



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze Agrarie, Alimentari e Forestali		
ACADEMIC YEAR	2021/2022		
BACHELOR'S DEGREE (BSC)	AGRICULTURAL ENGINEERING		
SUBJECT	AGRICULTURAL MECHANICS		
TYPE OF EDUCATIONAL ACTIVITY	B		
AMBIT	50120-Discipline dell'ingegneria agraria, forestale e della rappresentazione		
CODE	12504		
SCIENTIFIC SECTOR(S)	AGR/09		
HEAD PROFESSOR(S)	ORLANDO SANTO	Professore Associato	Univ. di PALERMO
OTHER PROFESSOR(S)			
CREDITS	8		
INDIVIDUAL STUDY (Hrs)	132		
COURSE ACTIVITY (Hrs)	68		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	3		
TERM (SEMESTER)	1° semester		
ATTENDANCE	Not mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	ORLANDO SANTO Monday 10:00 12:00 Dipartimento SAAF, Edificio 4, Ingresso L, Piano 1, Stanza 139 Tuesday 10:00 12:00 Dipartimento SAAF, Edificio 4, Ingresso L, Piano 1, Stanza 139 Friday 10:00 12:00 Dipartimento SAAF, Edificio 4, Ingresso L, Piano 1, Stanza 139		

DOCENTE: Prof. SANTO ORLANDO

PREREQUISITES	Knowledge of the basic concepts of physics and mathematics
LEARNING OUTCOMES	<p>Knowledge and understanding: Knowledge draw up a plan of mechanization. Ability 'to use the specific language.</p> <p>Applying knowledge and understanding: Ability to choose the drive agricultural machines and operators.</p> <p>Making judgments: Ability to assess the conditions and methods of use of agricultural machinery.</p> <p>Communication skills: Ability to interact with other professionals. Ability to transfer acquired knowledge to farmers.</p> <p>Learning skills: Ability to update by consulting the scientific publications.</p> <p>Ability to follow the master, seminars and refresher courses and specialization.</p>
ASSESSMENT METHODS	<p>The final exam consist in an oral colloquium during witch the student will be evaluated in terms of his capacity to reason and connection between the knowledge acquired</p> <p>During the exam could be ask to the student also to solve some problems related to the lectures topics</p>
EDUCATIONAL OBJECTIVES	The aim is to make known constructive and functional characteristics of the main agricultural machines. The graduate will be able to selection of appropriate equipment in order to solve the particular business and cultural needs.
TEACHING METHODS	<p>Thecourse consists of lectures for which the teacher use Power Point presentations that will be available for students.</p> <p>It will visit the Museum of machinery and engines and farms</p>
SUGGESTED BIBLIOGRAPHY	<p>Biondi P. (1999). Meccanica Agraria – Le macchine agricole. UTET; Torino, ISBN: 8802056099</p> <p>Peruzzi A., Sartori L. (1997). Lavorazione del terreno. Edagricole, ISBN: 8820660350</p> <p>Bodria L., Pellizzi G., Piccarolo P. (2006). Meccanica Agraria vol. I e II. Edagricole, ISBN: 8850651317, ISBN: 8850651325</p> <p>Dispense fornite dal docente durante il corso.</p>

SYLLABUS

Hrs	Frontal teaching
1	Objectives of the course and its subdivision.
2	History of agricultural mechanization
2	Internal combustion engines
2	Electric engines
2	Power transmission systems
4	The farm tractors
2	Wheels and tracks
2	Hitches and power applications
4	Machines for soil coltivation
2	Seeders, fertilizer and transplantation machines
4	Sprayers Machines
3	the combine harvesters
4	Machines for forage harvester
4	Machines for the collection of vegetable crops
6	Machine for fruit harvester
2	Machines for the transport and handling of the products on farms
2	Safety and ergonomics of farm machinery
Hrs	Workshops
2	Tractor static balance
2	Tractor dynamic balance
3	Machine and implement selection criteria.
3	The machines and models of implementation of precision farming
Hrs	Others
10	Observation of use and regulation of agricultural machinery