## Science 2 (Physics)

Basic Course Informatio	n			
Course Number	03005020	Subject Category	CampulsaryIGI	
Class Format	Lecture	Credit Type and Number of Credits	1.5	
Department	Electrical and Electronics	Student Category	Year 1	
Period of Study	Semester 2	Classes per Week	3	
Required Materials	KOSEN Textbook Series Pl H, Ushio et al, Morikita Pu	KCSEN Textbook Siries Physics volume 1. Michanics and Waves. H. Ushio et al., Morkita Publishing Co., Ltd. ISBN978-4-627-15511-4		
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Course Objective

This course introduces basic concepts of science such as (P) momentum and collision/ uniform circular motion/ simple harmoric motion/ angular motion/ universal gravitation/ static equilibrium/ rotation of rigid body.

Evaluation (Rubrio)	Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)	Unacceptable Level of Achievement (Fail)	
Understanding concepts of physics and their relation	Show very good knowledge and understanding of concepts in physics, Good connections among these concepts and methematical procedures to correctly solve problems or answer questions.	Show good knowledge and understanding of typical physics concepts, Good connections among these concepts and mathematical procedures to solve problems, but occasionally may make minor errors,	Lacks the socroprists knowledge and understanding of concepts in physics, Weak connections among these concepts.	
Mathematical and graphical representation	Show good understanding and grachs are logical with sufficient details to describe the content	Show understanding and graphs are reasonable with the content, but not with details.	Describe insufficiently in the content, Equations are limited or inaccurate. Graphs are incomplete or absent of information.	
Problem Sölving	Provide a clear and logical progression from general concepts, focustions to solve specific problems with different conditions, All final numerical answers are correct with appropriate units and calculations,	from general concepts/equations to solve specific problems with minor	Provide an unclear logical progression or solution which is ver- difficult to follow Major shedbasic solution.	

## Platetimate with Learning Outcomes G(1) White Innovincing on Science and Displacement and practical shifts to apply them to solve problems in the scolery. Please change Please change

## Teaching Method

Teaching Method	
Outline:	Studints will study basic concepts and principles of mechanics in physics, Students are expected to develop an appreciation of the fundamental laws and principles and their applications to solve typical questions.
Class Format	Lecture, exercise and experiment
Please Note :	All materials will be posted on the Google classroom. The student is requested to less choice cosisor files of all submitted materials to ensure further study by crosself, syssigment is requested to submit in grouple classroom within a week after it is assigned, if not, there will be soone deduction for belle submission full acces = 100 control submission within a week. So and 0 coints (2 weeks after the final exam date).

Secretary   Contracts and Method of Course   Colds After non-treat, and Secretary   Colds Afte	Course Plan			l
Delication for control of the cont	Semester 2	Contents and Method of Course	Goals	Related MCC
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Line of conservation of recenturia.   Line of conservation   Line of the second control of recenturia.   Line of conservation of recenturia.   Line of conservation of recenturia.   Line of conservation of recenturia.   Line of the second control of recent of recenturia.   Line of conservation of recenturia.   Line of control of recent of recent of recent of the control of the	1st week	Guidenos: Introduction,	Calculate momentum based on	211 1 20
Description for control of the con	Tot week	Impulse and momentum	mass and velocity of object.	
Description for control of the con				
Deform calculations whiter to consider the control of the contro			11	I-A 1 29
Deform calculations whiter to consider the control of the contro			law for the calculation of various	
Deform calculations whiter to consider the control of the contro	2nd week	Law of conservation of momentum.  Coefficient of restitution and collision and rebound	physical quantities, Calculate	
Deform calculations whiter to consider the control of the contro			collision and rebound	
4(h) week  Sinele hamonic motion  Diplain the malaticanal to between 1.4 1 2.1 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1				
4(h) week  Simple harmonic motion  Experiment Simple harmonic motion  Description of the indictor is to below the simple harmonic motion  Contract Simple harmonic motion  Description of indices to the simple harmonic motion of the indices of the indices indices in indices to the simple harmonic motion of the indices of the			Budous sale formation and	I-A 1 32
4(h) week  Simple harmonic motion  Experiment Simple harmonic motion  Description of the indictor is to below the simple harmonic motion  Contract Simple harmonic motion  Description of indices to the simple harmonic motion of the indices of the indices indices in indices to the simple harmonic motion of the indices of the	Dod	Links and the second	velocity, angular velocity.	
4(h) week  Simple harmonic motion  Experiment Simple harmonic motion  Description of the indictor is to below the simple harmonic motion  Contract Simple harmonic motion  Description of indices to the simple harmonic motion of the indices of the indices indices in indices to the simple harmonic motion of the indices of the	3rd week	Uniform circular motion	acceleration and centricetal force of	
40) week  Finder harmonic motion  Similar harmonic motion  Brinder harmonic motion  Do experiment related to initial harmonic motion  Brinder related to initial harmonic motion  Brinder related to initial harmonic motion  Brinder related to initial harmonic motion  Caliculate the grands arise fall or of the force and the second related to initial harmonic motion  This week  Christerial grands and behavior motion 1  Discontinuor related to initial harmonic motion  Discontinuor related to initial harmonic motion  This week  Christeria grands and behavior motion 2  Perform calculations related to general and the local particular motion of general motion of genera			objects in uniform direutal motion.	
De experiment disease la similar   De experiment related to				I-A 1 30
De experiment disease la similar   De experiment related to			Explain the relationship between	I-A 1 31
De experiment disease la similar   De experiment related to	4th week	Simple harmonic motion	and force in relation to the simple	
10   4   10   1   1   1   1   1   1   1   1			harmonic motion,	
10   4   10   1   1   1   1   1   1   1   1				T-A 1 90
10   4   10   1   1   1   1   1   1   1   1				I-A 1 31
10   4   10   1   1   1   1   1   1   1   1	5th week	Experiment: Simple harmonic motion	Do experiment related to simple	1-8 1 1
Girl veels			narmonic motion	I-B 1 4
This week   Universal growth and planetery motion 2   Perform calculations related to generate motion				1-8 1 5
This week   Universal growth and planetery motion 2   Perform calculations related to generate motion				I-A 1 33
This week   Universal growth and planetery motion 2   Perform calculations related to generate motion			Calculate the gravity acting	
This week   Universal growth and planetery motion 2   Perform calculations related to generate motion	6th week	Universal gravity and planetary motion 1	between objects using the law of universal gravitation	
Bith veek  Summary of Week 1 - 7  Precentation for midlem examination if and in examination of any in examination of any in examination of any in examination in any in examination of any in examination in any in examination of any in examination examination of any in examination of any in examination of any in examination of any	1		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Bith veek  Summary of Week 1 - 7  Precentation for midlem examination if and in examination of any in examination of any in examination of any in examination in any in examination of any in examination in any in examination of any in examination examination of any in examination of any in examination of any in examination of any				I-A 1 34
Bith veek  Summary of Week 1 - 7  Precentation for midlem examination if and in examination of any in examination of any in examination of any in examination in any in examination of any in examination in any in examination of any in examination examination of any in examination of any in examination of any in examination of any	1		l	
Bith veek  Summary of Week 1 - 7  Precentation for midlem examination if and in examination of any in examination of any in examination of any in examination in any in examination of any in examination in any in examination of any in examination examination of any in examination of any in examination of any in examination of any	7th week	Universal gravity and planetary motion 2	Perform calculations related to planetary motion	<u> </u>
Deb week    Deb week   1-8	1		Danetary III.	
Deb week    Deb week   1-8				
Deb week    Deb week   1-8	1			<b>—</b>
Deb week    Deb week   1-8	Otto samoli	Supercon of Work 1 - 7	Preparation for midterm	
10h week   Pelifur Mothern Earn and Residuck   Calculate the recovered from search Moment of the force   1.4 1 30	Stri Week	Summary of Week 1 - 7	examination (if any)	
10h week   Pelifur Mothern Earn and Residuck   Calculate the recovered from search Moment of the force   1.4 1 30				
10h week   Pelifur Mothern Earn and Residuck   Calculate the recovered from search Moment of the force   1.4 1 30				
10h week   Pelifur Mothern Earn and Residuck   Calculate the recovered from search Moment of the force   1.4 1 30				
11th week  Static equilibrium of rigid body  Perform calculations relating to the additional of the control of earth to be additional or additional or additional equation of means and object stability  Perform calculations relating to the disease.  Perform calculations relating to the disease of the control of the co	9th week	Midterm Examination	For week 1-8	
11th week  Static equilibrium of rigid body  Perform calculations relating to the additional of the control of earth to be additional or additional or additional equation of means and object stability  Perform calculations relating to the disease.  Perform calculations relating to the disease of the control of the co				
11th week  Static equilibrium of rigid body  Perform calculations relating to the additional of the control of earth to be additional or additional or additional equation of means and object stability  Perform calculations relating to the disease.  Perform calculations relating to the disease of the control of the co				T-A 1 96
11th week  Static equilibrium of rigid body  Perform calculations relating to the additional of the control of earth to be additional or additional or additional equation of means and object stability  Perform calculations relating to the disease.  Perform calculations relating to the disease of the control of the co				17 1 30
11th week  Static equilibrium of rigid body  Perform calculations relating to the additional of the control of earth to be additional or additional or additional equation of means and object stability  Perform calculations relating to the disease.  Perform calculations relating to the disease of the control of the co	1 Oth week	Return Midterm Exam and feedback	Understanding return midterm exam	
11th week  Static equilibrium of rigid body  Perform calculations relating to the additional of the control of earth to be additional or additional or additional equation of means and object stability  Perform calculations relating to the disease.  Perform calculations relating to the disease of the control of the co	100111001	Moment of the force	Calculate the moment of forces.	
11th week  Static earliterance of rigid body  Perform colorations relating to the earliterance of prices of today.  ITA 130  Perform colorations related body  ITA 130  Perform colorations related body  ITA 130  ITA 14  ITA 14				
12th week   Center of growths, center of mass and object stability   Perform calculation in tente to 15th   1.0				I-A 1 38
12th week   Center of growths, center of mass and object stability   Perform calculation in tente to 15th   1.0			Perform calculations relating to the	
12th week  Carder of gravito, center of mess and claim stability  Floridational equation of motion  13th week  Protectional equation of motion  14th week  Moment of inertia and angular momentum  15th week  Experiment Plotational motion  Do experiment related to relational angular momentum of a motion of the moment of the motion of the m	11th week	Static equilibrium of rigid body	equilibrium of forces of rigid bodies.	
12th week  Carder of gravito, center of mess and claim stability  Floridational equation of motion  13th week  Protectional equation of motion  14th week  Moment of inertia and angular momentum  15th week  Experiment Plotational motion  Do experiment related to relational angular momentum of a motion of the moment of the motion of the m				
13th week				I-A 1 39
13th week			Perform calculations relating to the center of gravity, Consider rigid body	
13th week	12th week	Center of gravity, center of mass and object stability		
13th week			tipping	
13th week				T-A 1 41
1-60 week			Perform calculations relating to the rotational motion of rigid bodies using the rotational equation of motion.	10 1 41
1-60 week	1 3th week	Rotational equation of motion		
1-60 week	100111001	1 1010000 01 0400000 1 01 1100001		
15th week				
15th week				I-A 1 36
15th week	1		Perform calculation of the moment of inertia for simple shapes such as	E'A 1 40
15th week	14th week	Moment of inertia and angular momentum	a uniform rods and angular	
1501 week			momentum.	
1501 week				
150h week Exeminant Rindstonal motion Du oversiment reliabed for distantal in the control of the	1		l	
16th week	15th week	Experiment: Rotational motion	Do experiment related to rotational motion	I-8 1 1
16th week Conservation of angular momentum and relational energy of angular momentum ender of angular momentum ender of angular momentum ender of angular momentum ender second engage momentum ender engage momentum ender engage momentum ender engage momentum ender engage enga	1		110,001	I-6 1 4
16th week Conservation of angular momentum and relational energy of angular momentum ender of angular momentum ender of angular momentum ender of angular momentum ender second engage momentum ender engage momentum ender engage momentum ender engage momentum ender engage enga				
17th week Summitty of Week 10-16 Phetomistion for millions exemption			Explain the principle of conservation	I-A 1 37
17th week Summitty of Week 10-16 Phetomistion for millions exemption	400			
17th week Summitty of Week 10-16 Phetomistion for millions exemption	15th week	Conservation of angular momentum and rotational energy	or angular momentum showing specific examples.	
180 week 10-17	1			<b>—</b>
180 week 10-17				
180 week 10-17				
180 week 10-17	17th week	Summary of Week 10- 16	examination (if any)	
	18th week	Final Examination	For week 10-17	l
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	Examination	Quitz	Mutual Evaluations between	n studente Report	Portfolio	Other
Basic Ability	60	30		10		
Technical Ability						
Interdisciplinary Ability						
	•					
	Physics	Chemistry	Life Science	Earth	Science	