



An-Najah National University

Faculty of Engineering & Information Technology

Presented in partial fulfillment of the requirements for
Bachelor degree in Mechatronics Engineering

Graduation Project 2

3 axis laser engraver CNC machine

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ABSTRACT

CNC technology has become a requirement in the industrial world, manufacturers of this type of machine are trying to conform to the market requirements in terms of quality, price, and quantity, and so the CNC machine can meet the requirements and has acquired a leading position. Using CNC machines is more cost-effective, accurate, and much faster. It's the ability to manufacture complex shapes with high quality and accuracy compared to the ordinary machines.

The vast majority of today's CNC arsenals are completely electronic. Some of the more common CNC-operated processes include ultrasonic welding, hole-punching and laser cutting.

In this final project, a 3-axis laser engraver CNC was designed and developed, that has two linear axis and one rotational axis capable of engrave "draw" on cylindrical parts. Starting from the mechanical design, then the electric and controller selection, followed by the software, programing and finally the results and dissolution.