date of submission: *Date to come (sent after EPC)*

Name of institution: Kent State University

Primary institutional contact for this request:

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Name of new program: Computer Engineering Technology major within the Bachelor of Science degree

For institutions that are already approved/authorized by the chancellor

☐ New degree designation
☒ New program within an existing degree (e.g., major, minor, concentration)
☐ New technical certificate program
☐ New licensure/endorsement area (educator preparation)

Delivery options (check all that apply):

☒ Campus-based
☒ Online/hybrid delivery
☐ Flexible or accelerated delivery
☐ Offering the program at a new offsite location
☐ Offering the program at an existing offsite location
☐ Program contains off-campus experiences (e.g., internship, clinical, practicum, student teaching)

The institution will be seeking specialized accreditation for the program:

☐ No ☒ Yes

If "yes," provide the name of the accrediting agency:

Kent State University will seek accreditation for the degree program from the Association of Technology, Management and Applied Engineering (ATMAE), which accredits Kent State's bachelor's degree programs in applied engineering and construction management (the latter in candidacy status).

A future goal will be to seek accreditation from the Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

Provide a brief description of the request.

Kent State University proposes to offer a Computer Engineering Technology major within the Bachelor of Science degree, to be administered by the university's College of Applied Engineering, Sustainability and Technology as both an online and ground program on the Kent Campus.

This program is existing as a concentration within the college's Applied Engineering major. Proposed is to elevate the concentration to a separate degree program (major) to allow this area of study to further distinguish itself into a focused program that is relevant and responsive to industry needs.

Explain the academic unit's rationale for making the request.

Computer Engineering Technology, currently, is one of four concentrations in the Applied Engineering major, and is accredited as part of this major by ATMAE.[1] The concentration was established in fall 2012 to meet industry needs and programmatic interests of students by focusing on computer and networking systems. The main objective with its establishment was to offer a program with a strong hands-on, applied technology emphasis on the design, development, evaluation, installation, configuration, troubleshooting, maintenance and repair of personal computer systems, computer network systems and their supporting components.

Due to the gradual development of the concentrations in the Applied Engineering major to meet their respective market needs, the percentage of major courses for each of the concentrations has reduced to be 10 percent of the entire curriculum. Since the Ohio Department of Higher Education requires concentrations to comprise a minimum 50 percent of the major curriculum, this program is not in compliance.

The noncompliance primarily is due to the program's incremental development to keep up with the perpetually developing nature of technology. For this field of study to remain relevant to students and employers, it must continue to develop and diverge from its fellow concentrations of study. The college will align this curriculum along ATMAE accrediting criteria to ensure the highest quality of instruction and value to students and employers. Thus, the concentration must evolve to become its own major to remain an asset to the state and its population.

This area of study continues to remain relevant to the economic future of Ohio. Industry relies heavily on information technology systems to deliver better service and cost savings to operational bottom lines. The Bureau of Labor Statistics analysis for the decade between 2014 and 2024 proves this by indicating a continued growth of between eight percent (as fast as average) and 27 percent (much faster than average) for various labor markets in IT employment, including those for web developers[2], computer systems analysts[3], computer network architects[4], information security

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[1] The remaining three Applied Engineering concentrations are mechatronics, mechanical engineering technology and applied engineering and technology management. Proposals have been submitted to establish separate degree programs for mechatronics and mechanical engineering technology.

[2] Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2016-17 Edition*, Web Developers. Retrieved from www.bls.gov/ooh/computer-and-information-technology/web-developers.htm.

[3] Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2016-17 Edition*, Computer Systems Analysts. Retrieved from www.bls.gov/ooh/computer-and-information-technology/computer-systems-analysts.htm.

analysts[5] and network and computer systems administrators[6]. This range of growth, at its minimum, is on par or with that of other healthy labor markets and, at its maximum, far exceeds the average growth for the labor market in general.

In addition, Ohio is ranked fifth in the nation with the highest employment for computer systems analysts and ninth overall with the highest concentration of jobs in this occupation[7]

These trends and data have not been ignored by other college and universities in Ohio. Every major state institution in Ohio offers an array of computer science, computer engineering, computer information systems and similar programs of study. However, few of these institutions offer a program that merges the core concepts of engineering design and computer technology as defined by industry. Students also have noticed the relevance of this field of study. The appeal of the existing concentration has been reflected in a threefold increase in enrollment from fall 2012 to fall 2016.

Fall Semester Student Enrollment (15th Day Census)
Computer Engineering Technology Concentration

2012	2013	2014	2015	2016
28	43	61	57	65

Indicate whether additional faculty and staff will be needed to support the proposed request.

As the program is existing, current faculty and staff satisfy the academic and administrative needs for the proposed change to a separate degree program. Approximately eight full-time and 13 part-time faculty teach the major courses in the program.

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[4] Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2016-17 Edition*, Computer Network Architects. Retrieved from www.bls.gov/ooh/computer-and-information-technology/computer-network-architects.htm.

[5] Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2016-17 Edition*, Information Security Analysts. Retrieved from www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm.

[6] Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2016-17 Edition*, Network and Computer Systems Administrators. Retrieved from www.bls.gov/ooh/computer-and-information-technology/network-and-computer-systems-administrators.htm.

[7] Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Employment Statistics, May 2016*, Computer Systems Analysts. Retrieved from www.bls.gov/oes/current/oes151121.htm#st.