	koures Number Nass Format	01005025 Lecture	Subject Category Credit Type and	Compulsory (M) 1		
<form></form>	epartment eriod of Study	Mechatronics Semester 1	Student Category Classes per Week	Year 4 2	1	
<text></text>	equired Materials structor	Handout materials based o Takeshi TOSHMA	in "Applied physics of Ko	sen", ISBN978-4-627-15102		
	curse Objective is almed not only to express the follow nat they are mathematically interlocked Memory for any first statematic and the statematics	ing physical phenomena usin and are analyzable events,	ng mathematical expression	ons but also to understand	1	
Name of the second s	mechanics equation or motion, work coment of inertia, elastic body icecifically, each item of the following n	ubric will be the target.	y, momentum conservato	n law, anguar momentum,	ļ	
	ivaluation (Rubrio)	Ideal Level of Achievement (Very Good) Ability to solve not only	t Standard Level of Achievement (Good)	Unacceptable Level of Achievement (Fail)		
	is possible to derive the equation of mo	basic problems but also applied problems on midterm and/or final exami about this category.	the equation of motions required from the problem sentence and obtain the answer.	equation of motions required from the problem sentence and obtain the answer.		
	is because to exclude the related is to etween work, and force, and solve with differentiation and integration,	basic problems but also applied problems on midterm and/or final exami about this category.	exclain the relationship between s work and force, and solve with differentiation and integration.	and force, and solve with differentiation and integration.		
	is possible to divide the shape of the gid body into small parts and derive s center of gravity and moment of erts.	Ability to solve not only basic problems but also applied problems on midtern and/or final exami about this category.	It is possible to divide the shape of the rigid body into small parts and derive its center of gravity and moment of inertia.	Can not divide the shape of the rigid body into small perts and derive its center of gravity and moment of inertia.		
	is possible to explain conservation w of momentum and describe elvavior before and after a collision of n object at two or three-dimensional refern,	Ability to solve not only basic problems but also applied problems on midterm and/or final exam about this category.	It is possible to excisin conservation law of momentum and describe behavior before and after a collision of an object at two or three-dimensional	Can not exclain conservation law of momentum and describe behavior before and after a collision of an object at two or three-dimensional exeten.		
Standard and standard arg man and standard arg man and standard arg man arg man arg man arg man arg man arg man arg ma	Is possible to explain the orrespondence relationship between common, and angular momentum nd mechanical energy in translational option and rotational motion,	Ability to solve not only basic problems but also applied problems on midtern and/or final exem about this category.	estem. It is possible to escalar the correspondences relationship between momentum and angular momentum and mechanical energy in translational motion and rototoral motion	Can not explain the correspondence relationship between momentum and angular memory in rensetional energy in transistional motion and rotational motion.		
<form>tansmit under under</form>	an describe and calculate the quations of motion for translation nd rotation.	Ability to solve not only basic problems but also applied problems on midterm and/or final exami about this category.	Can describe and calculate the equations of motion s for translation and rotation.	Can not describe and calculate the equations of motion for translation and rotation,		
	is possible to explain the difference etween a rigid body and an elastic ody and understand the mechanical roperties of materials.	Ability to solve not only basic problems but also appled problems on midterm and/or final exems about this category.	It is possible to excitain the difference between a singlid body and an elastic body and understand the modysmical properties of materials.	Can not explain the difference between a nigid body and an elastic body and understand the mechanical properties of materials.		
		Relationship with Learnin	ng Outcomes		1	
	1(1) Wide knowledge on Solence an collety. 1(1) Ability to design, propose and -	d Engineering and practic develop robotic/ mechatro	al ability to apply them onlo systems to solve an	to solve problems in the solfic problems	1	
	lease change					
Internation     Internation     Internation       Name Parties     An enclose the off a bandwork to the off a data data and an enclose to the off a data data data data data data data	eaching Method	Expression of physical pher mathematical expressions, conservation laws (mechan	nomena in dynamics, hyd Newton's law of motion, ricam energy, momentum	rodynamics using mass point system , angular momentum), rigid		
Name of the interfact of the bootst stepper to the det of course     Number of the course of	lase Format	body motion) In addition, the goal is set to Lecture and exercise	o be able to explain that p	ohysical quantities can		
James Brain     Contract or of balance of contract and when and contract of a part of the contract of the contract of a part of the contract of a part of the contract of th	Isase Note :	All materials will be posted of keep photo copies or files of manual	on the Google classroom of all submitted material to	The student is requested to a ensure further study by		
1 st own, Outdown Prevou of Prevou o	Semester 1	Contents and Me	thad of Course	Goale	Role V-A	nted MCC
Dr. to wath Produce of banders have of matters have of banders h	1st week	Guidance: Review of the position and velocity	e relationship between y and acceleration	Review basic equations of mechanics learned in physics.	V-A V-A V-A V-A V-A	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Drd work     Probust of toxic, course, controlled been dependent of transmission of controlled and transmission and transmission of transmission of transmission and transmission of transmission of transmission and transmission of transmission of transmission and transmission of transmission and transmission of transmission and transmission of transmission and transmit and transmission and tra	2nd week	Review of Newton's law of	f motion, force of inertia	Newton's 1st. 2nd and 3rd law of motion and explain physicals phenomena with differentiation and integration. It is possible to explain the	V-A V-A II-A II-A V-A	3
4ft vask Proteor of outer of means and momental information of the mean	3rd week	Review of work, power, k energy, conservative force, law of conservation of	inetic energy, potential , mechanical energy and f mechanical energy	relationship between the conservative forcs kinetic every and potential energy. Can derive various physical quantities using the law of conservation of before with the coursel.	V-A V-A I-A I-A V-A	3 3 3 1 1 3
Sh wak Peeter of terr of construction of numerical and second second constructions Image: Construction of construction of second secon	4th week	Review of center of m	ass and momentum	physical quantity can be derived by dividing a figure into microsegments and taking the sum of the microsegments.	V-A I-A	3
6ft week Packed of propert of formation of user and user returned and user basis of user		0	nation of momentum	It is possible to solve		
Th work Perform sub-latery and prometers of features. Must memory in a minimum sub-latery and in the sub-latery and in a minimum sub-latery and in a mining sub-latery and in a minimum sub-latery and in a minimum	5th week	Herview of Islan of conset		differential equations in the law of conservation of momentum.	I-A I-A	1
Bit work Water us of 1st half all answerser Revenue Packer performance   Dit work Mattern Exercitation For work 1:0   10h work Perturn Mathem Exercitation For work 1:0   10h work Perturn Mathem Exercitation For work 1:0   11h work Perturn Mathem Exercitation Perturn Mathem Exercitation   11h work Perturn Mathem Exercitation Perturn Mathem Exercitation   11h work Perturn Mathem Exercitation Perturn Mathem Exercitation   12h work Derivation of control of an others of reliable to drain the perturn of the pertu	5th week	Peview of moment of for and law of conservation	ces angular momentum of angular momentum	differential equations in the law of conservation of momentum. Understand the relationship between moments of force and anaular momentum and be able to derive the law of conservation of ansular momentum	V-A V-A V-A V-A V-A V-A V-A V-A	
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