

Course Brief Description - Procedures of the Course Plan Committee/ Department Civil	QF09/0409-1.0
Engineering and infrastructures	

machines), distr 0904210 S d f Co-0902202 T s	3C, 3H asic definitions for fore tibuted load (center of 3C,3H Stress and strain, mech liagrams; stresses and lexural and shearing st 1C,3L Fhis laboratory serves stress, yield stress, ultimeter	Course Name Statics (for Mech+Arch) ce system, components, resultants, couples, equilibrium, structures of area and center of gravity, areas of compound volumes), shear and 1 in beams, moment of inertia. Strength of Materials annical properties of materials, thin wall cylinders, bending momen deformations in members subjected to tension, compression, shoresses in beams; deflection of beams; combined stresses. Strength of Materials Lab mainly the measuring and/or determination of some material proprimate stress, fracture stress). Non destructive testing of materials (from the basis of the basis	bending moment 0902202 t and shear force hear and torsion; 0902203 erties (strain and		
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machines), distr 0904210 S d f Co-0902202 T s	tibuted load (center of 3C,3H Stress and strain, mech liagrams; stresses and lexural and shearing st 1C,3L This laboratory serves stress, yield stress, ultim	area and center of gravity, areas of compound volumes), shear and in beams, moment of inertia. Strength of Materials anical properties of materials, thin wall cylinders, bending momen deformations in members subjected to tension, compression, sh tresses in beams; deflection of beams; combined stresses. Strength of Materials Lab mainly the measuring and/or determination of some material prop- mate stress, fracture stress). Non destructive testing of materials (f	bending moment 0902202 t and shear force hear and torsion; 0902203 erties (strain and		
0904210	3C,3H Stress and strain, mech liagrams; stresses and liagrams; stresses and lexural and shearing st 1C,3L Fhis laboratory serves stress, yield stress, ultimeters	in beams, moment of inertia. Strength of Materials anical properties of materials, thin wall cylinders, bending momen deformations in members subjected to tension, compression, sh tresses in beams; deflection of beams; combined stresses. Strength of Materials Lab mainly the measuring and/or determination of some material proper mate stress, fracture stress). Non destructive testing of materials (free stress).	0902202 t and shear force hear and torsion; 0902203 erties (strain and		
S d f Co-0902202 7 s	Stress and strain, mech liagrams; stresses and lexural and shearing st 1C,3L This laboratory serves stress, yield stress, ultim	Strength of Materials nanical properties of materials, thin wall cylinders, bending momen deformations in members subjected to tension, compression, sh tresses in beams; deflection of beams; combined stresses. Strength of Materials Lab mainly the measuring and/or determination of some material prop mate stress, fracture stress). Non destructive testing of materials (f	t and shear force hear and torsion; 0902203 erties (strain and		
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f Co-0902202 T s	Iexural and shearing st 1C,3L This laboratory serves stress, yield stress, ultimeter	The stresses in beams; deflection of beams; combined stresses. Strength of Materials Lab mainly the measuring and/or determination of some material propulate stress, fracture stress). Non destructive testing of materials (N	0902203 erties (strain and		
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ר s	This laboratory serves stress, yield stress, ultim	mainly the measuring and/or determination of some material prop mate stress, fracture stress). Non destructive testing of materials (1	erties (strain and		
s	tress, yield stress, ultin	mate stress, fracture stress). Non destructive testing of materials (N			
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n	nacro examination of 1		NDT), micro and		
		materials and phase diagrams for steel. It is equipped with machine	es for conducting		
t	ests, such as: Tension,	impact fatigue, bending, creep, hardness, and photo elasticity tests.			
0101104	3С,3Н	Probability and Statistics for Engineers	0902209		
<i>I</i>	A concise survey of: of	combinatorial analysis; probability and random variables; discrete	e and continuous		
Ċ	densities and distribution functions; expectation and variance; normal (Gaussian), binomial and Poisson				
Ċ	listributions; statistica	l estimation and hypothesis testing; method of least squares,	correlation and		
r	regression. The emphas	sis is on statistics and quality control methods for engineers.			
2 nd year	2C,2H	Geology for Engineers	0902221		
minerals and	minerals forming r cavation, slope stab	ence of Geology, regard earth surface formation, sur rocks; as well as discussing the soil and the strength of bility problems are of the interest in this topic and some i	the geological		
0902221	2C,2H	Construction Materials	0902222		
F	Production, types, prop	berties and uses of cementitious materials and aggregate. Fresh cor	ncrete properties,		
С	concrete operations, co	oncrete testing, and destructive and non-destructive testing of e	existing concrete		
S	tructures. Durability	Aspects of Concrete. Design of concrete mixes. Production and	nd properties of		
n	nasonry units including	g building stones, concrete blocks and calcium-silicate and clay brid	cks.		
0902222	1C,3L	Construction Materials Lab	0902223		
N	Normal Consistency &	Setting Time of Cement Past; Fresh and Mechanical Properties	of Mortar; Sieve		
A	Analysis of Aggregate	e; Specific Gravity of Aggregate; Unit Weight of Aggregate; A	Abrasion test of		
A	Aggregate; Fresh and I	Mechanical Properties of Concrete; Mechanical Properties of Steel	l; Tests on wood		

Al-Zaytoonah University of Jordan



		rocedures of the Course Plan Committee/ Department Civil ngineering and infrastructures	QF09/0409-1.0		
	(Machanical and W	/isual); Impact Test on Steel: Hardness Test on Metals.			
0402100		Technical Writing	0902231		
	-	riting of technical reports. Topics include exposition, argumenta			
		l effective communication. Frequent written exercises and develop	-		
		ing Centre resources required outside regular class hours.			
0902202	3C,3H	Structural Analysis I	0902332		
	Classification of	structures; loads; truss analysis, internal loadings in structures,	, shear and momen		
	diagrams for bean	ns and frames; influence lines for determinate structures; deflect	tions; introduction to		
	methods of analysi	s of statically indeterminate structures.			
0902332	3C,3H	Structural Analysis II	0902333		
	Analysis of static	cally indeterminate structures: method of consistent displacem	nents; three momer		
	equation, evaluation	on of fixed end moments; slope deflection method; moment distribu	ition method; colum		
	analogy. Introduct	tion to matrix methods. Approximate methods. Computer application	ons.		
0902222,					
0902333	3С,3Н	Reinforced Concrete I	0902434		
	Elevural Analysis	and Decign of beams: singly rainforced rectangular beams	doubly rainforce		
	Flexural Analysis and Design of beams; singly reinforced rectangular beams, doubly reinforced rectangular beams. Theams, Shear and diagonal tension, bond, anchorage and development length				
	rectangular beams		•		
	-	s, T-beams. Shear and diagonal tension, bond, anchorage and	•		
0002434	analysis and design	s, T-beams. Shear and diagonal tension, bond, anchorage and n of edge supported slabs, design of compression members.	development length		
0902434	analysis and design 3C,3H	s, T-beams. Shear and diagonal tension, bond, anchorage and n of edge supported slabs, design of compression members. Reinforced Concrete II	development length		
0902434	analysis and design 3C,3H Review of design	 T-beams. Shear and diagonal tension, bond, anchorage and in of edge supported slabs, design of compression members. Reinforced Concrete II basis, ultimate strength versus unified design approaches, tension 	development length 0902435 on- and compression		
0902434	analysis and design 3C,3H Review of design controlled member	s, T-beams. Shear and diagonal tension, bond, anchorage and n of edge supported slabs, design of compression members. Reinforced Concrete II basis, ultimate strength versus unified design approaches, tensions, strain limits. Serviceability analysis, deflection and cracking compressions.	development length 0902435 on- and compression ontrol, shrinkage and		
0902434	analysis and design 3C,3H Review of design controlled member creep deflection.	 a, T-beams. Shear and diagonal tension, bond, anchorage and in of edge supported slabs, design of compression members. Reinforced Concrete II basis, ultimate strength versus unified design approaches, tensions, strain limits. Serviceability analysis, deflection and cracking concerning and design for torsion. Slender columns. Analysis 	development length 0902435 on- and compression ontrol, shrinkage and of building frames		
0902434	analysis and design 3C,3H Review of design controlled member creep deflection. simplifications, ide	 a, T-beams. Shear and diagonal tension, bond, anchorage and in of edge supported slabs, design of compression members. Reinforced Concrete II basis, ultimate strength versus unified design approaches, tensioners, strain limits. Serviceability analysis, deflection and cracking concrete Analysis and design for torsion. Slender columns. Analysis ealization. Two-way slabs, column-supported slabs, direct design 	development length 0902435 on- and compression ontrol, shrinkage and of building frames		
	analysis and design 3C,3H Review of design controlled member creep deflection. simplifications, ide frame method. Des	s, T-beams. Shear and diagonal tension, bond, anchorage and n of edge supported slabs, design of compression members. Reinforced Concrete II basis, ultimate strength versus unified design approaches, tensions, strain limits. Serviceability analysis, deflection and cracking con- Analysis and design for torsion. Slender columns. Analysis ealization. Two-way slabs, column-supported slabs, direct design sign of stairs.	development length 0902435 on- and compression ontrol, shrinkage and of building frames n method, equivalen		
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	analysis and design 3C,3H Review of design controlled member creep deflection. simplifications, idd frame method. Des 2C,2H Structural Steel De	 a, T-beams. Shear and diagonal tension, bond, anchorage and in of edge supported slabs, design of compression members. Reinforced Concrete II basis, ultimate strength versus unified design approaches, tensioners, strain limits. Serviceability analysis, deflection and cracking contract and the sign for torsion. Slender columns. Analysis ealization. Two-way slabs, column-supported slabs, direct design sign of stairs. Steel Structural Design esign (3-0) Design of structural steel elements found in bridges and states. 	development length 0902435 on- and compression ontrol, shrinkage and of building frames n method, equivalen 0902436 d building structures		
	analysis and design 3C,3H Review of design controlled member creep deflection. simplifications, ide frame method. Des 2C,2H Structural Steel Des including plate gin	 a, T-beams. Shear and diagonal tension, bond, anchorage and in of edge supported slabs, design of compression members. Reinforced Concrete II basis, ultimate strength versus unified design approaches, tensioners, strain limits. Serviceability analysis, deflection and cracking control Analysis and design for torsion. Slender columns. Analysis ealization. Two-way slabs, column-supported slabs, direct design sign of stairs. Steel Structural Design esign (3-0) Design of structural steel elements found in bridges and ders, other built-up members, beams and slender columns;, and control of the state of the state. 	development length 0902435 on- and compression ontrol, shrinkage and of building frames n method, equivalen 0902436 d building structures		
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0902333	analysis and design 3C,3H Review of design controlled member creep deflection. simplifications, idd frame method. Des 2C,2H Structural Steel Dec including plate gir of steel structures; 3C,3H Principles of surve	 a, T-beams. Shear and diagonal tension, bond, anchorage and in of edge supported slabs, design of compression members. Reinforced Concrete II basis, ultimate strength versus unified design approaches, tension rs, strain limits. Serviceability analysis, deflection and cracking concrete Analysis and design for torsion. Slender columns. Analysis ealization. Two-way slabs, column-supported slabs, direct design sign of stairs. Steel Structural Design esign (3-0) Design of structural steel elements found in bridges an eders, other built-up members, beams and slender columns;, and condesign sessions (computer applications). Surveying 	development length 0902435 on- and compression ontrol, shrinkage an of building frame: n method, equivaler 0902436 d building structure: onnections.; detailin 0902341 ication in contouring		
0902333	analysis and design 3C,3H Review of design controlled member creep deflection. simplifications, idd frame method. Des 2C,2H Structural Steel Defined including plate gir of steel structures; 3C,3H Principles of surver profiles and crosse	 a, T-beams. Shear and diagonal tension, bond, anchorage and in of edge supported slabs, design of compression members. Reinforced Concrete II basis, ultimate strength versus unified design approaches, tension rs, strain limits. Serviceability analysis, deflection and cracking concrete Analysis and design for torsion. Slender columns. Analysis ealization. Two-way slabs, column-supported slabs, direct design sign of stairs. Steel Structural Design esign (3-0) Design of structural steel elements found in bridges and design sessions (computer applications). Surveying eying; linear measurements, chain surveying, leveling and its applications 	development length 0902435 on- and compression ontrol, shrinkage an of building frames n method, equivaler 0902436 d building structures onnections.; detailin 0902341 ication in contouring les; traverse surveys		
0902434 0902333 0101104	analysis and design 3C,3H Review of design controlled member creep deflection. simplifications, idd frame method. Des 2C,2H Structural Steel Defined including plate gir of steel structures; 3C,3H Principles of surver profiles and crosse	 a, T-beams. Shear and diagonal tension, bond, anchorage and in of edge supported slabs, design of compression members. Reinforced Concrete II basis, ultimate strength versus unified design approaches, tensioners, strain limits. Serviceability analysis, deflection and cracking contract and the design for torsion. Slender columns. Analysis ealization. Two-way slabs, column-supported slabs, direct design sign of stairs. Steel Structural Design esign (3-0) Design of structural steel elements found in bridges and design sessions (computer applications). Surveying eving; linear measurements, chain surveying, leveling and its applit-sections. Areas, volumes, and earthwork. Measurement of angle 	development length 0902435 on- and compression ontrol, shrinkage an of building frames n method, equivaler 0902436 d building structures onnections.; detailin 0902341 ication in contouring les; traverse surveys		



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	Chain surveying, the use of the level and leveling staff; setting out levels; profile and cross-section			
	leveling. The theodolite and its use traverse surveying. Tachometry and electronic distance measurements.			
	Measurement of areas with planimeter. The use of laser theodolite and level.			
0902341		3С,3Н	Traffic and Transportation Engineering	0902443
	The fi	ield of transportat	ion engineering; role of transportation in society economics; social;	political; and
	environmental. Operation and vehicular characteristics for all modes of transportation. Traffic control			
	devices; pavement markings; object marking; delineators; studs; signs; and channelization; introduction			
	to traffic signal timings. Rail transportation; Urban rail transit; railway cross section; Urban rail transit.			
	Air transport demand, selection of airport site and runway orientation; airport passenger terminal area.			
	Water transportation including marine structures, classes of harbors and planning and design of port			
	facilit	ies.		
0902443		3С,3Н	Highways Engineering	0902544
0902443	Princi		Highways Engineering tion. Horizontal alignment; design and setting out (circular curve	
0902443		ples of route loca		element, setting
0902443	out of	ples of route loca f circular and tran	tion. Horizontal alignment; design and setting out (circular curve	element, setting g sight distance.
0902443	out of Vertic	ples of route loca f circular and tran cal alignment; des	tion. Horizontal alignment; design and setting out (circular curve sition curves, superelevation. Sight distance; stopping and passing	element, setting g sight distance.
0902443 0902545	out of Vertic	ples of route loca f circular and tran cal alignment; des	tion. Horizontal alignment; design and setting out (circular curve sition curves, superelevation. Sight distance; stopping and passing ign and setting out (properties of vertical curves). Coordination o	element, setting g sight distance.
	out of Vertic vertic	ples of route loca f circular and tran cal alignment; des al curves. Capaci 3C,3H	tion. Horizontal alignment; design and setting out (circular curve sistion curves, superelevation. Sight distance; stopping and passing ign and setting out (properties of vertical curves). Coordination o ty of two-lane highways. Geometric design of intersection.	element, setting g sight distance. f horizontal and 0902545
	out of Vertic vertic Paven	ples of route loca f circular and tran cal alignment; des al curves. Capaci 3C,3H nent types and de	tion. Horizontal alignment; design and setting out (circular curve sition curves, superelevation. Sight distance; stopping and passing ign and setting out (properties of vertical curves). Coordination o ty of two-lane highways. Geometric design of intersection. Pavement Design	element, setting g sight distance. f horizontal and 0902545 aterial types and
	out of Vertic vertic Paven tests,	ples of route loca f circular and tran cal alignment; des al curves. Capaci 3C,3H nent types and de uses of asphalt in	 Attion. Horizontal alignment; design and setting out (circular curve asition curves, superelevation. Sight distance; stopping and passing ign and setting out (properties of vertical curves). Coordination of ty of two-lane highways. Geometric design of intersection. Pavement Design Afinitions, soil classification for highway purposes. Bituminous material curves is a setting out careful and setting out careful and setting out careful and setting out curves. 	element, setting g sight distance. f horizontal and 0902545 aterial types and Analysis of rigid
	out of Vertic vertic Paven tests, and f	ples of route loca f circular and tran cal alignment; des al curves. Capaci 3C,3H nent types and de uses of asphalt in lexible highway p	 Anticology and setting out (circular curve assistion curves, superelevation. Sight distance; stopping and passing ign and setting out (properties of vertical curves). Coordination of ty of two-lane highways. Geometric design of intersection. Pavement Design Anticology and passing initial curves is a structure of the properties of t	element, setting g sight distance. f horizontal and 0902545 aterial types and Analysis of rigid

Approved by		اعتمدت من قبل
	(التوقيع والخاتم الرسمي)	مجلس القسم