YAYASAN PERGURUAN CIKINI
INSTITUT SAINS DAN TEKNOLOGI NASIONAL

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# SURAT PENUGASAN TENAGA PENDIDIK

Nomor : 53 / 03.1 – Gsi/ IX/ 2022

SEMESTER GANJIL TAHUN AKADEMIK 2022/2023

| | | | | | |
|---|---|---|---|---|---|
| Nama | : Nataya Charoonsri Rizani.ST.MT | Status Pegawai | : Tetap | | |
| NIK | : 231420003 | Program Studi | : Teknik Industri S1 | | |
| JabatanAkademik | : Lektor | | | | |

| Bidang | PerincianKegiatan | Tempat | Jam/ Minggu | Kredit (sks) | Keterangan |
|---|---|---|---|---|---|
| I PENDIDIKAN DAN PENGAJARAN | MENGAJAR DI KELAS (KULIAH/RESPONSI DAN LABORATORIUM) | | | | |
| | 1.Analisa dan Peranc.Perusahaan | Industri S1 | 10:00-11:40,Senin | 3 | A / K |
| | 2.Ilkm.Perbrh.Ketenaga Kerjaan +3 | Mesin S1 & D3 | 10:00-11:40, Rabu | 2 | A /K |
| | 3.Analisis Keputusan (P) | Industri S1 | 13:30-15:00, Selasa | 3 | A |
| | 4. Ergonomi & Peranc. Sist, Kerja | - | 10:00_11:40,Rabu | 3 | A / K |
| | 5.. Manajemen SDM | | 15:00-16:40, Jumat | 2 | A |
| | 6.Permodelan Sistem | | 08.00-09-40, Kamis | 3 | A |
| | 7.Pengendalian & penjaminan Mutu | | 08:00-09:40 Selasa | 3 | A |
| | 8.Membimbing Kerja Praktek | | | 1 | |
| | 10.Membimbing Tugas Akhir | | | 1 | |
| | 11.Menguji Tugas Akhir | | | 1 | |
| | | | | | |
| II PENELITIAN | | | | | |
| | 2. Penulisan Karya Ilmiah | | | 1 | |
| | | | | | |
| II PENGABDIAN DAN MASYARAKAT | | | | | |
| | 2. Memberikan Penyuluhan / Penelitian / Ceramah kepada Masyarakat | | | 1 | |
| | | | | | |
| IV UNSUR-UNSUR PENUNJANG | | | | | |
| | 2. Berperan serta aktif dalam pertemuan ilmiah/ seminar | | | 1 | |
| | | | | | |
| | Jumlah Total | | | 25 | |

Kepada yang bersangkutan akan diberikan gaji/honorarium sesuai dengan peraturan penggajian yang berlaku di Institut SainsdanTeknologi Nasional Penugasan ini berlaku tanggal 01 September 2022 sampai dengan 28 Februari 2023.

Jakarta, 01 September 2022
Dekan,

Mustirah Gahya F.T.Dr.M.Si.S.Si)

**Tembusan :**
1.Direktur Akademik - ISTN
2.Direktur Non Akademik - ISTN
3.Ka. Biro SumberDayaManusia - ISTN
4.Kepala Program StudiFak. ....
5.Arsip

**BERITA ACARA PENGAJARAN**
**SEMESTER GANJIL 2022/2023**
**PROGRAM STUDI TEKNIK INDUSTRI**

NAMA DOSEN : NATAYA CHAROONSRI RIZANI, ST, MT
MATA KULIAH : ERGONOMI DAN PERANC. SISTEM KERJA 1
SKS/SEMESTER : 3
HARI/JAM : SENIN/ 19.30-21.00
KELAS/RUANG : K/ ONLINE

| NO | TANGGAL | MATERI PENGAJARAN | Jumlah Mhs | TANDA TANGAN |
|---|---|---|---|---|
| 1 | 19/9/22 | PENGANTAR ERGONOMI DAN SISTEM KERJA | 2 | |
| 2 | 26/9/22 | PENGGUNAAN SEVEN TOOLS | 2 | |
| 3 | 3/10/22 | PENGUKURAN WAKTU BAKU | 2 | |
| 4 | 10/10/22 | WORKSAMPLING | 2 | |
| 5 | 17/10/22 | PENGUKURAN WAKTU BAKU TIDAK LANGSUNG | 2 | |
| 6 | 24/10/22 | DATA WAKTU GERAKAN | 2 | |
| 7 | 31/10/22 | MTM | 2 | |
| 8 | 7/11/22 | UTS | 2 | |
| 9 | 14/11/22 | PETA KERJA | 1 | |
| 10 | 21/11/22 | PETA KERJA KESELURUHAN | 1 | |
| 11 | 28/11/22 | PETA KERJA SETEMPAT | 1 | |
| 12 | 5/12/22 | PETA PEKERJA MESIN | 1 | |
| 13 | 12/12/22 | DIAGRAM ALIR | 1 | |
| 14 | 19/12/22 | PETA TANGAN KIRI DAN KANA | 1 | |
| 15 | 26/12/22 | REVIEW | 1 | |
| 16 | 9/1/23 | UAS | 1 | |

**Mengetahui**
**Kepala Program Studi Teknik Industri**

**Ir. Iriandi Ilyas, MT**

**Dosen Yang Bersangkutan**

**Nataya Charoonsri Rizani, ST, MT**

# DAFTAR NILAI

## SEMESTER GANJIL REGULER TAHUN 2022/2023

Program Studi : Teknik Industri S1
Matakuliah : Ergonomi & Peranc.Sist.Kerja 1
Kelas / Peserta : K
Perkuliahan : Kampus ISTN Bumi Srengseng P2K - Kelas
Dosen : Nataya Charoonsri Rizani, ST. MT.



| No | NIM | N A M A | ABSEN | TUGAS | UTS | UAS | MODEL | PRESENTASI | NA | HURUF |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 10% | 20% | 30% | 40% | 0% | 0% | | |
| 1 | 22234001 | **Windi Atikasari** | 100 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 22234002 | **Yusufa Anthony Candrana** | 100 | 80 | 85 | 75 | 0 | 0 | 81.5 | **A** |

| Rekapitulasi Nilai | | | | | | | |
|---|---|---|---|---|---|---|---|
| A | 1 | B+ | 0 | C+ | 0 | D+ | 0 |
| A- | 0 | B | 0 | C | 0 | D | 0 |
| | | B- | 0 | C- | 0 | E | 0 |

Jakarta,24 January 2023

Dosen Pengajar

**Nataya Charoonsri Rizani, ST. MT.**

# CHECK AND CORRECT YOUR WORKING POSTURE

**<u>Use the brief checklist below</u> to check and correct your working habits and posture.**

**If you answer NO to any of the questions refer to the relevant information on this site through the links provided.**

**<u>Discuss the action required with your supervisor.</u>**

| QUESTION | AGREED ACTION |
|---|---|
| Are your keying and mouse activities interspersed with a variety of other work tasks? | |
| Are you including micro pauses as a deliberate attempt to reduce tension by relaxing between keybo ard operations. Eg: relaxing the hands into the lap whilst waiting for a document to be saved? | |
| Do you perform regular pause exercises during computer operation at least every hour, including changing your visual focus? | |
| Are you altering your seated po sture regularly throughout the day. Eg: reclining whilst on the phone and sitting upright again to key? | |
| Is your chair high enough or your desk low enough so that your elbows are level with, or slightly higher than your keyboard while you type? | |
| Does your chair have fully adjustable chair height, back rest position and seat tilt? | |
| Do you have a stable footrest if your feet are not flat on the floor when sitting? | |
| Does your desk provide adequate clearance for your legs to allow close access to the work task?<br>Minimum depth 550mm<br>Minimum width 800mm | |
| Is your chin tucked in towards the chest and aligned with the spine rather than poking forward or upwards? | |
| Is the screen at a comfortable reading distance from the operator (350mm to 750mm) ? | |

# CHECK AND CORRECT YOUR WORKING POSTURE

| QUESTION | AGREED ACTION |
|---|---|
| Is the image clear, stable and free from reflections and glare? | |
| Are the monitor and keyboard aligned and directly in front of you so that you do not twist to reach the keys? | |
| Is the keyboard located in close proximity to the body to avoid over reaching to key? | |
| Are your frequently accessed items within easy reach whilst sitting and under 4kgs? | |
| Are your shoulders relaxed when the hands are resting on the keys with the upper arms hangin g naturally and the lower arm at approximately 90 degrees? | |
| Are your wrists straight and in line with the forearm whilst keying or using the mouse, to avoid excessive bending to the side or upwards? | |
| Is the mouse at the same level as the keyboard and u sed as close as possible to the keyboard to avoid stretching your arm out to the side or across the desk? | |
| Do you have a relaxed grip when using the mouse? | |
| Do you have a relaxed keying style and avoid finger stretching to reach keys? | |
| Is the position of your source documents in line with or close to your monitor and around eye level to avoid excessive twisting or bending of your neck? | |
| Does your desk top size easily accommodate all work tasks? ( minimum recommendations)<br>Computer only – 1200 X 900mm<br>Computer and general clerical – 1500 X 900mm | |
| Is your office lighting, noise level and temperature, conducive to your comfort and productivity? | |
| For bi/tri/multi focal wearers, is your monitor low enough to prevent you raising your chin to view th e screen? | |
| If you regularly experience eye fatigue, have you had a recent review with your eye practitioner? Ensure you tell the practitioner the tasks you perform so the prescription is correct. | |

Contact the Risk Management Office on
(02) 9351 4335 if further information is required.

# Pengukuran Waktu Baku Metode Tidak langsung

**Nataya Charoonsri Rizani**

# Metode Tidak Langsung

- Data waktu Baku
- Analisa Regresi
- Data Waktu Gerakan

# Data Waktu Baku dan Analisa Regresi

Apa keuntungannya?

- Menghemat waktu
- Tidak diperlukan banyak pengukur dan tidak diperlukan tingkat keterampilan pengukur yang terlalu tinggi
- Dapat menaksir berapa waktu yang diperlukan untuk menyelesaikan pekerjaan
- Penentuan waktu tidak memerlukan kunjungan lapangan

# Kapan Digunakan ?

- Karakteristik pekerjaan hampir sama (elemen-elemen pekerjaan hampir sama)
- Variabel yang berpengaruh dapat dirangkum dalam ‘satu trend’, ‘pola’ atau kecenderungan

# Langkah-Langkah

- Uraikan pekerjaan menjadi elemen-elemen pekerjaan
- Cari faktor yang berpengaruh (variabel) terhadap pekerjaan
- Contoh :

  Pekerjaan mengebor kayu sama-sama terdiri dari elemen pekerjaan : set-up, operasi, pemasangan dan pengambilan benda kerja

  Variabel : diameter/kedalaman lubang

# Waktu Pemasangan Benda Kerja pada Catok dan Pengambilan untuk Sensitive Drills

| Elemen Kegiatan | Waktu (0,01 menit) | | | | | |
|---|---|---|---|---|---|---|
| | A | B | C | D | E | F |
| 1. Mengambil benda kerja dan menempatkan jig | 12 | 12 | 12 | 12 | 12 | 12 |
| 2. Memasang tutup pengikat mengencangkan lock screw | - | - | - | 10 | 10 | 10 |
| 3. Mengencangkan thumb screw | 08 | - | 08 | 08 | - | 08 |
| 4. Mengencangkan set-crew | - | 12 | 12 | - | 12 | 12 |
| 5. Mengendorkan set-crew | - | 06 | 06 | - | 06 | 06 |
| 6. Mengendorkan thumb screw | 05 | - | 05 | 05 | - | 05 |
| 7. Melepaskan tutup pengikat dan mengendorkan lock screw | - | - | - | 08 | 08 | 08 |
| 8.Mengambil benda kerja dari jig | 08 | 08 | 08 | 08 | 08 | 08 |
| 9. Membersihkan geram | 12 | 12 | 12 | 12 | 12 | 12 |
| Total | 45 | 50 | 63 | 63 | 68 | 81 |

Keterangan :

A = Benda kerja dipegang dengan thumb screw

B = Benda kerja dipegang dengan set crew

C = Benda kerja dipegang dengan thumb screw dan set crew

D = Benda kerja dipegang dengan cover strap dan thumb screw

E = Benda kerja dipegang dengan cover strap dan set screw

F = Benda kerja dipegang dengan cover strap, thumb screw, dan set screw

# Machine Manipulation Time untuk Sensitive Drills

| Elemen Kegiatan | Waktu (0,01 menit) | | | | | |
|---|---|---|---|---|---|---|
| | A | B | C | D | | |
| 1. Memasang bushing pada jig | - | 06 | - | 06 | | |
| 2. Memasang drill pada chuck | - | - | 04 | 04 | | |
| 3. Memajukan drill untuk operasi kerja | 04 | 04 | 04 | 04 | | |
| 4. Mengangkat dril dari lubang | 03 | 03 | 03 | 03 | | |
| 5. Mengambil bushing dari jig | - | 05 | - | 05 | | |
| 6. Mengambil drill dari Chuck | - | - | 03 | 03 | | |
| Total | 07 | 18 | 14 | 25 | | |

# Contoh

Misal dalam suatu operasi pembuatan lubang diameter ¼” dapat diestimasikan waktu baku untuk penyelesaiannya dengan Metode Data Waktu Baku

| Kegiatan | Waktu |
|---|---|
| Pemasangan dan pengambilan benda kerja (class B, work held by set screw) | 0,50 |
| Machine manipulation (class A, drilling one drill, no bushing) | 0,07 |
| Pengedrillan lubang ¼” (data diperoleh dari stopwatch time study) | 0,54 |
| Waktu normal per unit benda kerja | 1,17 |
| 5% allowance | 0,06 |
| Waktu Baku | 1,23 |

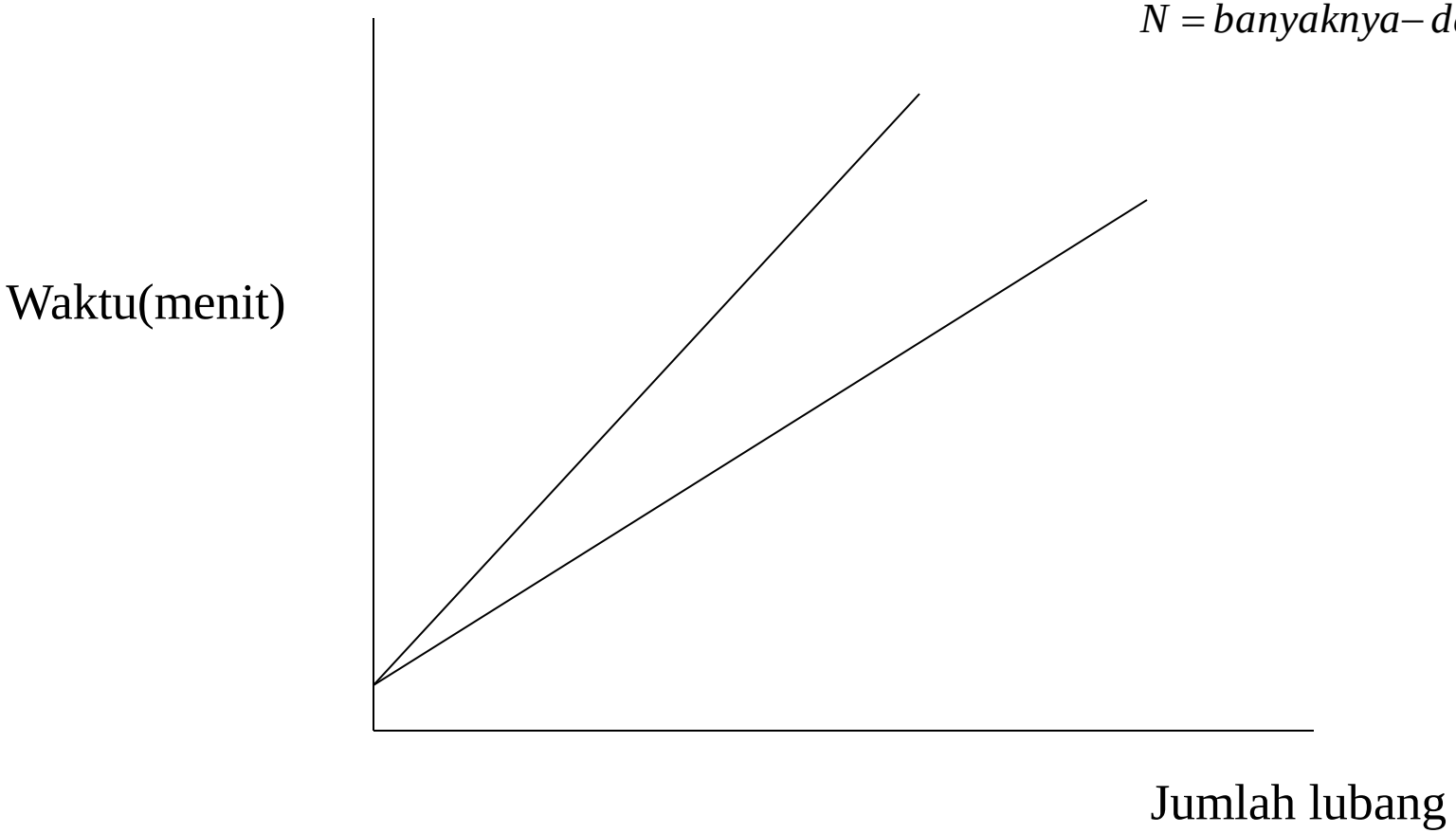
# Analisa Regresi

- Y=a+bx

$$a = \frac{(\sum y)(\sum x^2) - (\sum x)(\sum xy)}{N(\sum x^2) - (\sum x)^2}$$

$$b = \frac{N(\sum x^2) - (\sum x)(\sum y)}{N(\sum x^2) - (\sum x)^2}$$

$$N = banyaknya - data$$



# Formula Standar

- Ralph Barnes mengembangkan rumus empiris menghitung waktu pengelasan

  T= 0,014 L

  T= waktu pengelasan dalam menit

  L= panjang las-an dalam inch

- Benjamin Niebel

  $Y=0,08(13)^x$

  Y= time per inch

  X= size of weld