

Komatsu – Universities Collaboration

**Merdeka Belajar Kampus Merdeka
(MBKM) Activity**

December, 2022

1. Background & Purpose

1.1 Background

- ❖ Contribute in Human resource development which in-line with Company vision and mission.
- ❖ To strengthen collaboration between Komatsu Group Indonesia and University.
- ❖ Continue corporate social responsibility program in academic aspect in conjunction with KI 40th Anniversary.
- ❖ Collaborate with business partner for improvement aligned with ministry of education and culture program (MBKM*).

Basis hukum kebijakan Merdeka Belajar: Kampus Merdeka



*MBKM : Merdeka Belajar Kampus Merdeka

1.2 Purpose

- ❖ To introduce Komatsu and its technology to university and society.
- ❖ To keep win-win relationship with government, university, and company.
- ❖ To capture academic potential and human resources in university to improve our technologies
- ❖ To improve business process in KGI and business partners

4 Contoh kegiatan mahasiswa yang dapat dilakukan di luar kampus asal

Kegiatan	Penjelasan	Catatan
1 Magang / praktik kerja	Kegiatan magang di sebuah perusahaan, yayasan nirlaba, organisasi multilateral, institusi pemerintah, maupun perusahaan rintisan (startup)	Wajib dibimbing oleh seorang dosen / pengajar
2 Proyek di desa	Proyek sosial untuk membantu masyarakat di pedesaan atau daerah terpencil dalam membangun ekonomi rakyat, infrastruktur, dan lainnya	Dapat dilakukan bersama dengan aparat desa (kepala desa), BUMDes, Koperasi, atau organisasi desa lainnya
3 Mengajar di sekolah	Kegiatan mengajar di sekolah dasar, menengah, maupun atas selama beberapa bulan. Sekolah dapat berada di lokasi kota maupun terpencil	Program ini akan difasilitasi oleh Kemendikbud
4 Pertukaran pelajar	Mengambil kelas atau semester di perguruan tinggi luar negeri maupun dalam negeri, berdasarkan perjanjian kerjasama yang sudah diadakan Pemerintah	Nilai dan sks yang diambil di PT luar akan disertakan oleh PT masing-masing
5 Penelitian / riset	Kegiatan riset akademik, baik sains maupun sosial humaniora, yang dilakukan di bawah pengawasan dosen atau peneliti	Dapat dilakukan untuk lembaga riset seperti LIPI / BRIN
6 Kegiatan wirausaha	Mahasiswa mengembangkan kegiatan kewirausahaan secara mandiri – dibuktikan dengan penjelasan/ proposal kegiatan kewirausahaan dan bukti transaksi konsumen atau slip gaji pegawai	Wajib dibimbing oleh seorang dosen / pengajar
7 Studi / proyek independen	Mahasiswa dapat mengembangkan sebuah proyek berdasarkan topik sosial khusus dan dapat dikerjakan bersama-sama dengan mahasiswa lain	Wajib dibimbing oleh seorang dosen / pengajar
8 Proyek kemanusiaan	Kegiatan sosial untuk sebuah yayasan atau organisasi kemanusiaan yang disetujui Perguruan Tinggi, baik di dalam maupun luar negeri	Contoh organisasi formal yang dapat disetujui Rektor: Palang Merah Indonesia, Mercy Corps, dan lain-lain

Catatan:

- Semua kegiatan wajib dibimbing oleh seorang dosen / pengajar
- Kegiatan yang berada di luar Perguruan Tinggi asal (misalnya magang atau proyek di desa) dapat diambil sebanyak dua semester atau setara dengan 40 sks

2. MBKM Activity 2022 1st Batch (1/2)



1st batch Komatsu MBKM program 2022, followed by 20 college students from 4 Universities (Institute Teknologi Indonesia, Universitas Trisakti, Universitas Negeri Yogyakarta, and Universitas Mataram). Students have conducted improvement activities with various theme from quality, delivery, cost, and environment aspect. This activity has an impact / benefit not only for students but also for Komatsu and its business partners

No	Name	Major	University	Mentor	Supplier	Improvement Subject	Category
1	Faiz Akbar	Teknik Mesin	Institut Teknologi Indonesia	Muhammad Firmansyah	PT. Arkha Jayanti	Improving Welding Quality of D85ESS-2 Radiator Guard p/n :14U21J1230	Q
2	Ahmad Hadini	Teknik Mesin	Institut Teknologi Indonesia	Rochmat Efendi	PT. Arkha Jayanti	Reducing Lead Time Process On Manufacturing Support HD785-7 p/n : 561468A780XC	D
3	Nur Febrianti Sasmita	Teknik Industri	Universitas Trisakti	Liza Mulyadiana	PT. Kharisma Logam Utama	Quality Improvement and Reduce Time in Production Process Lip Bucket PC200	Q,D
4	Ni Gusti Ayu Kade Widiastuti	Teknik Industri	Universitas Trisakti	Elsa Qoriorotul Aini Susilo	PT. Kharisma Logam Utama	Reduce Time Movement Work Station	D
5	Ferry Chrys Noble Sitinjak	Teknik Mesin	Institut Teknologi Indonesia	Agustinus Berlian Mahardhika	PT. Waja Kamajaya Sentosa	Reducing Reject Ratio Engine Side Cover D85ESS-2 p/n : 14U5412871YN(LH) & 14U5412880NA(RH)	Q
6	Anugerah Choiril Asnan	Teknik Mesin	Institut Teknologi Indonesia	Tri Sutrisno	PT. Waja Kamajaya Sentosa	Reducing Lead Time Dandori For RAW Side Assy D85ESS 2 p/n : 14U7012BB1KK	D
7	Jilaa Rifda	Teknik Mesin	Universitas Mataram	Nisa Nur Aisyah	PT. Ganzu Gisma Seiko	Balancing Capacity Bushing D85 Air	D
8	Dirda Nareswari Hartara	Teknik Industri	Universitas Trisakti	Syifa Fauziah	PT. Ganzu Gisma Seiko	Reducing Cycle Time Production of Link Series through Implementing 5K	D
9	Segara Dewansyah	Teknik Industri	Universitas Trisakti	Mohammad Aziz Bashori	PT. Menara Cipta Metalindo	Reducing Lead Time for Searching Drawing & Jig on Welding Process	D
10	Akbar Wahyudi	Teknik Mesin	Universitas Mataram	Calvin Ambrio Daniswara	PT. Menara Cipta Metalindo	Reducing Reject Rasio caused by Thread 2NPT NG on HD785-7 Fuel Tank	Q
11	G.Yudha Fatria Egiansyah	Teknik Mesin	Universitas Negeri Yogyakarta	Muchtar Panji Asmoro	PT. Metal Castindo Indonesia	Reducing Cycle Time of Repair Process p/n 21T32311110	D
12	Achmad Arif Permadi	Teknik Mesin	Universitas Mataram	Rizqi Cakti Bramantyo	PT. Metal Castindo Indonesia	Reducing Cycle Time of Repair Process with Minimizing Casting Defect	Q,D
13	Umar Aminudin	Teknik Otomotif	Universitas Negeri Yogyakarta	Arumimar Rosari	PT. Fushoh Tube Part Indonesia	Improving Productivity of Semi Finish Tube due to Fluctuative Demand through Machining Priority	D
14	Kahfi aufar Mauladi	Teknik Mesin	Universitas Trisakti	Lukman Setyadi	PT. Fushoh Tube Part Indonesia	Reduce Electricity of Production Machine at Supplier	C,E
15	Rudimal Apriyandi	Teknik Mesin	Universitas Mataram	Rizqi Fatulloh	PT. Inspirasi Kreasi Sejahtera	Reducing Cycle Time Process Setting OP 3 on Bottom PDH 160 Production	D
16	Sholahuddin Arroyo Yakan	Pendidikan Teknik Mesin	Universitas Negeri Yogyakarta	Indra Nainggolan	PT. Inspirasi Kreasi Sejahtera	Reducing Cycle Time Process Setting OP 2 on Piston PDH 160 Production.	D
17	Bahiy Muhammad Rahmas	Pendidikan Teknik Otomotif	Universitas Negeri Yogyakarta	Rezimi Fadri	PT. Surya Agung Sentosa	Reducing Reject Welding Bead of Bucket PC210	Q
18	Sulantyo Djatinegoro	Teknik Otomotif	Universitas Negeri Yogyakarta	Yemima Putri Herlina	PT. Surya Agung Sentosa	Reducing Lead Time Process TW of Bucket Ransel PC210	D
19	Raden Yoka Krismawan Pratama	Teknik Mesin	Universitas Trisakti	Alamsyah Setyo Nugroho	PT. Cahaya Baja Kamindo	Reducing Time Process Upper Grapple PC135 Long Reach	D
20	Imam Azami	Teknik Mesin	Universitas Mataram	Ayatullah Faiz Aufa	PT. Cahaya Baja Kamindo	Reducing Hour Boring Process of PC135 Long Reach Grapple	D

Peserta Perempuan



2. MBKM Activity 2022 1st Batch (2/2)

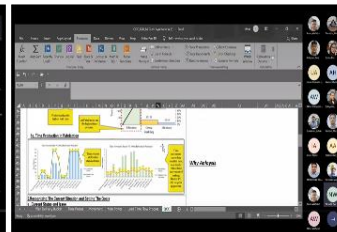
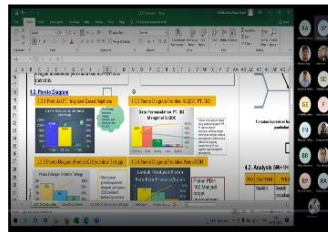


Basic safety (in-class) & KYT at Safety Dojo

Company Knowledge & Business Process



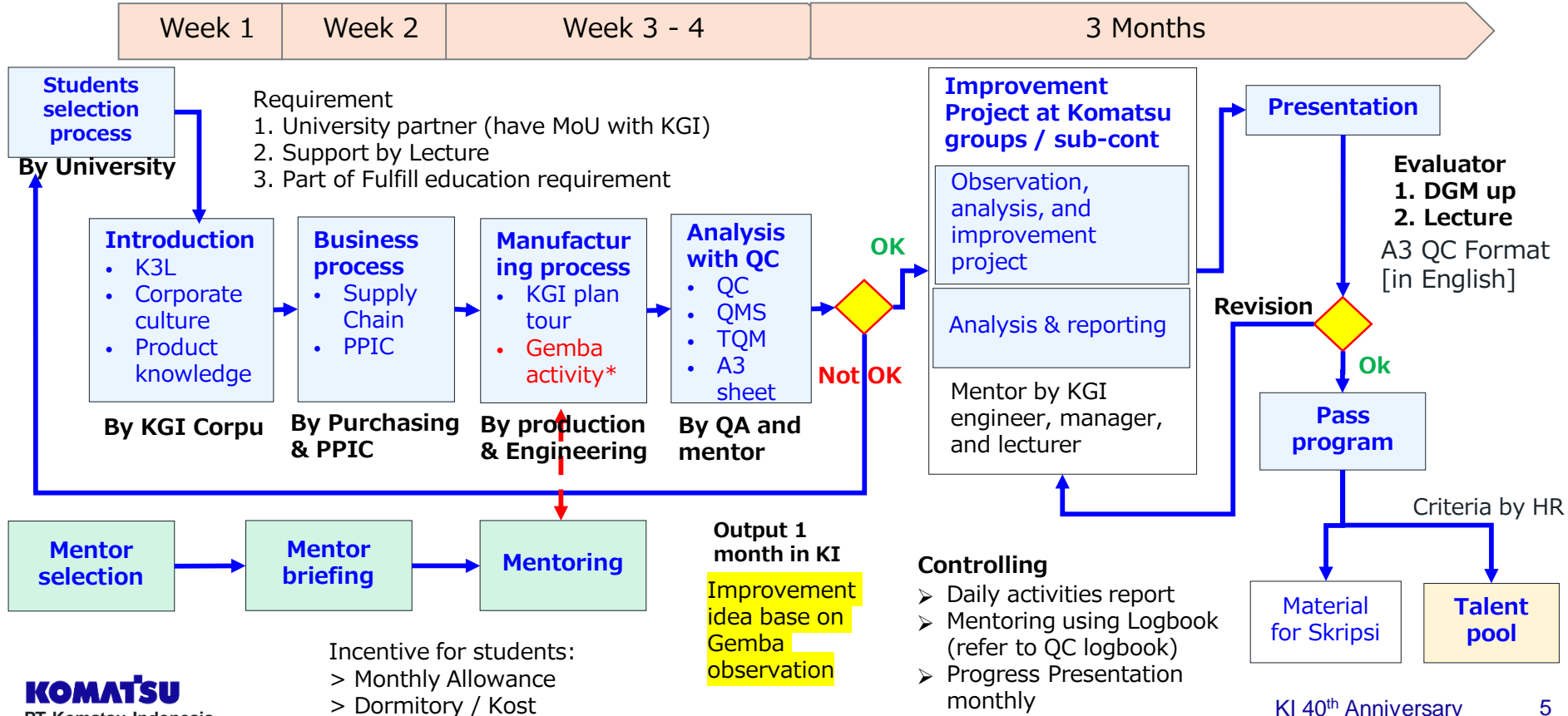
Plant tour to all Komatsu Group Indonesia Plant



Improvement Project Activity

3. Activities Concept of KOMATSU MBKM 2022

SCHEME OF MBKM PROGRAM AT KOMATSU



4. Curriculum of Activities

No	Aktivitas Pembelajaran	Total jam aktivitas	
		teori in-class	implementasi / OJT
1	Kesehatan, Keselamatan Kerja & Lingkungan (K3L) - Meramal Bahaya (<i>Kiken Yochi</i>) - Identifikasi Bahaya dan Pengendalian Resiko - Pengolahan limbah & pelestarian lingkungan di Komatsu - Aturan / Regulasi di Komatsu	8 jam	Selama mengikuti program MBKM (4 bulan)
2	Budaya Manufaktur - 5K (Ketelitian, Kerapihan, Kebersihan, Kesegaran, dan Kedisiplinan) - Komatsu Way (7 pilar <i>Monozukuri</i>) - Komunikasi & Pelaporan (<i>HORENSO</i>) - <i>Company Value (Care, Commitment, and Consistence)</i>	8 jam	Selama mengikuti program MBKM (4 bulan)
3	Pengenalan Komatsu Produk & Proses Manufaktur - Pengenalan produk Komatsu - Pengenalan proses produksi di Komatsu - Teknik Manufaktur (<i>Manufacturing Engineering</i>)	4 jam	4 jam
4	Pengenalan Business Process - Procurement & Supply Chain Management - Production Operation & Control	24 jam	

Working hours :

- > 8 hours / day
- > 5 days / week

Propose this activity can transferred into SKS on each universities (± 20 sks)

No	Aktivitas Pembelajaran	Total jam aktivitas	
		teori in-class	implementasi / OJT
5	Orientasi Area Kerja (Genba Orientation) - Foundry Plant (Proses pengecoran logam / <i>casting</i>) - Fabrikasi Plant (Proses pengelasan / <i>welding</i>) - Hydraulic Plant (Proses permesinan / <i>machining</i>) - Assembly Plant (Proses perakitan / <i>assembling</i>) - Reman KBN Plant (Proses remanufaktur / <i>remanufacturing</i>) - Cibitung Fab Plant (Proses pengelasan komponen besar / <i>welding</i>) - Cibitung Hyd Reman Plant (Proses pelapisan / <i>Chrome Plating</i>) - KUI Cikarang (Proses Tempa / <i>Forging</i>) - KUI Cikarang (Proses Perlakuan Panas / <i>Heat Treatment</i>)	8 jam 8 jam 8 jam 8 jam 8 jam 8 jam 8 jam 8 jam	
6	Quality Control (QC) & Quality Management System - Proses Inspeksi (non-destructive & destructive) - Quality Assurance & Quality Management System - Pengenalan Total Quality Management (TQM) - Pengenalan <i>Quality Control Circle (QC step, QC tools, A3 Sheet Story)</i>	4 jam 8 jam 4 jam 4 jam	4 jam 4 jam
7	Penugasan untuk Improvement Project - Pengenalan tempat penugasan - Mengidentifikasi kondisi terkini masalah di tempat penugasan - Membuat konsep ide perbaikan sesuai metode QC - Melakukan aktivitas perbaikan di tempat penugasan - Melakukan evaluasi hasil dan membuat laporan		480 jam (3 bulan)
8	Evaluasi Hasil Kegiatan MBKM - Melakukan presentasi hasil kegiatan dan <i>Improvement Project</i> yang dilakukan		
Total durasi kegiatan MBKM		628 jam (4 bulan)	

5. Participants

5.1 Target Total Participants

40 college students from collaborate university (4-5 college students from each university) divided into 2 batch :

- 1st batch in July – November '22
- 2nd batch in January'23 – May '23

5.2 Criteria of Participants

- *College students (male/female) in last year study.*
- *Engineering students with industry-related majors. (mechanical, industrial, and materials engineering)*
- *Wiling to join full program in Komatsu and ready to be placed in factory.*
- *Able to work in a team and have a good attitude.*



THANK YOU