UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	
ACADEMIC YEAR	
ANNO ACCADEMICO EROGAZIONE	
SUBJECT	
CODE	
SCIENTIFIC SECTOR(S)	
HEAD PROFESSOR(S)	CATANIA PIETRO Professore Ordinario Univ. di PALERMO
OTHER PROFESSOR(S)	
CREDITS	
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	
TERM (SEMESTER)	
ATTENDANCE	
EVALUATION	
TEACHER OFFICE HOURS	**CATANIA PIETRO** Monday 11:00 13:00 Dipartimento SAAF Stanza n. 135 Wednesday 11:00 13:00 Sede CdL Viticoltura e Enologia

DOCENTE: Prof. PIETRO CATANIA

PREREQUISITES	Must have passed the mathematics and physical teaching
LEARNING OUTCOMES	Knowledge and understanding. Acquire sufficient knowledge for the selection and use of tractors and machinery. Ability to apply knowledge and understanding. Ability to assess the technical and cultural requirements of farms in relation to the address production. Making judgments. To be able to suggest, in relation to the production sector, the adoption of machines to improve the qualitative and quantitative aspects of agricultural food production. Communicative skills. To be able to use a technically correct language, but simply to advise the farmer to make the appropriate choices of machines depending on their business needs. Learning skills Acquiring the ability to connect the different factors that influence the production adjusting modern knowledge through consultation scientific paper.
ASSESSMENT METHODS	The evaluation is done by oral exam.
EDUCATIONAL OBJECTIVES	Objective of the discipline is to deepen the technical and functional characteristics of the tractors for the mechanization of farming operations. They will be studied the selection criteria and the machines of the production process of the main Mediterranean crop management.
TEACHING METHODS	The teaching is organized in lectures and technical visits carried out in sicilian farms.
SUGGESTED BIBLIOGRAPHY	L. Bodria - G. Pellizzi - P. Piccarolo. Meccanica e meccanizzazione agricola. Edagricole 2013

SYLLABUS

Hrs	Frontal teaching
2	Elements of statics, kinematics and dynamics. fundamental principles of thermodynamics
2	Agricultural machinery. Classification and dissemination.
2	Physical and mechanical properties of the soil.
1	The Tractor: architecture, supporting structure, driving capabilities
2	Internal combustion engines, The transmission components, propulsion, support, direction and braking.
3	Coupling mechanisms and drive public works vehicles. Dynamic Tractor balance. Maximum tractive effort
1	Technical aspects of choice of the tractors.
1	Criteria for operative choice of machines.
3	Machines for tilling and preparation of the seedbed: plows, diggers, hoes, rippers, harrows and rollers.
5	Machines for fertilizing, sowing, transplanting and cultivation.
5	Machines for plant protection.
5	Functional verification of sprayers.
3	Forages, wheat and tubers harvest machines.
4	Mechanical harvesting of grape. Organization of yard work
2	Mechanical harvesting of olives. Organization of yard work
2	Mechanical harvesting of nuts
2	Mechanical harvesting of vegetables.
3	Precision agriculture. Positioning systems: GPS and DGPS. Precision viticulture.

Hrs	Practice
12	Technical visits to farms