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| الفرقة | الثالثة انتاج (3ج) | مقرر جديد |
| اسم المقرر | Machine tools design | |
|  | تصميم الات ورش | |
| استاذ المقرر | أ.د/ محمد فكري حسين  د. أحمد محروس  د. محمد عبد الله بهلول | |
| العناوين المقترحة للبحث : | | |
| 1- A study about metal cutting machine tools design including the following:  - machine tools structure  - mechanical transmission elements  - hydraulic valves in metal cutting machine tools, types, and main specifications. Give hydraulic circuits. | | |
| 2- A study about metal cutting machine tools design including the following:  - machine tools guideways  - feed and speed gearboxes  - hydrostatic pumps used in machine tools .Give main specifications and constructions. Demonstrate with examples. | | |
| 3- A study about metal cutting machine tools design including the following:  - Machine tools spindle design  - sliding gear boxes design  - hydrostatic pumps: types, main specifications, and method of selection. Explain with neat schemes. | | |
| 4- A study about machine tools design including the following:  - Machine tools manufacturing, foundation and leveling.  - machine tools structure  - A study on hydraulic actuators: types, specifications, working and use. Give hydraulic circuits. | | |