

## توزيعات درجات المقرر



# Course Specification

## 1. Basic Information

MDP482	Metrology and Measuring Instruments		4 CH
Prerequisites			
Number of weekly Contact Hours			
Lecture	Tutorial		Laboratory
3	0		5
Required SWL	200	Equivalent ECTS	8
Course Content			
Measuring Instruments: International system of units and standards, types of instrument magnification (mechanical, optical, electric, digital and pneumatic), measuring signals; static and dynamic response; design of limit gauges, simple measuring instruments, measuring instruments components; kinematics, comparators, measuring machines, CMM, advanced measuring techniques; computer vision, laser measurement, Nano measurement.			
Metrology: Linear measurement, angular measurement, form measurement, screw thread and gear measurement, geometric errors; straightness, flatness, roundness, squareness, alignment, parallelism and surface roughness measurement. Static tests for machine tools. Using CMM and advanced techniques in measurements.			
Used in Program / Level			
Program Name or requirement			Study Level
Design and Production Engineering Program requirement			4
Assessment Criteria			
Student Activities	Mid-Term Exam	Practical Exam	Final Exam
20%	25%	15%	40%