



**BERITA ACARA PENGAJARAN
SEMESTER GENAP 2020/2021
PROGRAM STUDI TEKNIK INDUSTRI**

NAMA DOSEN : NATAYA CHAROONSRI RIZANI, ST, MT
MATA KULIAH : PERANCANGAN SISTEM KERJA DAN ERGONOMI 2
SKS/SEMESTER : 2
HARI/JAM : JUMAT/16.00-17.40
KELAS/RUANG : K/ ONLINE

NO	TANGGAL	MATERI PENGAJARAN	JML MHS	TANDA TANGAN
1	19/3/21	PENGANTAR ERGONO DAN HUMAN MACHINE	2	
2	26/3/21	ANTROPOMETRI	2	
3	9/4/21	BIOMEKANIKA	2	
4	16/4/21	RISIKO ERGONOMI	2	
5	23/4/21	BEBAN KERJA FISIK	2	
6	30/4/21	RULA	2	
7	7/5/21	REBA	2	
8	7/5/21	UTS	2	
9	21/05/21	MANUAL MATERIAL HANDLING	2	
10	28/05/21	FAKTOR LINGKUNGAN KERJA	2	
11	4/6/21	DISPLAY	2	
12	11/6/21	OFFICE ERGONOMICS	2	
13	18/6/21	SHIFTWORK	2	
14	25/6/21	ERGONOMI KOGNITIF	2	
15	2/7/21	PERANC DISPLAY & PRINSIP ERGONOMI KOGNITIF	2	
16		UAS		

Mengetahui
Kepala Program Studi Teknik Industri

Ir. Iriandi Ilyas, MT

Dosen Yang Bersangkutan

Nataya Charoonsri Rizani, ST, MT

DAFTAR NILAI

SEMESTER GENAP REGULER TAHUN 2020/2021

Program Studi : Teknik Industri S1

Matakuliah : Ergonomi & Peranc.Sist. Kerja 2

Kelas / Peserta : K

Perkuliahan : Kampus ISTN Bumi Srengseng P2K - Kelas

Dosen : Nataya Charoonsri Rizani, ST. MT.

Hal. 1/1

No	NIM	N A M A	ABSEN	TUGAS	UTS	UAS	MODEL	PRESENTASI	NA	HURUF
			10%	15%	35%	40%	0%	0%		
1	17234601	Erdiansyah Perdana Saputra	100	70	85	75	0	0	80.25	A
2	19234502	Oktavia Susanti	100	70	85	75	0	0	80.25	A

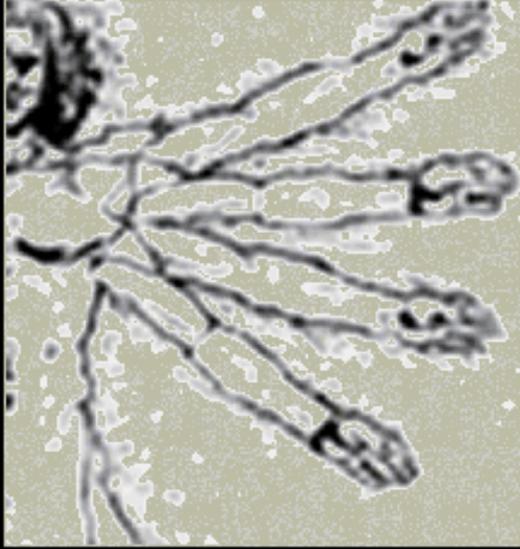
Rekapitulasi Nilai							
A	2	B+	0	C+	0	D+	0
A-	0	B	0	C	0	D	0
		B-	0	C-	0	E	0

Jakarta, 2 August 2021

Dosen Pengajar



Nataya Charoonsri Rizani, ST. MT.

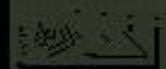


Office Ergonomics

**Adjusting Your Workstation
to Fit Your Body**

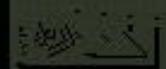
What is Ergonomics?

- **ERGO** = "work"
- **NOMICS** =
"rules" or "laws"
- **Ergonomics literally means "the laws of work"**



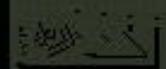
What is Ergonomics?

- **OSHA defines ergonomics as the science of “designing the job to fit the worker, instead of forcing the worker to fit the job.”**



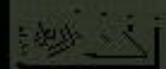
What is Ergonomics?

- **Ideally, ergonomics:**
 - **Makes the job safer by preventing injury and illness**
 - **Makes the job easier by adjusting the job to the worker**
 - **Makes the job more pleasant by reducing physical and mental stress**
 - **Saves money \$\$\$**



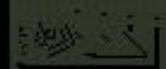
Ergonomic Factors

- **Two Categories of Ergonomic Factors**
 1. **Environmental**
 2. **Physical**



Environmental Factors

- Environmental factors may affect:
 - Hearing
 - Vision
 - General comfort and health



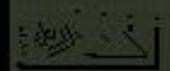
Environmental Factors

- Some examples of ergonomic environmental problems are:
 - Sick Building Syndrome
 - Excessive noise
 - Improper lighting
 - Temperature extremes



Environmental Factors

What are some of the environmental factors that might effect your work area?



Physical Stressors

- Physical stressors place pressure or stress on parts of the body:
 - Joints, muscles, nerves, tendons, bones
- Sometimes these injuries are referred to as “Cumulative Trauma Disorders” (CTDs) or “Repetitive Strain Injuries” (RSIs)



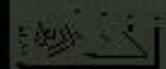
Cumulative Trauma Disorders (CTDs)

- **Cumulative** = occurring gradually over a period of weeks, months, or years
- **Trauma** = bodily injury to nerves, tissues, tendons, or joints
- **Disorders** = physical ailments or abnormal conditions



Cumulative Trauma Disorders

- **Examples of Cumulative Trauma Disorders include:**
 - **Carpal Tunnel Syndrome**
 - **Epicondylitis**
 - **Tenosynovitis**
 - **Bursitis**



Risk Factors

- The main risk factors for office-related CTDs are:
 - Repetition
 - Awkward positions or posture
 - Excessive pressure or force
- Another risk factor for CTDs would be:
 - Vibration



Risk Factors: Repetition

- The majority of CTDs are caused by repetitive motions that would not result in injury if only performed once.
 - Thousands of keystrokes typing
 - Hours of filing, day after day
 - Stamping dozens of papers
 - Frequent lifting
 - Repeated motions with computer mouse



Risk Factors: Awkward Positions

- ◆ Leaning forward at your desk
- ◆ Typing with wrists at an odd angle
- ◆ Raising shoulders while typing
- ◆ Reaching to use mouse
- ◆ Twisting neck to look at monitor or phone
- ◆ Lifting objects from below waist or above shoulders



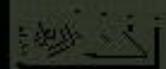
Risk Factors: Excessive Force

- Typing with too much force or “pounding” the keys
- Stamping
- Lifting heavy boxes of paper or carrying office equipment
- Using improper grip



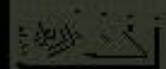
But the good news is....

**There are simple ways to help
yourself!**



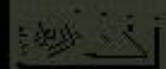
Prevention Strategies

- The elbows should be at a comfortable angle while "hanging" at the sides from the shoulders. The shoulders should remain relaxed in a lowered position while typing.



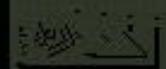
Prevention Strategies

- Avoid leaning forward at your desk
 - Maintain natural “s” curve of your spine
 - Support lower back
 - Keep feet supported on floor or use a foot rest



Prevention Strategies

- Avoid typing with wrists at an odd angles...
 - keep them in the neutral position, not bent up or down, or side-to-side



Prevention Strategies

- The keyboard should be slightly lower than normal desk height.
 - If it is not low enough, try raising your chair height. Prevent your legs from dangling by using a footrest.
- Keep "home row" of keys at elbow level.
- Adjust your chair!



Prevention Strategies

- Do not pound the keys. Use a light touch.
- Use two hands to perform double key operations like Ctrl-C or Alt-F instead of twisting one hand to do it.
- Position frequently used equipment so that you don't have to reach for it.



Prevention Strategies

- Place monitor in front of you, not off at an angle.
- Take lots of breaks to stretch and relax.
- Hold the mouse lightly.
- Keep your hands and arms warm.



Prevention Strategies

- Pay attention to the signals your body provides you.

If your neck hurts at work, examine your body position to try to figure out what might be causing the soreness. Are you holding your neck at an awkward angle while you type or talk on the phone?



Prevention Strategies

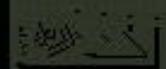
- If you are experiencing symptoms of CTDs...
 - **Tingling or numbness in the hands or fingers**
 - **Pain in fingers, hands wrists, or even shooting up into the arms or forearms**
 - **Loss of strength or coordination in the hands**
 - **Numbness or discomfort in the hands that wakes you up at night....**

SEE A DOCTOR!



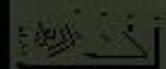
But What About Headaches?

- Many office-related headaches are caused by eyestrain.
 - Dry eyes
 - Monitor glare
 - Tired/strained eye muscles



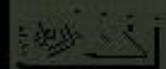
Eyestrain

- Position monitor at a comfortable distance
- Avoid glare
- Adjust VDT brightness and contrast
- Keep screen clear of dust
- Look up and away every few minutes or so!



Ergonomic Products

- There are a variety of ergonomic products available on the market, including:
 - **Keyboards**
 - **Wrist rests**
 - **Mouse pads**
 - **Chairs**
 - **Adjustable desks**
 - **Glare screens**



Additional Information...

- OSU EHS's Internet Web Site for Ergonomics:

<http://www.pp.okstate.edu/ehs/ergonomics.htm>

