Resolution 2020-2021B
Revolution to Approve New Major, Robotics and Mechatronics, in Bachelor of Science
in Mechanical Engineering

Recommended by the Commission on Undergraduate Studies and Policies
First Reading: September 14, 2020
Faculty Senate:
Staff Senate:
Graduate Student Assembly:
Student Government Association:
Second Reading:
Approved by University Council:
Approved by the President:
First Effective Date to Declare Major: Fall 2020
First Effective Date to Graduate: Winter 2022

WHEREAS, the Major in Robotics and Mechatronics will advance knowledge and education to make the
next generation of sophisticated robots and intelligent machines that will assist humans in different
aspects of their lives; such as 1) dangerous situations, industrial accidents, homeland security events, or
natural disasters, 2) labor-intensive tasks, and 3) industry, farms, homes, hospitals, or offices; and

WHEREAS, Robotics and Mechatronics represents a unique academic and interdisciplinary field that
will educate the next generation of engineering students with a hands-on as well as theoretical career on
emerging topics of robotics, mechatronics, control and intelligent systems, artificial intelligence,
dynamical systems, manufacturing, and computer programming; and

WHEREAS, the Department of Mechanical Engineering supports the mission of continued emphasis on
robotics and mechatronics by educating the next generation of robotics engineers; and

WHEREAS, the new curriculum will allow students to fundamentally understand the principle of
robotics, mechatronics, and control and intelligent systems, and apply them to the next generation of
complex real-world systems in a wide range of applications including, but not limited to, industrial
automation, autonomous vehicles, aerial and ground vehicles, manufacturing, healthcare, prosthesis and
orthotics, and disaster response; and

WHEREAS, the Major in Robotics and Mechatronics is designed for students who wish to pursue a
career in industrial robots, rescue robots, biomedical robots, mechatronics, industrial automation,
autonomous cars, and unmanned vehicles; and

WHEREAS, students in the Major in Robotics and Mechatronics will gain a comprehensive and
interdisciplinary education of complex dynamical systems, robotic systems, mechatronics and hardware,
engineered control systems, and computer programming.

THEREFORE, LET IT BE RESOLVED that the Major in Robotics and Mechatronics be approved for
the addition to the Bachelor of Science in Mechanical Engineering effective Fall 2020 and the proposal
forwarded through University governance and to the President for the approval.