

## Course Description Form

<b>1. Course Name:</b>
Soil Preparation Equipment
<b>2. Course Code:</b>
Sope376
<b>3. Semester / Year:</b>
first semester 2023–2024
<b>4. Description Preparation Date:</b>
1/9/2023
<b>5. Available Attendance Forms:</b>
Combined (Attendance + distance education)
<b>6. Number of Credit Hours (Total) / Number of Units (Total)</b>
30 theoretical hours +45 practical hours =75 hours
<b>7. Course administrator's name (mention all, if more than one name)</b>
Name: Ahmed Mohammad Ameen Saeed Email:ahmed_ameem@uomosul.edu.i Shalih Sabry Ali
<b>8. Course Objectives</b>
1- Explaining the basics and principles of engineering sciences and their applications in the field soil preparation equipment 2- Gaining knowledge in improving soil treatments and preparing it with machines in a way that suits agricultural reality and development 3- The ability to develop modern soil preparation systems in line with the general trend in production and the requirements of human resources capable of dealing with those systems
<b>9. Teaching and Learning Strategies</b>
1-Interactive lecture 2-Brainstorming 3-Dialogue and discussion 4-Field Training 5-Practical exercises 6-Field project 7-Self-education

<b>10. Course Structure</b>					
<b>We ek</b>	<b>Hours</b>	<b>Required Learning Outcomes</b>	<b>Unit or subject name</b>	<b>Learning method</b>	<b>Evaluation method</b>
<b>1</b>	<b>2 theoretical</b>	a1 knows the importance of soil and its types and knows the types of tillage	Importance, types of soil and types of tillage	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test1 Final test
	<b>3 Practical</b>	c3 tests the technological properties of the soil a2 classifies types of soil preparation equipment	Technological characteristics of the soil and their impact on tillage operations and types of tillage Classification of tillage equipment	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test1 Final test
<b>2</b>	<b>2 theoretical</b>	a1 knows what the mold board plow is and its parts, and remembers its features a5 distinguishes its types	Mold board plow Types - features - parts	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test1 Final test
	<b>3 Practical</b>	c3 tries and tests the mold board plow in the field c2write a report on the mold board plow	Applications, regulation and field experiments on the mold board plow	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test1 Final test
<b>3</b>	<b>2 theoretical</b>	a1 knows what a disc plow is and its parts, and remembers its features a5 distinguishes its types	disc plow Types - features - parts	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test1 Final test
	<b>3 Practical</b>	c3 trials and tests a disc plow in field c2write a report on the disc plow	Applications, regulations, and field experiments on the disc plow	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test1 Final test
<b>4</b>	<b>2 theoretical</b>	a1 knows what a vertical disc plow is and its parts, and remembers its features a5 distinguishes its types	Vertical disc plow - types - features - parts	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test1 Final test
	<b>3 Practical</b>	c3 tries and tests a vertical disc plow in the field c2write a report on the vertical disc plow	Applications, regulation and field experiments on the Vertical disc plow	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test1 Final test
<b>5</b>	<b>2 theoretical</b>	a1 knows what a chisel plow is and its parts, and remembers its features a5 distinguishes its types	Chisel plow - types - features - parts	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test1 Final test
	<b>3 Practical</b>	c3 tries and tests the chisel plow in the field c2writes a report on the chisel plow	Applications, regulation and field experiments on the The chisel plow	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test1 Final test
<b>6</b>	<b>2 theoretical</b>	a1 knows what a rotary plow is and its parts, and remembers its features a5 distinguishes its types	Rotary plow - types - features - parts	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test1 Final test

	<b>3 Practical</b>	c3 tries and tests the rotary plow in the field c2 write a report on the rotary plow	Applications, regulations and field experiments on the Rotational plow	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test 1 Final test
<b>7</b>	<b>2 theoretical</b>	a1 knows what subsoil plow is its parts, and remembers its features a5 distinguishes its types	Subsoil plow (mulching and maintenance plow) features - parts	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test 1 Final test
	<b>3 Practical</b>	c3 tries and tests the subsoil plow in the field c2 write a report on the subsoil plow	Applications, regulations and field experiments on the subsoil plow	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test 1 Final test
<b>8</b>	<b>2 theoretical</b>	a1 knows what a plow or undercutting hoe is and its parts and remembers its features a5 distinguishes its types	Undercut plow or hoe - types - features - parts	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test 1 Final test
	<b>3 Practical</b>	c3 tries and tests the plow or the sub-cutting hoe in the field c2 writes a report on the plow or the undercut hoe	Applications, regulations and field experiments on subsoiler shear joints	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test 1 Final test
<b>9</b>	<b>2 theoretical</b>	a1 knows the types of combs and their parts and remembers their features harrows a5 distinguishes its types	Disc, crawler, and toothed combs - types - features - parts	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test 1 Final test
	<b>3 Practical</b>	c3 tries and tests types of harrow in the field c2 write a report on the types of combs	Applications, regulations, and field experiments on combs of all kinds	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test 1 Final test
<b>10</b>	<b>2 theoretical</b>	a1 knows what rollers, leveling machines and their parts are, and remembers their features a5 distinguishes its types	Rollers and graders - Types - features - parts	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test 1 Final test
	<b>3 Practical</b>	c3 tries and tests graders and rollers in the field c2 writes a report on rollers and graders	Applications, regulations, and field experiments on rollers and graders	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test 1 Final test
<b>11</b>	<b>2 theoretical</b>	a1 knows what planning machines and their parts are and remembers their features a5 distinguishes its types	Planning machines and compound machines - types - features - parts	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test 1 Final test
	<b>3 Practical</b>	c3 tries and tests plotting machines in the field c2 writes a report on plotting machines	Applications and organization of field experiments on planning machines	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test 1 Final test
<b>12</b>	<b>2 theoretical</b>	a1 knows what the mechanical assembly of soil preparation machines and its parts is and remembers its advantages	Mechanical assembly of soil preparation machines Soil and its systems	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test 1 Final test

		a5 distinguishes its types			
	<b>3 Practical</b>	c3 experiments and tests the mechanical assembly of soil preparation machines in the field c2 write a report on the mechanical assembly of soil preparation machines	Applications, regulation and field experiments on mechanical assembly machines	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test1 Final test
<b>13</b>	<b>2 theoretical</b>	c1 calculates field productivity field efficiency of soil preparation equipment	Calculating the process productivity and field efficiency of initializing machines the soil	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test1 Final test
	<b>3 Practical</b>	a3 solves mathematical problems about field productivity and field efficiency	Solve mathematical problems on how to calculate field productivity and field efficiency	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test1 Final test
<b>14</b>	<b>2 theoretical</b>	c1 calculates the capacity and sliding requirements of soil preparation equipment	Calculating the power, sliding, and (floating and soil compaction) requirements for soil preparation machines	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test1 Final test
	<b>3 Practical</b>	a 3 solves calculation problems about capacity requirements and sliding of soil preparation equipment	Solve mathematical problems on how to calculate power and slip requirements with field experiments	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test1 Final test
<b>15</b>	<b>2 theoretical</b>	a1 knows the importance of maintaining and maintaining soil preparation equipment	The importance of maintenance and maintenance - storing soil preparation machines	Interactive lecture, brainstorming, dialog and discussion, self-learning	Short daily test Semester test1 Final test
	<b>3 Practical</b>	c4 inspects machinery in the field c3 is trying to perform maintenance operations and perpetuate	Educational field applications for how to maintain, sustain, and store soil preparation machines	Interactive lecture, brainstorming, dialog and discussion, field training, and self-learning	Short daily test Semester test1 Final test

## 1. Course Evaluation

Seq.	Evaluating style	date	marks	Relative weight
<b>1</b>	<b>Home reports</b>	<b>every week</b>	<b>10</b>	<b>10%</b>
<b>2</b>	<b>Short tests</b>	<b>every week</b>	<b>10</b>	<b>10%</b>
<b>3</b>	<b>Semester test 1</b>	<b>The seventh week</b>	<b>10</b>	<b>10%</b>
<b>4</b>	<b>Semester test 2</b>	<b>The final week</b>	<b>10</b>	<b>10%</b>
<b>5</b>	<b>Final practical test</b>	<b>End of the course</b>	<b>20</b>	<b>20%</b>
<b>6</b>	<b>Final theoretical test</b>	<b>End of the course</b>	<b>40</b>	<b>40%</b>
	<b>the total</b>		<b>100</b>	<b>100%</b>

## 11. Learning and Teaching Resources

Required textbooks (curricular books, if any)	معدات تهيئة التربة 1999 د. عزيز رمو البنا
Main references (sources)	
Recommended books and references (scientific journals, reports...)	الآلات الزراعية 1995 د.سهيل بربارة المرجع في الميكانيك الزراعي 1987 د. عادل الصفار
Electronic References, Websites	<a href="https://www.youtube.com">https://www.youtube.com</a>



مدرس المادة العملي  
م.م.صالح صبري علي



مدرس المادة النظري  
م.أحمد محمدأمين سعيد



رئيس قسم المكنان والآلات الزراعية  
أ.م.نوفل عيسى محييد



رئيس اللجنة العلمية  
أ.د. أركان محمدأمين صديق

