Universitas Negeri Yogyakarta
Sustainably Excellent, Creative, and Innovative

STUDENT STUDY LOAD REPORT 2022

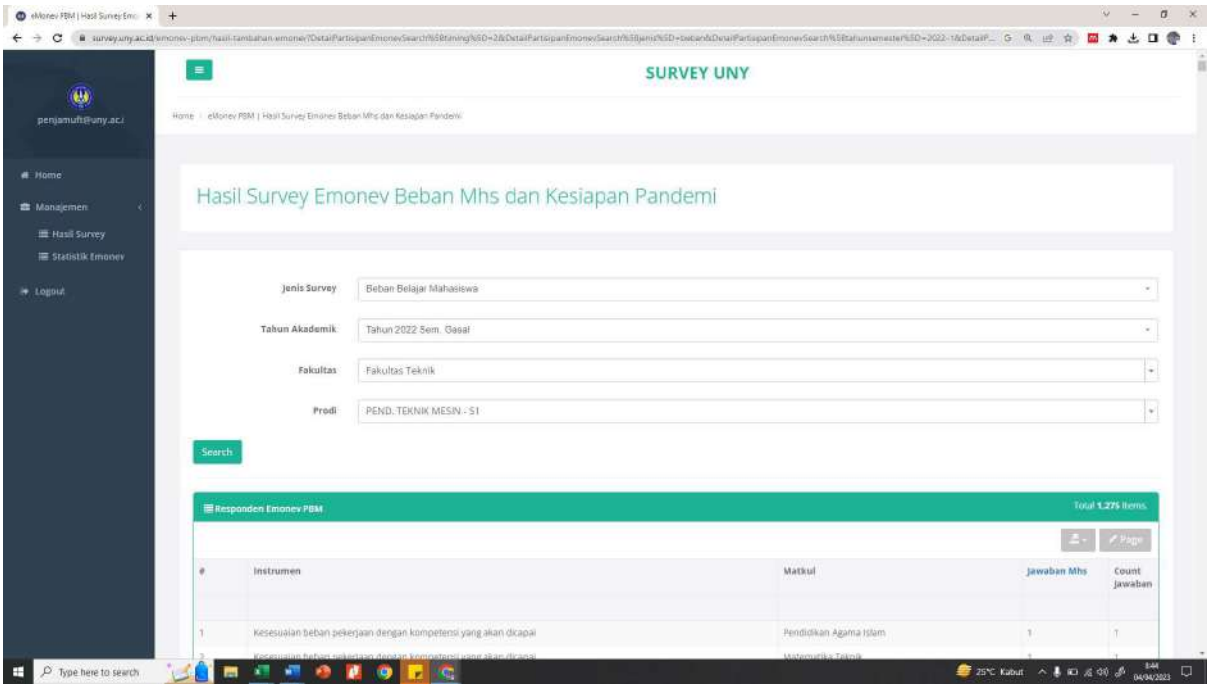
Quality Assurance Unit, Faculty of Engineering
Yogyakarta State University

Students' Workload Survey BMEE

A. Mechanism

With respect to measuring students' workload, in December 2022 UNY has improved the regular students' monitoring and evaluating system by integrating new items to measure students' actual workload. The new system is aimed to measure students' workload for every course at the end of every semester. This monitoring and evaluating system is available online on (http://survey.uny.ac.id/emonev-pbm/take-survey-akhir)

The new system has been implemented since the end of the first semester of the academic year 2022/2023 (i.e. December 2022). The system is managed by the university and each study program has a team who responsible for monitoring and evaluating. The team holds an admin account to retrieve and analyze the survey data. The appearance of the system is shown in the following figure.



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ANGKET MONITORING DAN EVALUASI PERKULIAHAN AKHIR SEMESTER

Tahun Akademik 2020/2021 Semester Ganjil

Mata Kuliah : MAT6313 - Persamaan Differensial
Dosen : Drs. Tuharto, M.Si.

Petunjuk :

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- ☑ 5 : Sangat baik
- ☐ 4 : Baik
- ☐ 3 : Biasa
- ☐ 2 : Kurang
- ☐ 1 : Sangat kurang

NO	PERNYATAAN	SKALA PENILAIAN
A.	**Pembelajaran di Kampus (sebelum Pandemi COVID-19)**	
1.	Kesesuaian pembelajaran dengan Rencana Pembelajaran Semester (RPS)	○5 ○4 ○3 ○2 ○1
2.	Keruntutan dosen dalam penyampaian materi dalam perkuliahan	○5 ○4 ○3 ○2 ○1
3.	Kemampuan dosen dalam, memotivasi mahasiswa dalam perkuliahan	○5 ○4 ○3 ○2 ○1
14.	Kesesuaian ujian dengan materi yang disampaikan Dosen	○5 ○4 ○3 ○2 ○1
15.	Kepedulian Dosen terhadap kesulitan mahasiswa	○5 ○4 ○3 ○2 ○1
16.	Kesesuaian beban pekerjaan dengan kompetensi yang akan dicapai	○5 ○4 ○3 ○2 ○1
17.	Kemudahan mendapatkan akses tentang penilaian dan tugas-tugas matakuliah	○5 ○4 ○3 ○2 ○1
18.	Kejelasan informasi tentang penilaian	○5 ○4 ○3 ○2 ○1
19.	Dibandingkan dengan mata kuliah yang lainnya, jumlah waktu yang anda habiskan khusus untuk mata kuliah ini	○ Lebih Sedikit ○ Sama ○ Lebih Banyak
20.	Waktu efektif yang and habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mata kuliah ini (dalam satuan menit)	
B.	**Pembelajaran Masa Pandemi COVID-19 (Pembelajaran di Rumah/Kost/Luar Kampus)**	
1.	Kesesuaian durasi waktu pembelajaran daring dengan jadwal kuliah	○5 ○4 ○3 ○2 ○1
2.	Ketercapaian tujuan perkuliahan melalui pembelajran daring	○5 ○4 ○3 ○2 ○1
3.	Ketepatan metode perkuliahan yang diterapkan dalam pembelajaran daring	○5 ○4 ○3 ○2 ○1
4.	Ketepatan umpan balik yang diberikan dosen dalam pembelajaran daring	○5 ○4 ○3 ○2 ○1
5.	Kemudahan materi daring dipahami	○5 ○4 ○3 ○2 ○1
6.	Kesesuaian tugas yang diberikan dengan Capaian Pembelajaran	○5 ○4 ○3 ○2 ○1
7.	Kesesuaian media pembelajaran yang digunakan dengan karakteristik materi dalam pembelajaran daring	○5 ○4 ○3 ○2 ○1
8.	Kesesuaian teknik penilaian yang digunakan dosen	○5 ○4 ○3 ○2 ○1
9.	Kualitas secara umum perkuliahan ini melalui daring	○5 ○4 ○3 ○2 ○1

In general, the questionnaire in the system is aimed to retrieve data about teaching and learning activities for one semester. Specifically, items related to students' workload are items in section A number 16, 19, and 20.

Table 1. Students' workload questionnaire

Item no.	Statements	Answer Choices
16	Kesesuaian beban pekerjaan dengan kompetensi yang akan dicapai *The suitability of workload with the competencies to be achieved*	○ 5 ○ 4 ○ 3 ○ 2 ○ 1
19	Dibandingkan dengan matakuliah yang lainnya, jumlah waktu yang Anda habiskan khusus untuk mata kuliah *Compared to other courses, the amount of time you spend specifically on this course is*	○ sama ○ lebih sedikit ○ lebih banyak ○ *equal* ○ *less than* ○ *more than*
20	Waktu efektif yang Anda habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mata kuliah ini (dalam menit) *The effective time you spend in a week (outside class hours) to study in this course (in minutes*)	… menit … *minutes*

B. The result

The result of the students' workload survey, for item number 16 was described and converted into categories according to Table 2.

Table 2 Students' Workload Categorization

Score Interval	Score	Category
$X > X_i + 1{,}5\ SB_i$	$X > 4{,}00$	Very Suitable
$X_i + SB_i < X \leq X_i + 1{,}5\ SB_i$	$3{,}67 < X \leq 4{,}00$	Suitable
$X_i - 0{,}5\ SB_i < X \leq X_i + SB_i$	$2{,}67 < X \leq 3{,}67$	Fair
$X_i - 1{,}5\ SB_i < X \leq X_i - 0{,}5\ SB_i$	$2 < X \leq 2{,}67$	Less Suitable
$X \leq X_i - 1{,}5\ SB_i$	$X \leq 2$	Not Suitable

The result was presented in Figure 1.

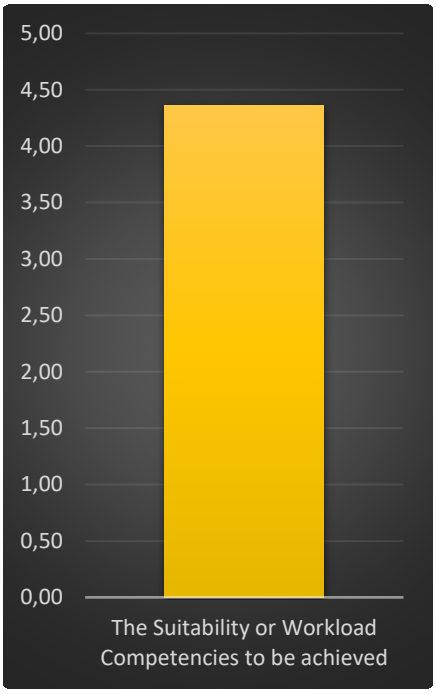


Figure 1. Student Responses Related to Workload Suitability

Based on the result represented in Figure 1, the workload suitability was in the very suitable category with an average of 4.36. This is in accordance with the standard workload of the university.

The result of the students' workload survey item number 19 was depicted in Table 3 and Figure 2. The subject of Community Service Program, Microteaching, Product Design, Industrial Internship, and Construction Application had percentage of students answered "more than" as much as 40%. Meanwhile, for other courses, students generally answered that the time they spent in other courses was equal to that course.

Table 3. Percentage of Student Responses to Item 19

Courses	More Than	Less Than	Equal
Engineering Material	20,41%	9,18%	70,41%
2D CADs	37,23%	7,45%	55,32%
Machine Elements	16,67%	9,38%	73,96%
Advanced Machine Elements	15,79%	0,00%	84,21%
Engineering Physics	35,00%	13,00%	52,00%
Engineering Drawings	35,35%	5,05%	59,60%
Mechanic Vibration	21,05%	5,26%	73,68%
Educational Science	4,85%	32,04%	63,11%
Workbench	37,00%	16,00%	47,00%
Community Service Program	66,67%	33,33%	0,00%
Creativity, Innovation, and Entrepreneurship	11,70%	12,77%	75,53%
Educational Management	9,59%	12,33%	78,08%

Courses	More Than	Less Than	Equal
Engineering Mathematics	23,76%	3,96%	72,28%
Welding Metalurgy	10,00%	5,00%	85,00%
Educational Research Methodology	8,00%	34,67%	57,33%
Welding Inspection	5,56%	5,56%	88,89%
Machining of Jig and Fixtures	20,51%	10,26%	69,23%
Machining of Compplicated Product	19,59%	13,40%	67,01%
Non-Conventional Machining	14,29%	17,14%	68,57%
Islamic Education	7,69%	13,19%	79,12%
Catholic Education	0,00%	40,00%	60,00%
Protestant Christian Education	25,00%	37,50%	37,50%
Citizenship Education	5,05%	18,18%	76,77%
Vocational and Technology Education	3,09%	28,87%	68,04%
Microteaching	40,00%	4,00%	56,00%
Vocational Learning Assessment	6,12%	16,33%	77,55%
Product Design	61,11%	5,56%	33,33%
Pumps and Compressors	14,08%	8,45%	77,46%
Industrial Internship	50,00%	6,67%	43,33%
Construction Application	41,18%	11,76%	47,06%
Educational Psychology	6,33%	8,86%	84,81%
Educational Sociology	5,26%	7,89%	86,84%
Vocational Learning Strategy	14,00%	13,00%	73,00%
CNC Machining Technology	36,08%	10,31%	53,61%
Teory of Machining	8,82%	18,63%	72,55%
Teory of Welding	7,77%	13,59%	78,64%
Digital Transformation	9,68%	13,98%	76,34%

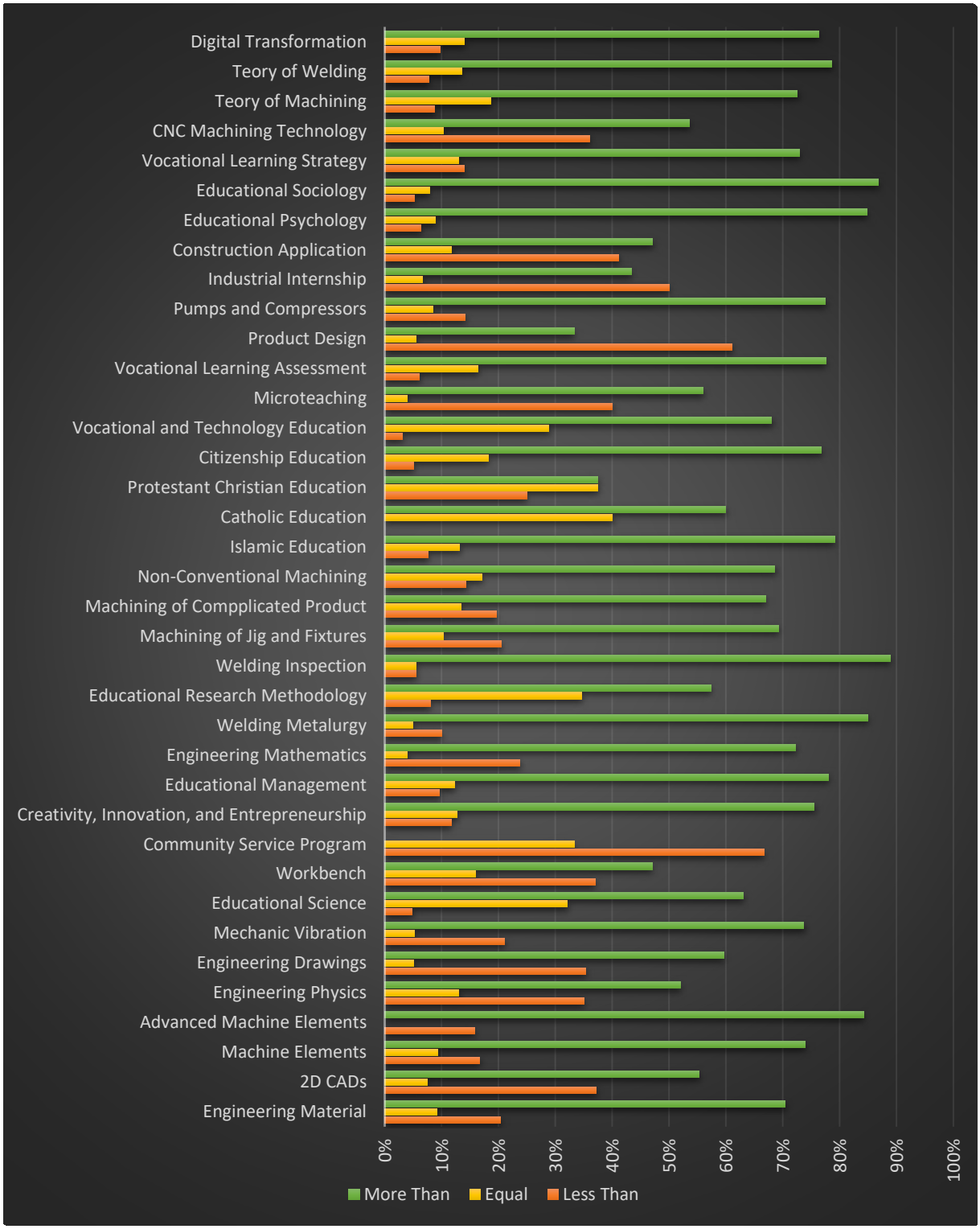


Figure 2. Percentage of Student Responses to Item 19

Based on the results of a survey related to item number 20 *"The effective time you spend in a week (outside class hours) to study this course (in minutes)"*, most of the courses get a dominant time spend of more than 180 minutes/week. The percentages are above 50%. The courses need to be studied outside of the classroom both education and mechanical courses.

The results also showed that all subjects with less than or equal to 60 minutes/week of study time were less than 20%. Courses that have study time outside between 61-120 minutes/week are around 11-33%. There is no course that has a study time between 121-180 minutes/week. Most courses have a study time of more than 180 minutes/week.

Table 2. Percentage of Study Time Outside Class Hours (in minutes)

Courses	0-60 Minutes	61-120 Minutes	121-180 Minutes	> 180 Minutes
Engineering Material	54,08%	29,59%	5,10%	11,22%
2D CADs	42,55%	15,96%	15,96%	25,53%
Machine Elements	59,38%	25,00%	5,21%	10,42%
Advanced Machine Elements	10,53%	47,37%	26,32%	15,79%
Engineering Physics	56,70%	25,77%	8,25%	9,28%
Engineering Drawings	86,11%	6,57%	3,79%	3,54%
Mechanic Vibration	78,95%	13,16%	5,26%	2,63%
Educational Science	91,99%	6,31%	0,49%	1,21%
Workbench	92,50%	3,00%	2,00%	2,50%
Community Service Program	91,67%	0,00%	0,00%	8,33%
Creativity, Innovation, and Entrepreneurship	88,83%	6,91%	2,13%	2,13%
Educational Management	87,67%	9,25%	2,40%	0,68%
Engineering Mathematics	87,38%	7,92%	2,23%	2,48%
Welding Metalurgy	86,25%	10,00%	0,00%	3,75%
Educational Research Methodology	91,33%	7,00%	1,00%	0,67%
Welding Inspection	84,72%	13,89%	0,00%	1,39%
Machining of Jig and Fixtures	89,74%	5,13%	2,56%	2,56%
Machining of Compplicated Product	90,79%	4,47%	2,37%	2,37%
Non-Conventional Machining	86,30%	2,74%	6,16%	4,79%
Islamic Education	90,66%	6,87%	0,55%	1,92%
Catholic Education	100,00%	0,00%	0,00%	0,00%
Protestant Christian Education	100,00%	0,00%	0,00%	0,00%
Citizenship Education	92,42%	5,56%	0,51%	1,52%
Vocational and Technology Education	92,27%	5,67%	0,77%	1,29%
Microteaching	84,00%	9,00%	1,67%	5,33%
Vocational Learning Assessment	91,58%	5,87%	1,02%	1,53%
Product Design	78,57%	7,14%	2,86%	11,43%
Pumps and Compressors	88,03%	7,39%	3,17%	1,41%
Industrial Internship	100,00%	0,00%	0,00%	0,00%
Construction Application	85,29%	7,35%	1,47%	5,88%
Educational Psychology	87,66%	9,49%	1,58%	1,27%
Educational Sociology	87,50%	8,88%	1,64%	1,97%

Courses	0-60 Minutes	61-120 Minutes	121-180 Minutes	> 180 Minutes
Vocational Learning Strategy	89,50%	7,00%	1,75%	1,75%
CNC Machining Technology	86,86%	5,41%	3,09%	4,64%
Teory of Machining	90,24%	6,10%	0,73%	2,93%
Teory of Welding	89,32%	7,52%	0,97%	2,18%
Digital Transformation	90,05%	6,72%	1,08%	2,15%

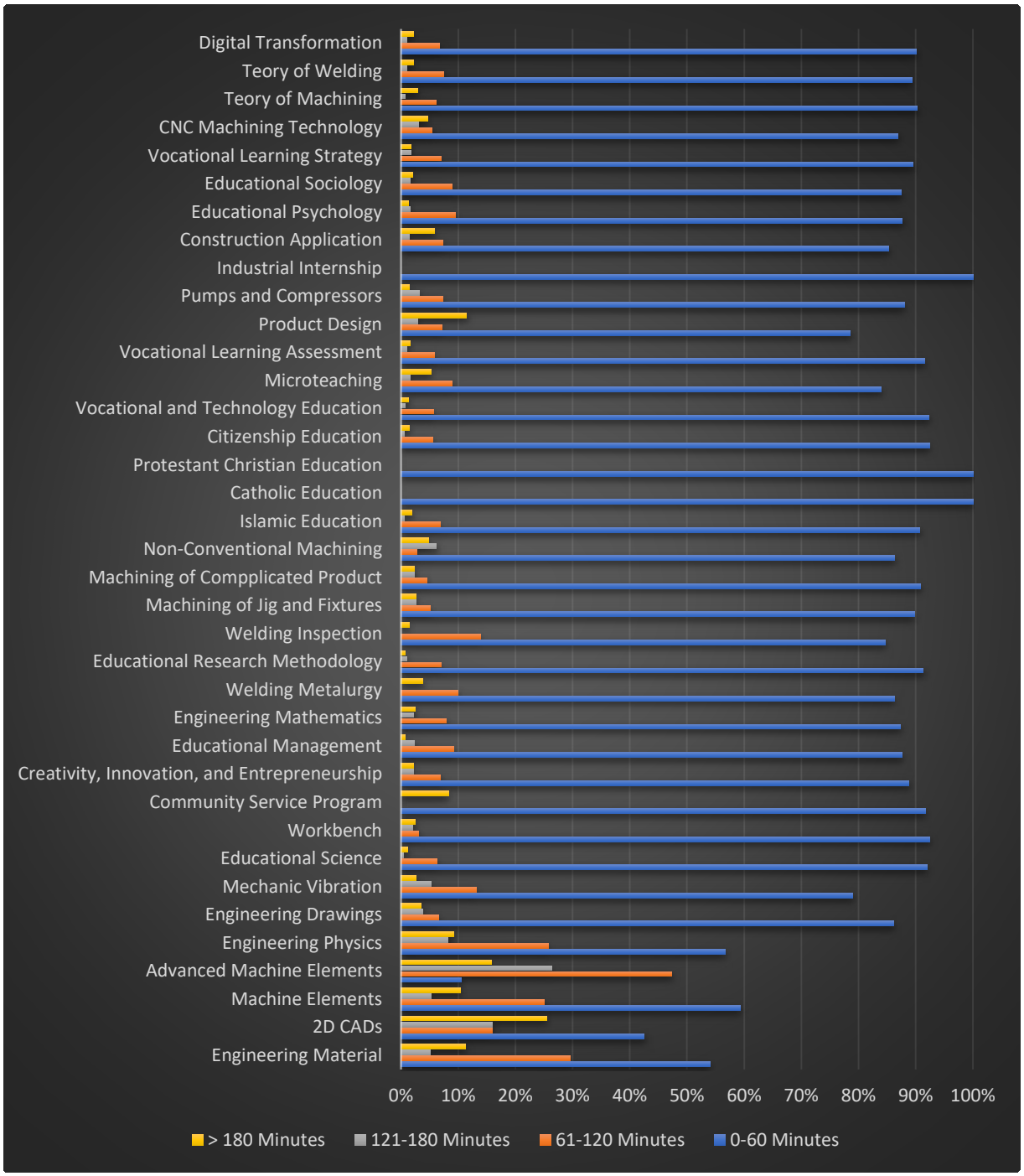


Figure 3. Percentage of Study Time Outside Class Hours

Overall, the result of this survey shows that in general students' factual workload was in accordance with the standard workload as mentioned in the Academic Regulation. Nevertheless, the survey revealed that students spent less self-study time than standard workload for the University Common Courses.

C. Suggestions

Here are some suggestions which are obtained from the survey.

In relation to *The suitability of workload with the competencies to be achieved*

Student responses related to the suitability of workloads with the competencies to be achieved have been very good. This needs to be maintained. For some courses that have not suitable, the suitability needs to be improved so that students get a satisfactory quality of service.

In relation to *Compared to other courses, the amount of time you spend specifically on this course is*

In general, the amount of time students spend on education courses as well as technical and vocational of mecahnical courses is more than or equal to the others. This needs to be maintained. One and another courses support each other to produce students who have good Program Objectives.

In relation to *The effective time you spend in a week (outside class hours) to study in this course (in minutes*)

Effective self-study time for all courses is almost the same. Students use effective self-study time in a week of more than 180 minutes. The gap in independent study time for students is quite small. Students have enough awareness to learn independently. This needs to be maintained.

D. Action plans

With these suggestions, the study program plans to take the following action.

No.	Category	Action Plan
1	Increase student' motivation to spend more time on self-study	Carrying out routine evaluation through conducting discussion and sharing information between lecturers, especially between lecturers whose students are less active on self-study

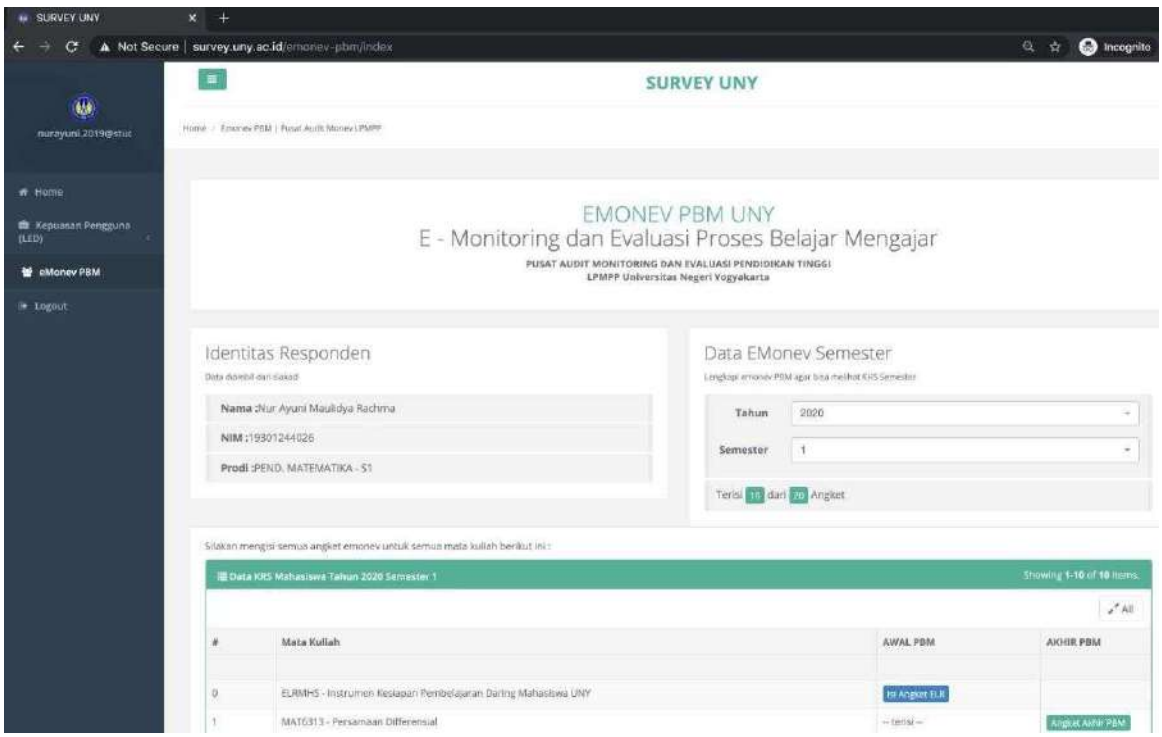
2	Less self-study time than standard workload for the University Common Courses	Emphasizing the importance of University Common Courses through academic activities carried out by each course and lecturer. It is used to increase students' awareness of self-study.
3	Maintaining positive responses from students on the suitability of workloads with competencies	Updating the learning process in accordance with technological advances, especially in the field of mechanicall engineering during the COVID-19 pandemic. This will have implications for student responses because what will be learned is in accordance with the expected competencies.

Students' Workload Survey Bachelor of Automotive Engineering Education (BAEE)

A. Mechanism

Regarding estimating understudies' responsibility, in December 2022, UNY improved the customary understudies' checking and assessing framework by incorporating new things to gauge understudies' real responsibility. This new system is designed to measure student workload for each course. Data collection is carried out at the end of each semester. This monitoring and evaluating system is available online on (http://survey.uny.ac.id/emonev-pbm/take-survey-akhir)

The new system has been implemented since the end of the second semester of 2019/2020 (i.e. August 2020). The university manages the system, and each study program has a team responsible for monitoring and evaluating. The team holds an admin account to retrieve and analyze the survey data. The appearance of the system is shown in the following figure.



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ANGKET MONITORING DAN EVALUASI PERKULIAHAN AKHIR SEMESTER

Tahun Akademik 2020/2021 Semester Ganjil

Mata Kuliah : MAT6313 - Persamaan Differensial
Dosen : Drs. Tuharto, M.Si.

Petunjuk :

Isilah angket berikut ini sesuai dengan kondisi yang Anda alami. Masukan Anda akan sangat berguna bagi kualitas pendidikan.
Pilih radio button pada skala yang Anda pilih.

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- ☐ 4 : Baik
- ☐ 3 : Biasa
- ☐ 2 : Kurang
- ☐ 1 : Sangat kurang

NO	PERNYATAAN	SKALA PENILAIAN
A.	**Pembelajaran di Kampus (sebelum Pandemi COVID-19)**	
1.	Kesesuaian pembelajaran dengan Rencana Pembelajaran Semester (RPS)	○5 ○4 ○3 ○2 ○1
2.	Keruntutan dosen dalam penyampaian materi dalam perkuliahan	○5 ○4 ○3 ○2 ○1
3.	Kemampuan dosen dalam, memotivasi mahasiswa dalam perkuliahan	○5 ○4 ○3 ○2 ○1

14.	Kesesuaian ujian dengan materi yang disampaikan Dosen	○5 ○4 ○3 ○2 ○1
15.	Kepedulian Dosen terhadap kesulitan mahasiswa	○5 ○4 ○3 ○2 ○1
16.	Kesesuaian beban pekerjaan dengan kompetensi yang akan dicapai	○5 ○4 ○3 ○2 ○1
17.	Kemudahan mendapatkan akses tentang penilaian dan tugas-tugas matakuliah	○5 ○4 ○3 ○2 ○1
18.	Kejelasan informasi tentang penilaian	○5 ○4 ○3 ○2 ○1
19.	Dibandingkan dengan mata kuliah yang lainnya, jumlah waktu yang anda habiskan khusus untuk mata kuliah ini	○ Lebih Sedikit ○ Sama ○ Lebih Banyak
20.	Waktu efektif yang and habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mata kuliah ini (dalam satuan menit)	
B.	**Pembelajaran Masa Pandemi COVID-19 (Pembelajaran di Rumah/Kost/Luar Kampus)**	
1.	Kesesuaian durasi waktu pembelajaran daring dengan jadwal kuliah	○5 ○4 ○3 ○2 ○1
2.	Ketercapaian tujuan perkuliahan melalui pembelajran daring	○5 ○4 ○3 ○2 ○1
3.	Ketepatan metode perkuliahan yang diterapkan dalam pembelajaran daring	○5 ○4 ○3 ○2 ○1
4.	Ketepatan umpan balik yang diberikan dosen dalam pembelajaran daring	○5 ○4 ○3 ○2 ○1
5.	Kemudahan materi daring dipahami	○5 ○4 ○3 ○2 ○1
6.	Kesesuaian tugas yang diberikan dengan Capaian Pembelajaran	○5 ○4 ○3 ○2 ○1
7.	Kesesuaian media pembelajaran yang digunakan dengan karakteristik materi dalam pembelajaran daring	○5 ○4 ○3 ○2 ○1
8.	Kesesuaian teknik penilaian yang digunakan dosen	○5 ○4 ○3 ○2 ○1
9.	Kualitas secara umum perkuliahan ini melalui daring	○5 ○4 ○3 ○2 ○1

In general, the questionnaire in the system is aimed at retrieving data about teaching and learning activities before and after the Covid-19 pandemic. Specifically, items related to students' workload are items in section A, number 16, 19, and 20.

Table 1. Students' workload questionnaire

Item no.	Statements	Answer Choices
16	Kesesuaian beban pekerjaan dengan kompetensi yang akan dicapai *The suitability of workload with the competencies to be achieved*	○ 5 ○ 4 ○ 3 ○ 2 ○ 1
19	Dibandingkan dengan matakuliah yang lainnya, jumlah waktu yang Anda habiskan khusus untuk mata kuliah *Compared to other courses, the amount of time you spend specifically on this course is*	○ sama ○ lebih sedikit ○ lebih banyak ○ *equal* ○ *less than* ○ *more than*
20	Waktu efektif yang Anda habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mata kuliah ini (dalam menit) *The effective time you spend in a week (outside class hours) to study in this course (in minutes*)	….

B. The result

The result of the students' workload survey, for item number 16 was described and converted into categories according to Table 1.

Table 2. Students' Workload Categorization

Score Interval	Score	Category
$X > X_i + 1{,}5\ SB_i$	$X > 4{,}00$	Very Suitable
$X_i + SB_i < X \leq X_i + 1{,}5\ SB_i$	$3{,}67 < X \leq 4{,}00$	Suitable
$X_i - 0{,}5\ SB_i < X \leq X_i + SB_i$	$2{,}67 < X \leq 3{,}67$	Fair
$X_i - 1{,}5\ SB_i < X \leq X_i - 0{,}5\ SB_i$	$2 < X \leq 2{,}67$	Less Suitable
$X \leq X_i - 1{,}5\ SB_i$	$X \leq 2$	Not Suitable

The result was presented in Figure 1. (item 16)

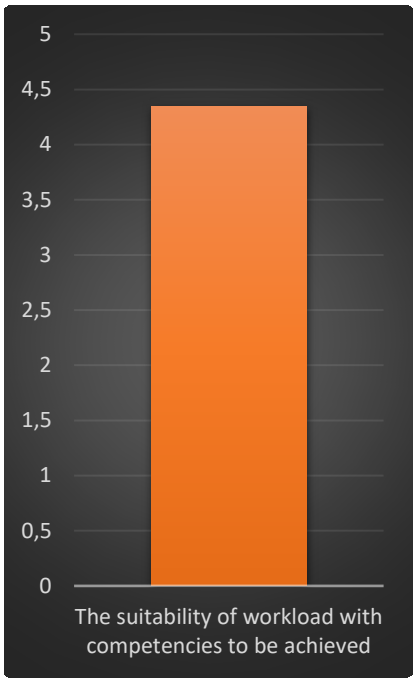


Figure 1. The BAEE Students' Workload

Based on the result represented in Figure 1, the workload suitability was in the suitable category with an average of 4,347. This is in accordance with the standard workload of the university.

The result of the students' workload survey item number 19 was depicted in Table 3 and Figure 2. The subject of Scientific Writing, Automotive Engineering Education and Training Project had a percentage of students answered "more than" above 40%. other courses are the same as this course.

Table 3. Percentage of BAEE Student Responses to Item 19

Kursus	Lebih sedikit	Sama	Lebih banyak
Alat dan Pengukuran Teknik Otomotif	9	73	15
Bahasa Inggris	0	3	0
Desain Otomotif	18	73	14
Engine Management System	2	47	25
Fisika Teknik	4	81	15
Ilmu Pendidikan	11	87	8
Kemudi, Rem dan Suspensi	9	75	19
KKN	0	1	0
Kreativitas, Inovasi dan Kewirausahaan	4	61	7
Listrik dan Elektronika Dasar	7	75	16

Kursus	Lebih sedikit	Sama	Lebih banyak
Listrik dan Elektronika Otomotif	5	81	18
Literasi Sosial dan Kemanusiaan	8	74	14
Manajemen Industri Otomotif	6	64	7
Manajemen Pendidikan Kejuruan	8	72	9
Matematika Teknik	4	84	9
Metodologi Penelitian Pendidikan	3	61	18
Pancasila	26	73	4
Pembelajaran Mikro	5	54	26
Pendidikan Agama	16	76	4
Pendidikan Kewarganegaraan	35	61	8
Penilaian Pembelajaran Kejuruan	3	73	13
Pneumatik dan Hidrolik	1	0	0
Praktik Gambar Teknik	4	60	32
Psikologi Pendidikan	19	88	4
Regulasi Menajemen Transportasi	4	73	7
Sosio Antropologi Pendidikan	22	57	6
Statika dan Kekuatan Material	7	87	12
Statistika	2	11	5
Teknologi Bodi dan Pengecatan	0	4	0
Teknologi Motor Bensin	7	81	17
Teknologi Pembentukan Dasar	17	65	14
Termodinamika	10	77	18

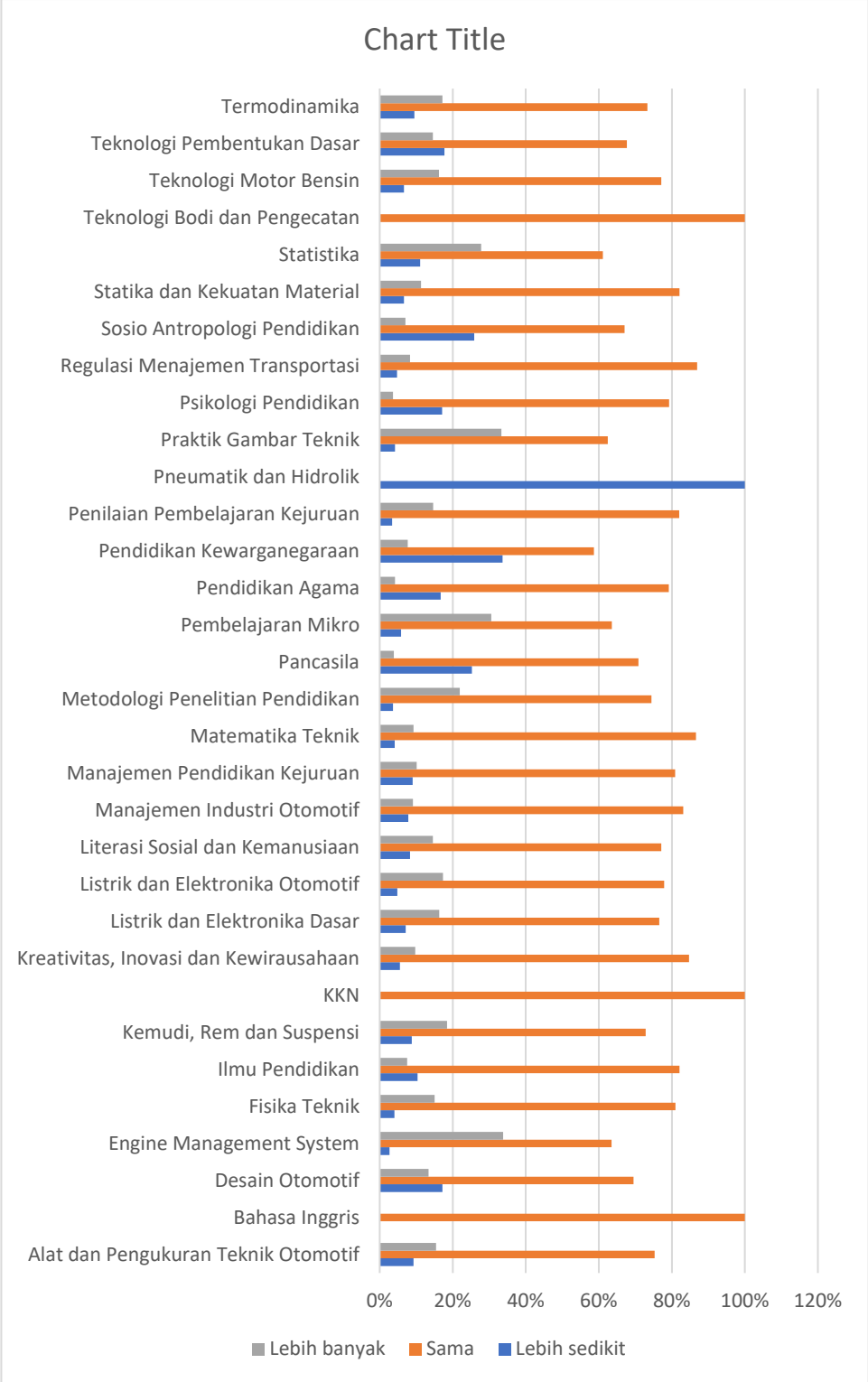


Figure 2. Percentage of Student Responses to Item 19

Based on the results of a survey related to item number 20, *"The effective time you spend in a week (outside class hours) to study this course (in minutes)"*, there were three courses that get a dominant time spend of more than 180 minutes/week, namely Engine Management System, Engineering Drawing Practice, with 33%. Most of the

subjects that need to be studied outside the classroom are related to independent projects and analysis of automotive and vocational courses.

The results of the study also showed that there were nine subjects whose study time was less than or equal to 60 minutes/week, namely Curriculum and Learning. Vocational (Curriculum and Vocational Learning) with 100% and Educational Psychology (Educational Psychology) with 50%. Courses that take less than 60 minutes are dominated by education and vocational courses. In general, the average percentage of time students spend studying is 60-120 minutes and more than 180 minutes, because master programs require a lot of analysis. Table 4 and Figure 3 depict the more details.

Table 3. Percentage of Study Time Outside Class Hours (in minutes) (item 20)

Kursus	0-60 Menit	61-120 Menit	121-180 Menit	> 180 Menit
Alat dan Pengukuran Teknik Otomotif	52%	31%	4%	13%
Bahasa Inggris	33%	33%	0%	33%
Desain Otomotif	54%	35%	4%	7%
Desain Otomotif	54%	35%	4%	7%
Engine Management System	32%	38%	15%	15%
Engine Management System	32%	38%	15%	15%
Fisika Teknik	48%	30%	6%	16%
Ilmu Pendidikan	46%	28%	3%	23%
Kemudi, Rem dan Suspensi	56%	32%	8%	4%
Kreativitas, Inovasi dan Kewirausahaan	46%	35%	7%	13%
Listrik dan Elektronika Dasar	46%	30%	8%	16%
Listrik dan Elektronika Otomotif	49%	34%	6%	12%
Literasi Sosial dan Kemanusiaan	50%	28%	5%	17%
Manajemen Industri Otomotif	44%	35%	8%	13%
Manajemen Pendidikan Kejuruan	52%	33%	6%	10%
Matematika Teknik	45%	31%	4%	20%
Metodologi Penelitian Pendidikan	43%	39%	10%	9%
Pancasila	63%	32%	3%	2%
Pembelajaran Mikro	48%	26%	9%	16%
Pendidikan Agama	55%	28%	6%	10%
Pendidikan Kewarganegaraan	64%	31%	3%	2%
Penilaian Pembelajaran Kejuruan	45%	37%	7%	11%
Praktik Gambar Teknik	40%	38%	7%	16%
Psikologi Pendidikan	61%	32%	2%	5%
Regulasi Menajemen Transportasi	51%	35%	5%	10%
Sosio Antropologi Pendidikan	54%	34%	4%	8%
Statika dan Kekuatan Material	57%	35%	7%	2%
Statistika	50%	33%	11%	6%
Teknologi Bodi dan Pengecatan	75%	25%	0%	0%

Teknologi Motor Bensin	55%	38%	5%	2%
Teknologi Pembentukan Dasar	56%	28%	5%	10%
Termodinamika	57%	34%	4%	5%

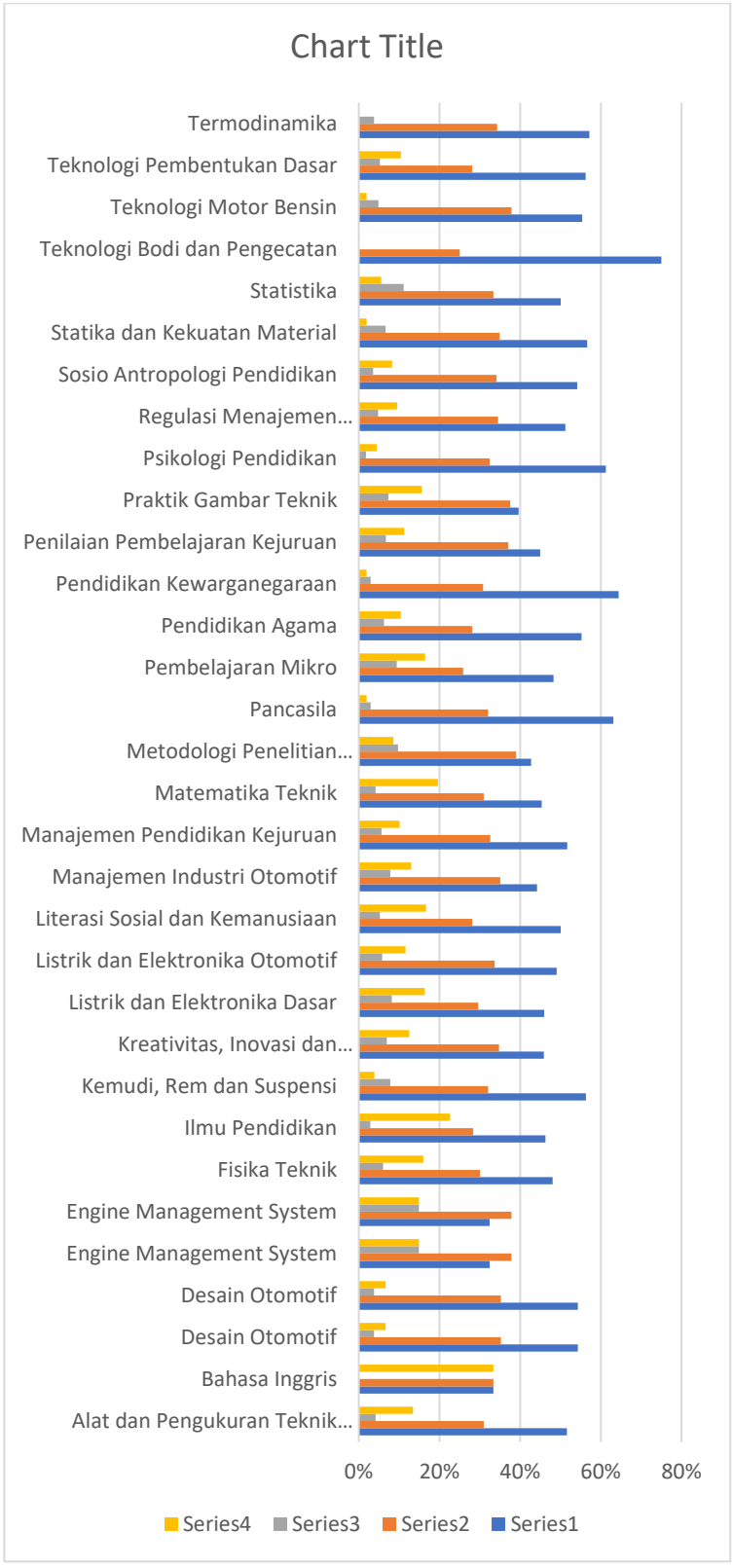


Figure 3. Percentage of Study Time Outside Class Hours

The survey results that have been carried out show that the student workload has demonstrated the standard workload following the Academic Regulations. Specifically for general university courses, the survey revealed that students spending time for independent study is less than studying concentration courses from the study program.

C. Suggestions

Here are some suggestions which are obtained from the survey.

In relation to *The suitability of workload with the competencies to be achieved*

Student responses related to workload adjustment with the competencies to be achieved have been very good. This needs to be maintained. For some study programs that are not yet suitable, the completeness needs to be improved so that students get a satisfactory quality of service.

In relation to *Compared to other courses, the amount of time you spend specifically on this course is*

In general, the amount of time saved by students for basic courses as well as technical and vocational courses is more or the same as the others. This needs to be maintained. One and the other courses support each other to produce students who have good Program Objectives.

In relation to *The effective time you spend in a week (outside class hours) studying in this course (in minutes*)

The effective independent study time spent by students in a week is at most 61-120 minutes for 5 courses, 5 courses are more than 180 minutes, while 3 courses are less than 180 minutes. This needs to be a concern, especially for subjects that have different independent learning gaps, such as Educational Sciences and Educational Psychology. Students have different awareness of studying independently. To increase student motivation to spend more time, lecturers should apply innovative learning, and structured assignments with feedback.

D. Action plans

With these suggestions, the study program plans to take the following action.

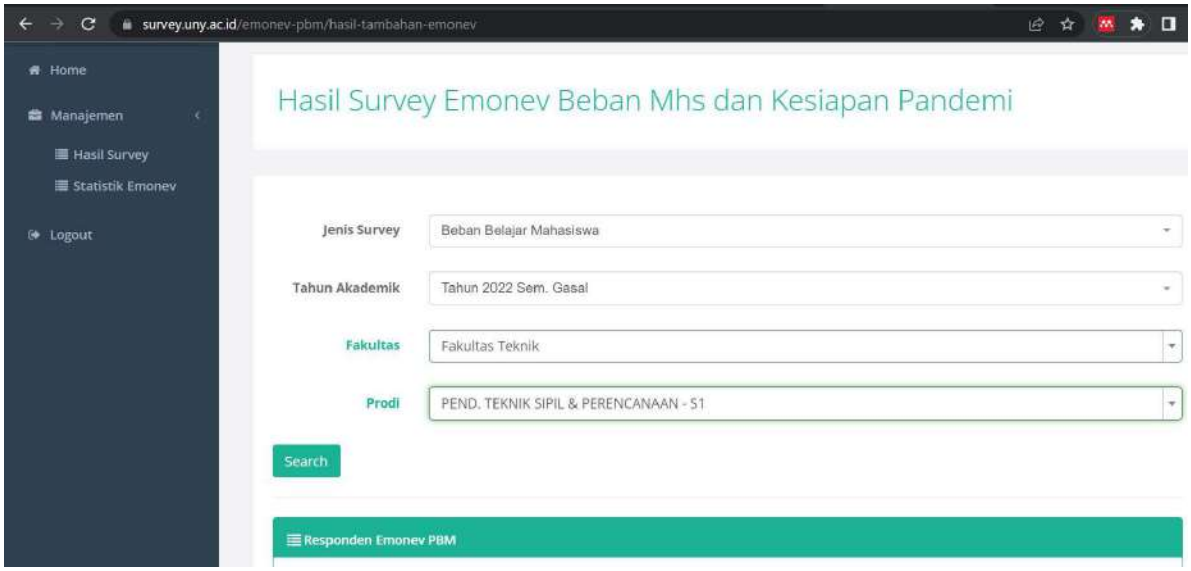
No.	Category	Action Plan
1	Increase student' motivation to spend more time on self-study	They conducted a routine evaluation by conducting discussion and sharing information between lecturers, especially lecturers whose students are less active in self-study.
2	Less self-study time than standard workload for the University Common Courses	Emphasize the importance of University Common Courses through such an academic activity conducted by the study program and with the help of students' academic supervisor
3	Maintaining positive responses from students on the suitability of workloads with competencies	Updating the learning process in accordance with technological advances, especially in the field of electrical engineering. For example, the use of various technologies and simulators for distance learning during the COVID-19 pandemic. This will have implications for student responses because what will be learned is in accordance with the expected competencies.

Students' Workload Survey BCEPE

A. Mechanism

With respect to measuring students' workload, in December 2022 UNY has improved the regular students' monitoring and evaluating system by integrating new items to measure students' actual workload. The new system is aimed to measure students' workload for every course at the end of every semester. This monitoring and evaluating system is available online on (http://survey.uny.ac.id/emonev-pbm/take-survey-akhir)

The new system has been implemented since the end of the first semester of the academic year 2022/2023 (i.e. December 2022). The system is managed by the university and each study program has a team who responsible for monitoring and evaluating. The team holds an admin account to retrieve and analyze the survey data. The appearance of the system is shown in the following figure.



Petunjuk :

Isilah angket berikut ini sesuai dengan kondisi yang Anda alami. Masukan Anda akan sangat berguna bagi kualitas pendidikan.
Pilih radio button pada skala yang Anda pilih.

- ☑ 5 : Sangat baik
- ☐ 4 : Baik
- ☐ 3 : Biasa
- ☐ 2 : Kurang
- ☐ 1 : Sangat kurang

NO	PERNYATAAN	SKALA PENILAIAN
A.	**Pembelajaran di Kampus (sebelum Pandemi COVID-19)**	
1.	Kesesuaian pembelajaran dengan Rencana Pembelajaran Semester (RPS)	○5 ○4 ○3 ○2 ○1
2.	Keruntutan dosen dalam penyampaian materi dalam perkuliahan	○5 ○4 ○3 ○2 ○1
3.	Kemampuan dosen dalam, memotivasi mahasiswa dalam perkuliahan	○5 ○4 ○3 ○2 ○1
14.	Kesesuaian ujian dengan materi yang disampaikan Dosen	○5 ○4 ○3 ○2 ○1
15.	Kepedulian Dosen terhadap kesulitan mahasiswa	○5 ○4 ○3 ○2 ○1
16.	Kesesuaian beban pekerjaan dengan kompetensi yang akan dicapai	○5 ○4 ○3 ○2 ○1
17.	Kemudahan mendapatkan akses tentang penilaian dan tugas-tugas matakuliah	○5 ○4 ○3 ○2 ○1
18.	Kejelasan informasi tentang penilaian	○5 ○4 ○3 ○2 ○1
19.	Dibandingkan dengan mata kuliah yang lainnya, jumlah waktu yang anda habiskan khusus untuk mata kuliah ini	○ Lebih Sedikit ○ Sama ○ Lebih Banyak
20.	Waktu efektif yang and habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mata kuliah ini (dalam satuan menit)	
B.	**Pembelajaran Masa Pandemi COVID-19 (Pembelajaran di Rumah/Kost/Luar Kampus)**	
1.	Kesesuaian durasi waktu pembelajaran daring dengan jadwal kuliah	○5 ○4 ○3 ○2 ○1
2.	Ketercapaian tujuan perkuliahan melalui pembelajran daring	○5 ○4 ○3 ○2 ○1
3.	Ketepatan metode perkuliahan yang diterapkan dalam pembelajaran daring	○5 ○4 ○3 ○2 ○1
4.	Ketepatan umpan balik yang diberikan dosen dalam pembelajaran daring	○5 ○4 ○3 ○2 ○1
5.	Kemudahan materi daring dipahami	○5 ○4 ○3 ○2 ○1
6.	Kesesuaian tugas yang diberikan dengan Capaian Pembelajaran	○5 ○4 ○3 ○2 ○1
7.	Kesesuaian media pembelajaran yang digunakan dengan karakteristik materi dalam pembelajaran daring	○5 ○4 ○3 ○2 ○1
8.	Kesesuaian teknik penilaian yang digunakan dosen	○5 ○4 ○3 ○2 ○1
9.	Kualitas secara umum perkuliahan ini melalui daring	○5 ○4 ○3 ○2 ○1

In general, the questionnaire in the system is aimed to retrieve data about teaching and learning activities for one semester. Specifically, items related to students' workload are items in section A number 16, 19, and 20.

Table 1. Students' workload questionnaire

Item no.	Statements	Answer Choices
16	Kesesuaian beban pekerjaan dengan kompetensi yang akan dicapai *The suitability of workload with the competencies to be achieved*	○ 5 ○ 4 ○ 3 ○ 2 ○ 1
19	Dibandingkan dengan matakuliah yang lainnya, jumlah waktu yang Anda habiskan khusus untuk mata kuliah *Compared to other courses, the amount of time you spend specifically on this course is*	○ sama ○ lebih sedikit ○ lebih banyak ○ *equal* ○ *less than* ○ *more than*
20	Waktu efektif yang Anda habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mata kuliah ini (dalam menit) *The effective time you spend in a week (outside class hours) to study in this course (in minutes*)	… menit *… minutes*

B. The result

The result of the students' workload survey, for item number 16 was described and converted into categories according to Table 2.

Table 2 Students' Workload Categorization

Score Interval	Score	Category
$X > X_i + 1{,}5\ SB_i$	$X > 4{,}00$	Very Suitable
$X_i + SB_i < X \leq X_i + 1{,}5\ SB_i$	$3{,}67 < X \leq 4{,}00$	Suitable
$X_i - 0{,}5\ SB_i < X \leq X_i + SB_i$	$2{,}67 < X \leq 3{,}67$	Fair
$X_i - 1{,}5\ SB_i < X \leq X_i - 0{,}5\ SB_i$	$2 < X \leq 2{,}67$	Less Suitable
$X \leq X_i - 1{,}5\ SB_i$	$X \leq 2$	Not Suitable

The result was presented in Figure 1.

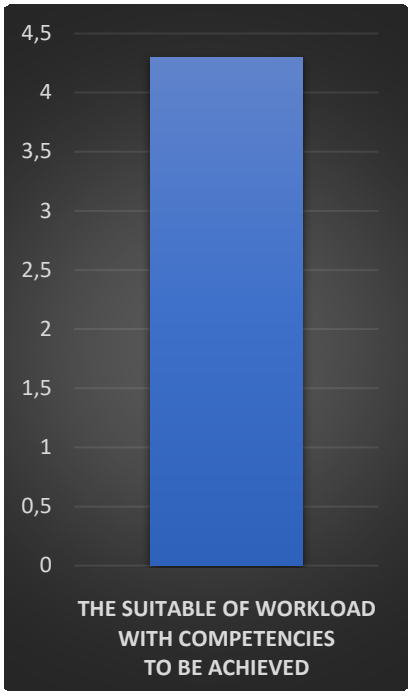


Figure 1. Student Responses Related to Workload Suitability

Based on the result represented in Figure 1, the workload suitability was in the very suitable category with an average of 4.30. This is in accordance with the standard workload of the university.

The result of the students' workload survey item number 19 was depicted in Table 2 and Figure 2. The subject of Furniture Laboratory Work, Industrial Internship, Concrete Construction Laboratory Work, and Concrete structure II, had percentage of students answered "more than" above 50%. The dominating subjects are laboratory work courses that require repeated practice to achieve the desired competencies. For Community Service, students are directly at the KKN location to complete all their assignments. Meanwhile, for other courses, students generally answered that the time they spent in other courses was equal to that course.

Table 3. Percentage of Student Responses to Item 19

Courses	Less Than	Equal	More Than
Structure Analysis I	6.52%	64.13%	29.35%
Building Materials and Introduction to Concrete Technology	3.26%	80.43%	16.30%

Courses	Less Than	Equal	More Than
Indonesian Language	19.61%	72.55%	7.84%
CAD Building Construction & Drawing II	3.06%	35.71%	61.22%
Engineering Drawing	5.49%	39.56%	54.95%
Geomatics I	0%	100%	0%
Geomatics II	4.82%	80.72%	14.46%
Educational Science	18.09%	72.34%	9.57%
Community Service	100%	0%	0%
Creativity, Innovation & Entrepreneurship	25.81%	66.67%	7.53%
Vocational Curriculum and Learning	9.91%	79.28%	10.81%
Social and Humanitarian Literacy	21.28%	69.15%	9.57%
Civil Engineering Mathematics	4.49%	70.79%	24.72%
Learning Media and Information Technology	10.81%	67.57%	21.62%
Soil Mechanics	5.49%	63.74%	30.77%
Fluid Mechanics	2.17%	65.22%	32.61%
Religious Education	24.44%	72.22%	3.33%
Civic Education	20.00%	74.44%	5.56%
Vocational Learning Assessment	13.33%	80.00%	6.67%
Plumbing & Sanitation Laboratory Work	12.09%	82.42%	5.49%
Furniture Laboratory Work	4.41%	45.59%	50.00%
Industrial Internship	2.78%	33.33%	63.89%
Masonry I	17.98%	57.30%	24.72%
Plumbing & Sanitation Laboratory Work	12.09%	54.95%	32.97%
Concrete Construction Laboratory Work	3.03%	42.42%	54.55%
Carpentry I	16.67%	54.44%	28.89%
Educational Psychology	13.98%	78.49%	7.53%
Vocational Learning Strategies	14.13%	70.65%	15.22%
Concrete structure II	1.28%	41.03%	57.69%
Geotechnical Survey & Investigation	10.99%	74.73%	14.29%
Concrete Technology	7.69%	60.44%	31.87%
Digital Transformation	12.96%	57.41%	29.63%
Utility and Building Maintenance	13.16%	75.66%	11.18%

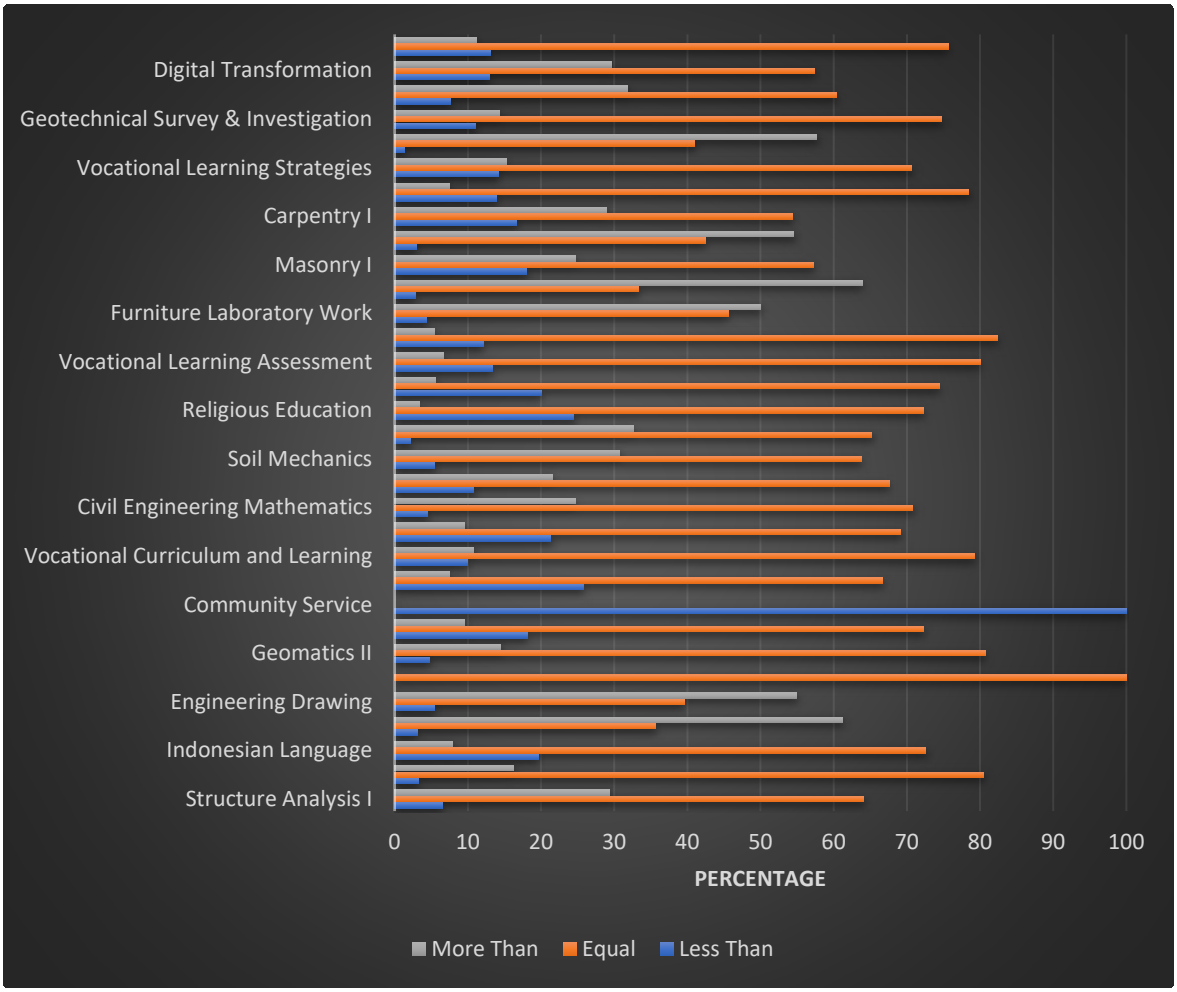


Figure 2. Percentage of Student Responses to Item 19

Based on the results of a survey related to item number 20 *"The effective time you spend in a week (outside class hours) to study this course (in minutes)"*, there were five courses that get a dominant time spend of more than 180 minutes/week, namely Structure Analysis I (75,72%), Digital Transformation (61.42%), Concrete structure II (52,95%), Vocational Learning Strategies (49,71%), CAD Building Construction & Drawing II (48.93), Fluid Mechanics (46,76%), Learning Media and Information Technology (45,07%), In general, the most widely studied subjects outside of class hours are subjects related to the course of study.

The results also showed that most of the subjects had study time of less than 60 minutes/week except for religious education (86.66%) minutes/week. The Building Materials and Introduction to Concrete Technology course has a learning time of less than 61-120 minutes/week with a percentage of 52.09%. Civic Education courses have a learning time of less than 121-180 minutes/week with a percentage of 56.68%. Structure Analysis I (75.72%) and Digital

Transformation (61.42%) courses have more than 60% study time > 180 minutes/week.

Table 4. Percentage of Study Time Outside Class Hours

Courses	0-60 Minutes	61-120 Minutes	121-180 Minutes	> 180 Minutes
Structure Analysis I	11.90	12.37	0	75.72
Building Materials and Introduction to Concrete Technology	32.83	52.09	2.66	12.43
Indonesian Language	26.29	40.40	1.98	31.33
CAD Building Construction & Drawing II	48.93	25.12	1.25	48.93
Engineering Drawing	30.94	50.85	5.91	12.30
Geomatics II	39.69	32.07	6.85	21.39
Educational Science	44.92	36.41	5.33	13.33
Creativity, Innovation & Entrepreneurship	31.20	21.70	3.83	31.20
Vocational Curriculum and Learning	38.49	36.83	7.97	16.70
Social and Humanitarian Literacy	11.63	44.59	9.73	34.05
Civil Engineering Mathematics	28.40	22.85	11.11	2.91
Learning Media and Information Technology	2.91	38.92	13.10	45.07
Soil Mechanics	59.84	16.10	5.42	18.64
Fluid Mechanics	30.06	17.71	5.47	46.76
Religious Education	86.66	4.53	1.87	6.94
Civic Education	14.22	6.51	56.68	22.58
Vocational Learning Assessment	6.27	19.37	38.08	36.27
Plumbing & Sanitation Laboratory Work	26.67	15.94	28.69	28.69
Educational Psychology	59.94	22.99	0	25.06
Vocational Learning Strategies	25.06	9.94	15.29	49.71
Concrete structure II	9.14	1.90	36.00	52.95
Digital Transformation	11.85	7.23	19.51	61.42
Utility and Building Maintenance	7.72	30.43	20.01	41.84

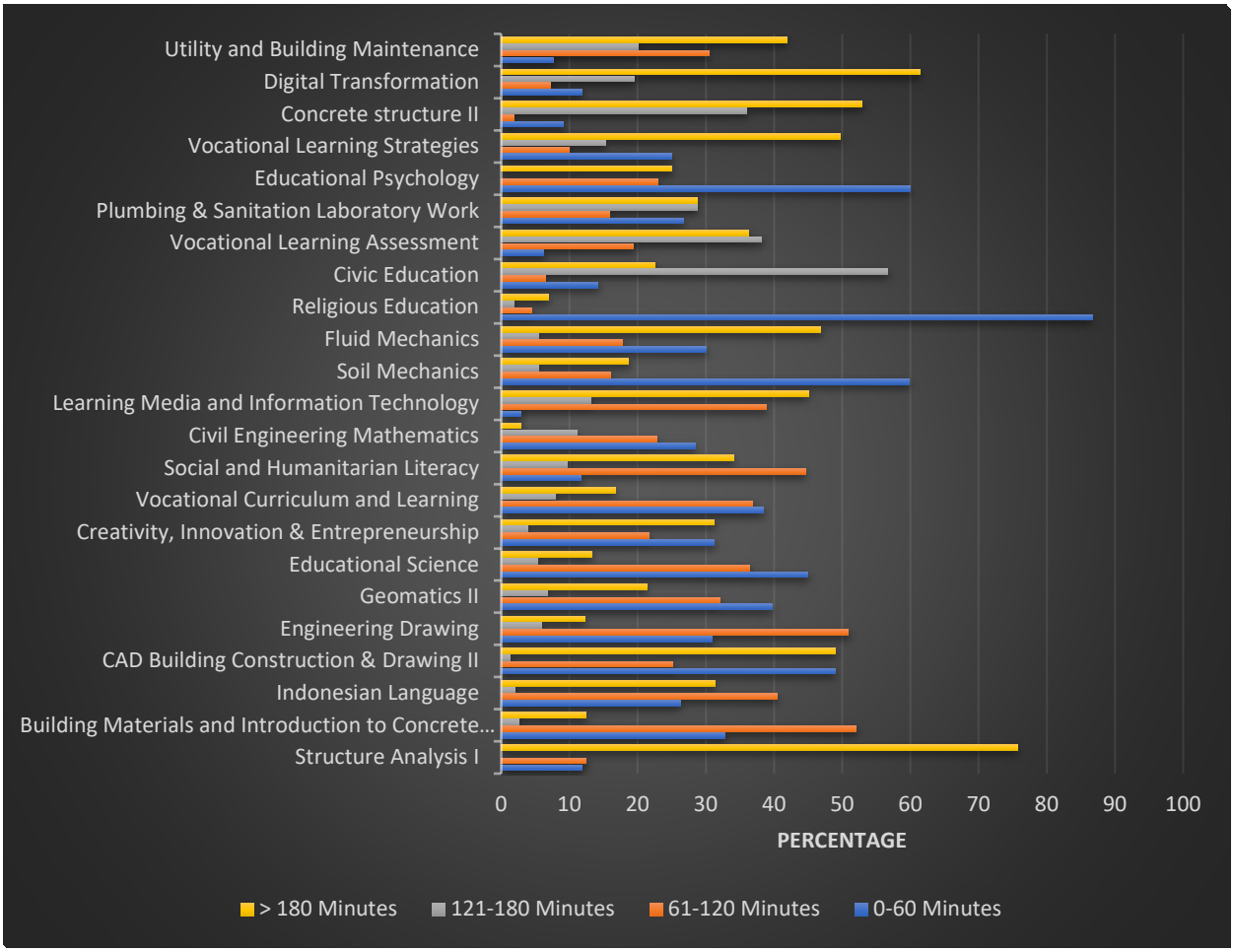


Figure 3. Percentage of Study Time Outside Class Hours

The survey results that have been carried out show that the student workload has demonstrated the standard workload following the Academic Regulations. Specifically for general university courses, the survey revealed that students spent time for independent study is less than studying concentration courses from the study program.

C. Suggestions

Here are some suggestions which are obtained from the survey.

In relation to *The suitability of workload with the competencies to be achieved*

The suitability of the workload with competence has been responded to by students and produced good results, but efforts are needed to improve to

become excellent. For courses whose response results are still lacking, efforts are needed to improve the suitability of student workloads for the quality of service to become better.

In relation **to** *Compared to other courses, the amount of time you spend specifically on this course is*

Overall, the amount of time required to study Concentration Courses (according to the study program) is more than General Courses from universities, especially for laboratory work courses with confident choices/concentrations. This result is following the number of credits per course taken by students. General courses and introductory education courses provide essential competencies for prospective informatics teachers to use good teaching strategies and methods. Meanwhile, special courses (concentration/electives) provide students with the information skills needed to work in the future.

In relation **to** *The effective time you spend in a week (outside class hours) to study in this course (in minutes*)

Students' adequate independent study time in a week is at most 61-120 minutes for one course, four courses are 180 minutes, while other courses are less than 1 hour. Courses that require 180 minutes or more of independent study are laboratory works. In comparison, theoretical subjects dominate the courses with the 1-hour study category. Students only need 1 hour of independent study time because the lecturers during class can explain well and are structured.

A. Action plans

With these suggestions, the study program plans to take the following action.

No.	Category	Action Plan
1	Increase student' motivation to spend more time on self-study	They conducted a routine evaluation by conducting discussion and sharing information between lecturers, especially lecturers whose students are less active in self-study.

2	Less self-study time than standard workload for the University Common Courses	Emphasize the importance of University Common Courses through such an academic activity conducted by the study program and with the help of students' academic supervisor
3	Maintaining positive responses from students on the suitability of workloads with competencies	It updates the curriculum according to the latest global trends. For example, era 4.0 demands 4C, digital literacy, data literacy, and human literacy. Updating the curriculum will have implications for student responses because it is following the expected competencies.

Students' Workload Survey BEEE

A. Mechanism

With respect to measuring students' workload, in December 2020 UNY has improved the regular students' monitoring and evaluating system by integrating new items to measure students' actual workload. The new system is aimed to measure students' workload for every course at the end of every semester. This monitoring and evaluating system is available online on (http://survey.uny.ac.id/emonev-pbm/take-survey-akhir)

The new system has been implemented since the end of the first semester of the academic year 2020/2021 (i.e. December 2020). The system is managed by the university and each study program has a team who responsible for monitoring and evaluating. The team holds an admin account to retrieve and analyze the survey data. The appearance of the system is shown in the following figure.

14.	Kesesuaian ujian dengan materi yang disampaikan Dosen	5 4 3 2 1
15.	Kepedulian Dosen terhadap kesulitan mahasiswa	5 4 3 2 1
16.	Kesesuaian beban pekerjaan dengan kompetensi yang akan dicapai	5 4 3 2 1
17.	Kemudahan mendapatkan akses tentang penilaian dan tugas-tugas matakuliah	5 4 3 2 1
18.	Kejelasan informasi tentang penilaian	5 4 3 2 1
19.	Dibandingkan dengan mata kuliah yang lainnya, jumlah waktu yang anda habiskan khusus untuk mata kuliah ini	Lebih Sedikit Sama Lebih Banyak
20.	Waktu efektif yang and habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mata kuliah ini (dalam satuan menit)	
B.	**Pembelajaran Masa Pandemi COVID-19 (Pembelajaran di Rumah/Kost/Luar Kampus)**	
1.	Kesesuaian durasi waktu pembelajaran daring dengan jadwal kuliah	5 4 3 2 1
2.	Ketercapaian tujuan perkuliahan melalui pembelajran daring	5 4 3 2 1
3.	Ketepatan metode perkuliahan yang diterapkan dalam pembelajaran daring	5 4 3 2 1
4.	Ketepatan umpan balik yang diberikan dosen dalam pembelajaran daring	5 4 3 2 1
5.	Kemudahan materi daring dipahami	5 4 3 2 1
6.	Kesesuaian tugas yang diberikan dengan Capaian Pembelajaran	5 4 3 2 1
7.	Kesesuaian media pembelajaran yang digunakan dengan karakteristik materi dalam pembelajaran daring	5 4 3 2 1
8.	Kesesuaian teknik penilaian yang digunakan dosen	5 4 3 2 1
9.	Kualitas secara umum perkuliahan ini melalui daring	5 4 3 2 1

In general, the questionnaire in the system is aimed to retrieve data about teaching and learning activities for one semester. Specifically, items related to students' workload are items in section A number 16, 19, and 20.

Table 1. Students' workload questionnaire

Item no.	Statements	Answer Choices
16	Kesesuaian beban pekerjaan dengan kompetensi yang akan dicapai *The suitability of workload with the competencies to be achieved*	○ 5 ○ 4 ○ 3 ○ 2 ○ 1
19	Dibandingkan dengan matakuliah yang lainnya, jumlah waktu yang Anda habiskan khusus untuk mata kuliah *Compared to other courses, the amount of time you spend specifically on this course is*	○ sama ○ lebih sedikit ○ lebih banyak ○ *equal* ○ *less than* ○ *more than*
20	Waktu efektif yang Anda habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mata kuliah ini (dalam menit) *The effective time you spend in a week (outside class hours) to study in this course (in minutes*)	… menit *… minutes*

B. The result

The result of the students' workload survey, for item number 16 was described and converted into categories according to Table 2.

Table 2 Students' Workload Categorization

Score Interval	Score	Category
$X > X_i + 1{,}5\ SB_i$	$X > 4{,}00$	Very Suitable
$X_i + SB_i < X \leq X_i + 1{,}5\ SB_i$	$3{,}67 < X \leq 4{,}00$	Suitable
$X_i - 0{,}5\ SB_i < X \leq X_i + SB_i$	$2{,}67 < X \leq 3{,}67$	Fair
$X_i - 1{,}5\ SB_i < X \leq X_i - 0{,}5\ SB_i$	$2 < X \leq 2{,}67$	Less Suitable
$X \leq X_i - 1{,}5\ SB_i$	$X \leq 2$	Not Suitable

The result was presented in Figure 1.

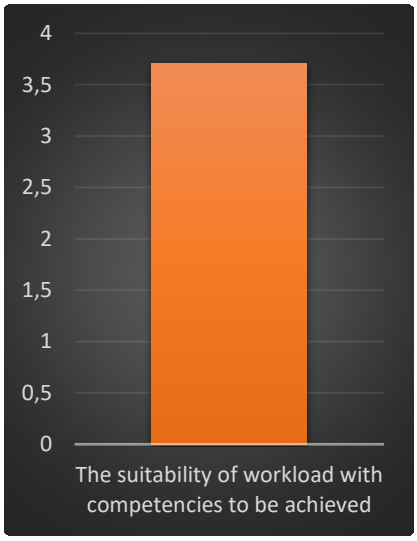


Figure 1. Student Responses Related to Workload Suitability

Based on the result represented in Figure 1, the workload suitability was in the suitable category with an average of 3.71. This is in accordance with the standard workload of the university. The result of the students' workload survey item number 19 was depicted in Table 3 and Figure 2. In all courses, students generally answer that the time they spend in each course is equal to other courses. However, there are several courses with high enough percentage scores for student answers to spend more time on these courses than other courses. These courses include digital transformation (20%), web design (33.33%), basic electronics (25%), and Audio Video systems (50%). In general, the largest percentage of students who answered spent more time on study program concentration courses.

Table 3. Percentage of Student Responses to Item 19

Courses	Less Than	Equal	More Than
Algorithms and Programming Language	5,77%	94,23%	0,00%
Basic Electronics	25,00%	66,67%	8,33%
Medical Electronics	8,51%	87,23%	4,26%
Electronics Physics	16,67%	79,17%	4,17%
Internet of Things	9,43%	84,91%	5,66%
Environmental and Occupational Health and Safety	20,83%	75,00%	4,17%
Creativity, Innovation and Entrepreneurship	10,26%	89,74%	0,00%
Curriculum and Vocational Learning	7,32%	92,68%	0,00%
Workshop and Laboratory Management	12,20%	85,37%	2,44%
Mathematics	4,17%	77,08%	18,75%
Vocational Learning Media	16,98%	79,25%	3,77%
Mechatronics	10,00%	84,00%	6,00%

Courses	Less Than	Equal	More Than
Web Design	33,33%	66,67%	0,00%
Educational Mangement	0,00%	100,00%	0,00%
Audio Video System	50,00%	50,00%	0,00%
Research Methods	0,00%	68,29%	31,71%
Islam Education	4,44%	84,44%	11,11%
Civic Education	14,58%	79,17%	6,25%
Vocational and Technology Education	0,00%	100,00%	0,00%
Digital Signal Processing	12,96%	79,63%	7,41%
Mechatronics Laboratory Work	0,00%	82,35%	17,65%
Educational Psychology	0,00%	100,00%	0,00%
Electrical Circuit	4,17%	72,92%	22,92%
Control System	4,00%	84,00%	12,00%
Microprocessor System	0,00%	92,00%	8,00%
Educational Sociology and Anthropology	0,00%	100,00%	0,00%
Statistics	5,26%	94,74%	0,00%
Digital Transformation	20,00%	76,00%	4,00%

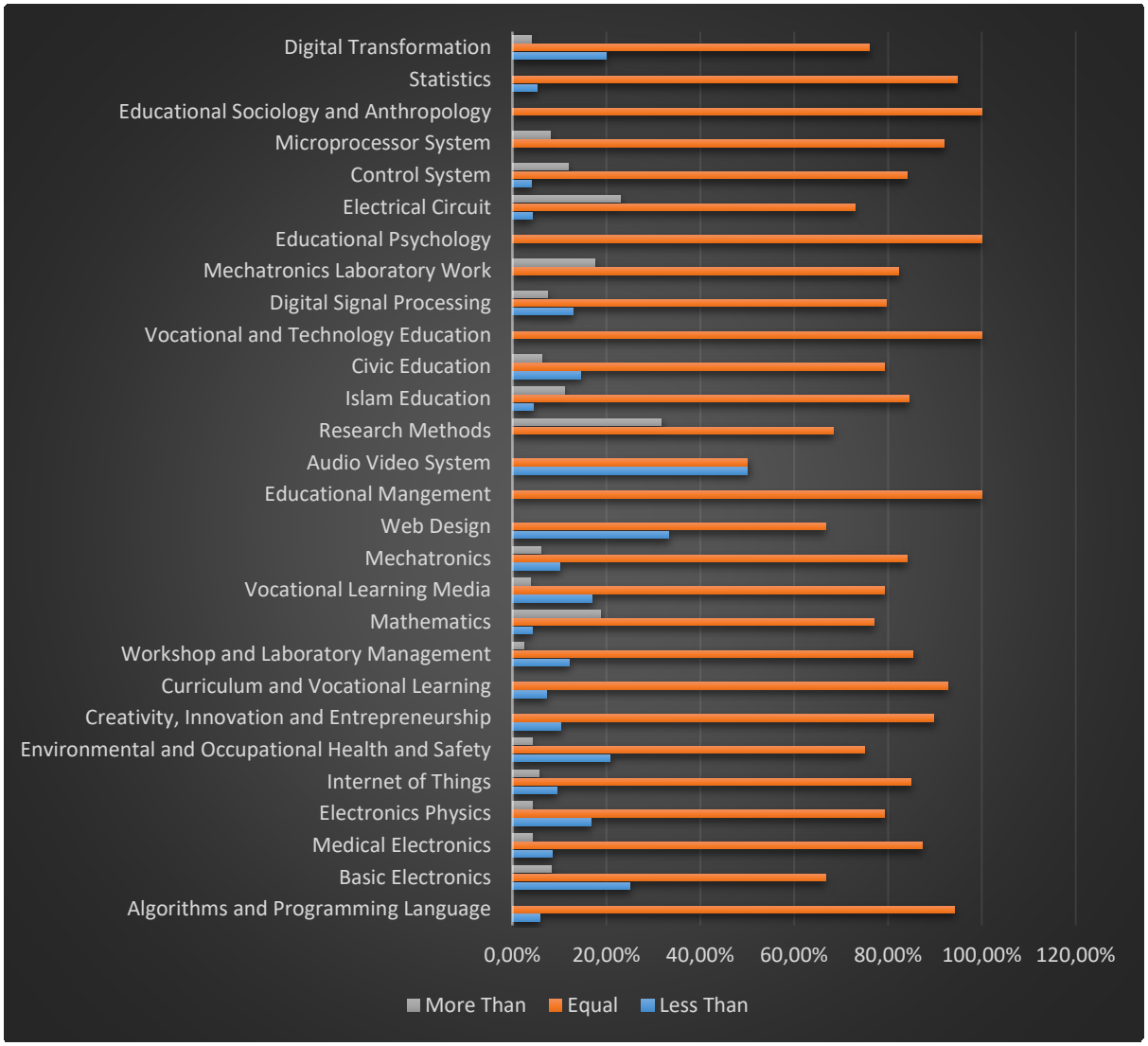


Figure 2. Percentage of Student Responses to Item 19

Based on the results of a survey related to item number 20 *"The effective time you spend in a week (outside class hours) to study this course (in minutes)"*, in general the average percentage of students' time spend to study was 0-60 minutes. However, there are several courses with a fairly high percentage of student time spent 60-120 minutes. The courses are Algorithms and Programming Language (40.38%), Medical Electronics (36.17), Mechatronics (40%), Digital Signal Processing (40.74), and Control Systems (42%). Most of the courses are related to the study program's concentration courses related to the analytical process. Table 4 and Figure 3 depict the more details.

Table 4. Percentage of Study Time Outside Class Hours

Courses	0-60 Minutes	61-120 Minutes	121-180 Minutes	> 180 Minutes
Algorithms and Programming Language	44,23%	40,38%	5,77%	9,62%
Basic Electronics	68,75%	18,75%	2,08%	10,42%
Medical Electronics	53,19%	36,17%	4,26%	6,38%
Electronics Physics	66,67%	22,92%	0,00%	10,42%
Internet of Things	52,83%	30,19%	1,89%	15,09%
Environmental and Occupational Health and Safety	79,17%	12,50%	0,00%	8,33%
Creativity, Innovation and Entrepreneurship	56,41%	35,90%	2,56%	5,13%
Curriculum and Vocational Learning	56,10%	36,59%	4,88%	2,44%
Workshop and Laboratory Management	58,54%	34,15%	2,44%	4,88%
Mathematics	60,42%	27,08%	0,00%	12,50%
Vocational Learning Media	52,83%	32,08%	5,66%	9,43%
Mechatronics	46,00%	40,00%	4,00%	10,00%
Web Design	33,33%	33,33%	0,00%	33,33%
Educational Management	66,66%	33,33%	0,00%	0,00%
Audio Video System	66,66%	33,33%	0,00%	0,00%
Research Methods	46,34%	36,59%	2,44%	14,63%
Islam Education	62,22%	22,22%	2,22%	13,33%
Civic Education	75,00%	14,58%	0,00%	10,42%
Vocational and Technology Education	53,66%	36,59%	4,88%	4,88%
Digital Signal Processing	44,44%	40,74%	3,70%	11,11%
Mechatronics Laboratory Work	41,18%	35,29%	0,00%	23,53%
Educational Psychology	50,00%	50,00%	0,00%	0,00%
Electrical Circuit	60,42%	18,75%	4,17%	16,67%
Control System	40,00%	42,00%	8,00%	10,00%
Microprocessor System	42,00%	38,00%	8,00%	12,00%
Educational Sociology and Anthropology	66,67%	33,33%	0,00%	0,00%
Statistics	50,00%	39,47%	5,26%	5,26%
Digital Transformation	56,00%	32,00%	2,00%	10,00%

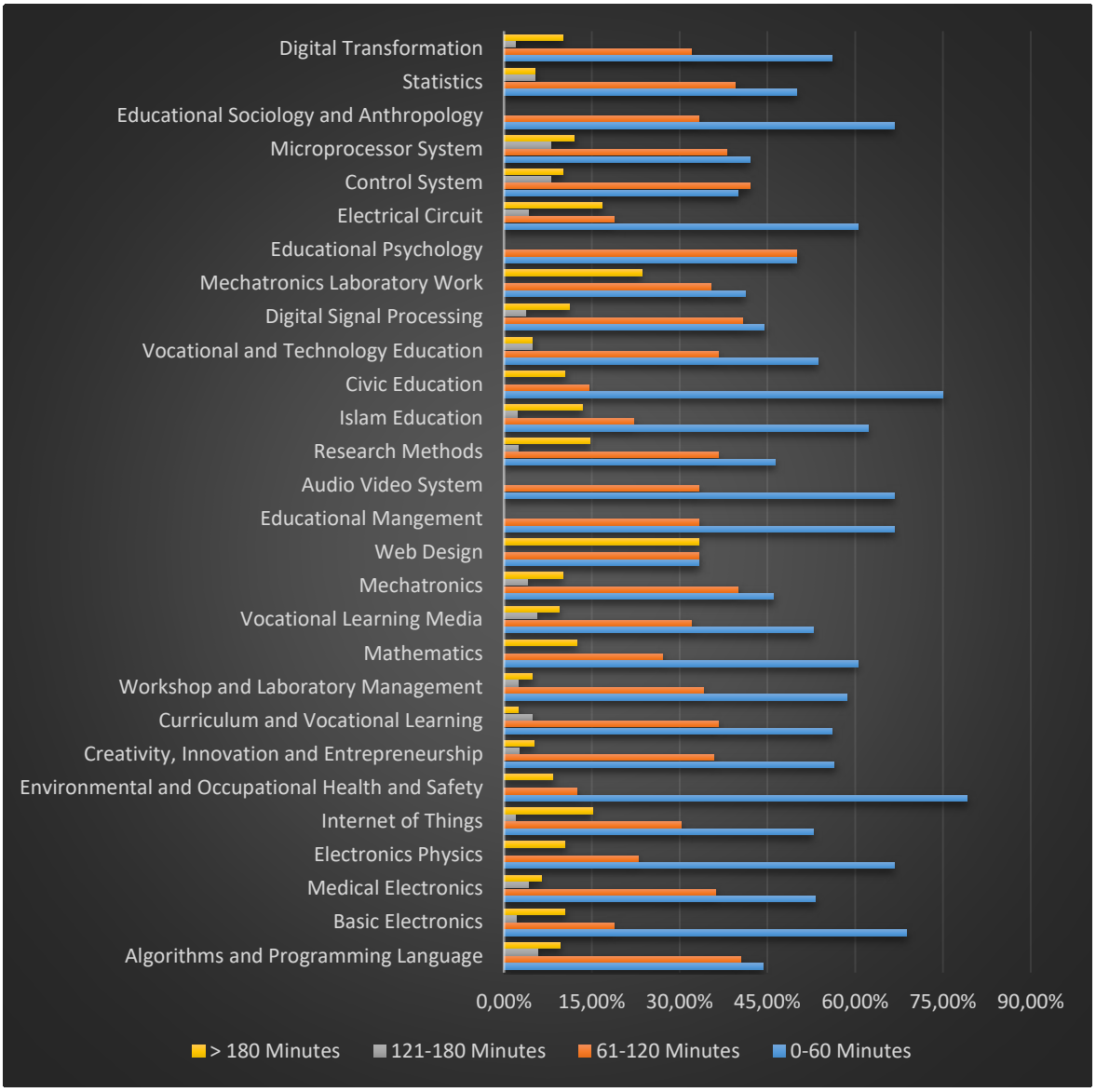


Figure 3. Percentage of Study Time Outside Class Hours

Overall, the result of this survey shows that in general students' factual workload was in accordance with the standard workload as mentioned in the Academic Regulation. Nevertheless, the survey revealed that students spent less self-study time than standard workload for the University Common Courses.

C. Suggestions

Here are some suggestions which are obtained from the survey.

In relation to *The suitability of workload with the competencies to be achieved*

Student responses related to the suitability of workloads with the competencies to be achieved have been good. This needs to be maintained. For some courses that have not suitable, the suitability needs to be improved so that students get a satisfactory quality of service.

In relation to *Compared to other courses, the amount of time you spend specifically on this course is*

In general, the amount of time students spend on all courses are equal to the others. However, there are several courses with high enough percentage scores for student answers to spend more time on these courses than other courses. The largest percentage of students who answered spent more time on study program concentration courses. This needs to be maintained. One and other courses support each other to produce students who have good Program Objectives.

In relation to *The effective time you spend in a week (outside class hours) to study in this course (in minutes*)

In general, the average percentage of students' time spend to study was 0-60 minutes. However, there are several courses with a high percentage of student time spent 60-120 minutes. This needs to be a concern, especially for subjects that have different independent learning gaps. Students have different awareness to study independently. To increase students' motivation to spend more time, lecturers should implement innovative learning, structured assignments accompanied by feedback.

D. Action plans

With these suggestions, the study program plans to take the following action.

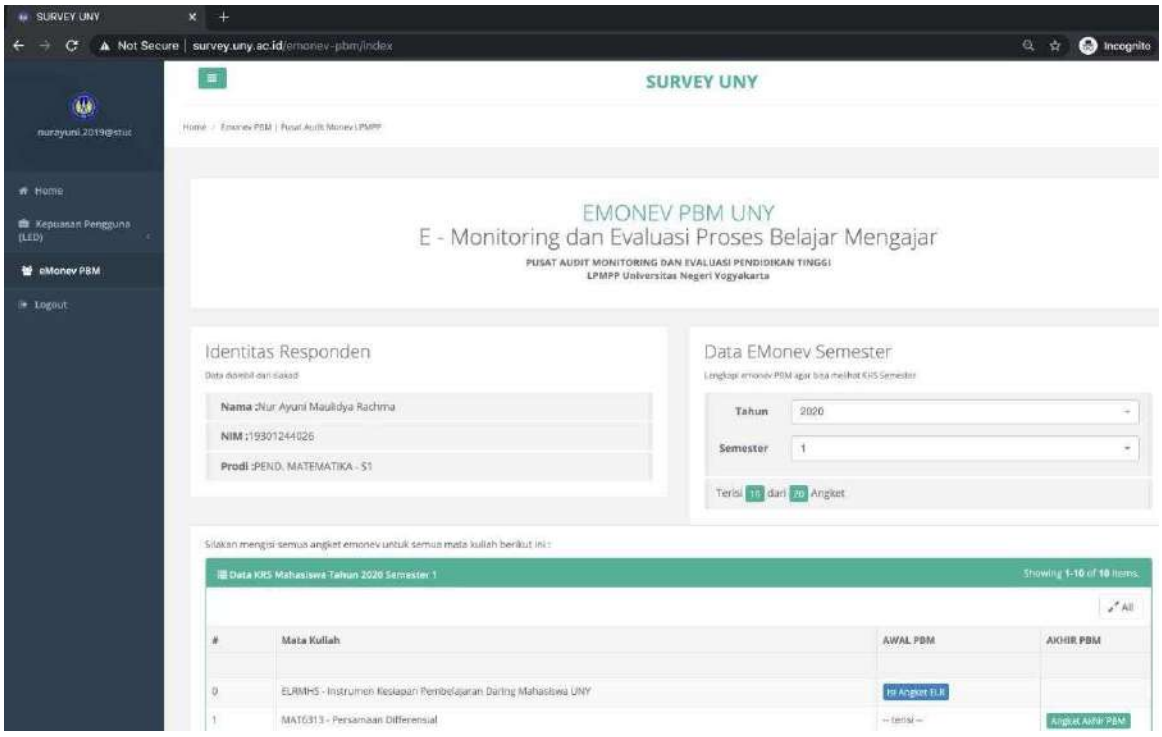
No	Category	Action Plan
1	Increase student' motivation to spend more time on self-study	Carrying out routine evaluation through conducting discussion and sharing information between lecturers, especially between lecturers whose students are less active on self-study
2	Less self-study time than standard workload for the University Common Courses	Emphasizing the importance of University Common Courses through academic activities carried out by each course and lecturer. It is used to increase students' awareness of self-study.
3	Maintaining positive responses from students on the suitability of workloads with competencies	Updating the learning process in accordance with technological advances, especially in the field of electronics engineering. For example, using various technologies and simulators for distance learning during post-pandemic period. This will have implications for student responses because what will be learned is in accordance with the expected competencies.

Students' Workload Survey Bachelor of Information Technology

A. **Mechanism**

Regarding estimating understudies' responsibility, in December 2022, UNY has improved the customary understudies' checking and assessing framework by incorporating new things to gauge understudies' real responsibility. This new system is designed to measure student workload for each course. Data collection is carried out at the end of each semester. This monitoring and evaluating system is available online on (http://survey.uny.ac.id/emonev-pbm/take-survey-akhir)

The new system has been implemented since the end of the second semester of 2019/2020 (i.e. August 2020). The university manages the system, and each study program has a team responsible for monitoring and evaluating. The team holds an admin account to retrieve and analyze the survey data. The appearance of the system is shown in the following figure.



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eMonev PBM

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ANGKET MONITORING DAN EVALUASI PERKULIAHAN AKHIR SEMESTER

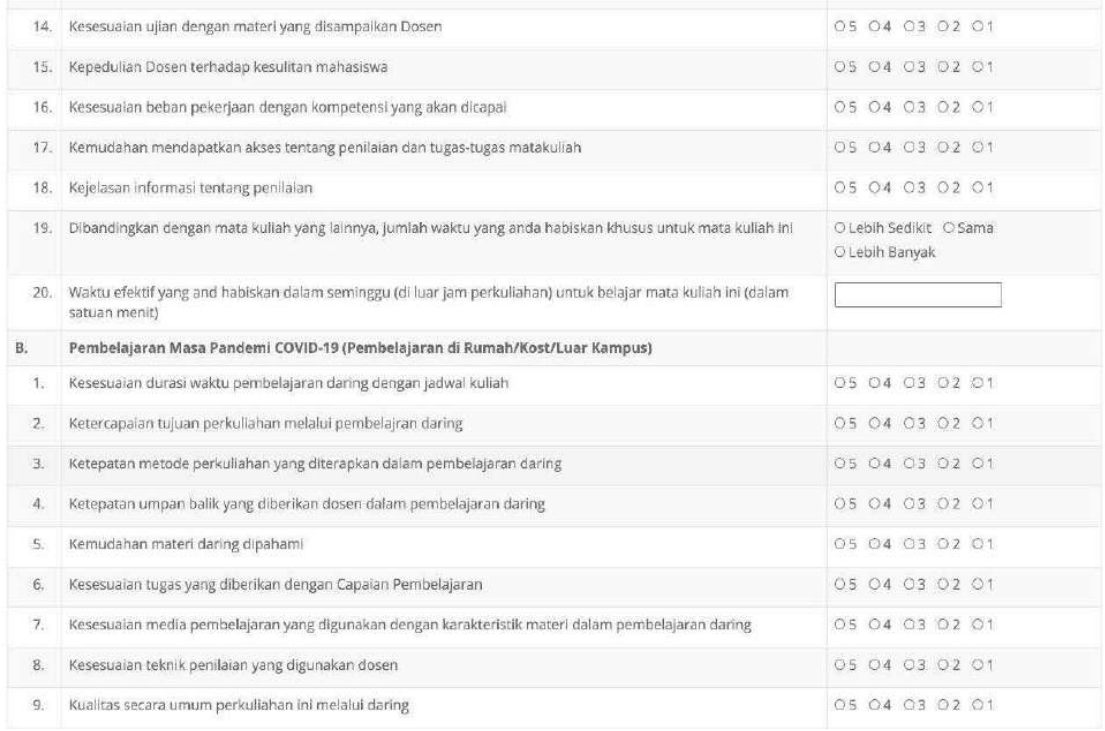
Tahun Akademik 2020/2021 Semester Ganjil

Mata Kuliah : MAT6313 - Persamaan Differensial
Dosen : Drs. Tuharto, M.Si.

Petunjuk :
Isilah angket berikut ini sesuai dengan kondisi yang Anda alami. Masukan Anda akan sangat berguna bagi kualitas pendidikan.
Pilih radio button pada skala yang Anda pilih.

- ☑ 5 : Sangat baik
- ☐ 4 : Baik
- ☐ 3 : Biasa
- ☐ 2 : Kurang
- ☐ 1 : Sangat kurang

NO	PERNYATAAN	SKALA PENILAIAN
A.	**Pembelajaran di Kampus (sebelum Pandemi COVID-19)**	
1.	Kesesuaian pembelajaran dengan Rencana Pembelajaran Semester (RPS)	○5 ○4 ○3 ○2 ○1
2.	Keruntutan dosen dalam penyampaian materi dalam perkuliahan	○5 ○4 ○3 ○2 ○1
3.	Kemampuan dosen dalam, memotivasi mahasiswa dalam perkuliahan	○5 ○4 ○3 ○2 ○1



14.	Kesesuaian ujian dengan materi yang disampaikan Dosen	○5 ○4 ○3 ○2 ○1
15.	Kepedulian Dosen terhadap kesulitan mahasiswa	○5 ○4 ○3 ○2 ○1
16.	Kesesuaian beban pekerjaan dengan kompetensi yang akan dicapai	○5 ○4 ○3 ○2 ○1
17.	Kemudahan mendapatkan akses tentang penilaian dan tugas-tugas matakuliah	○5 ○4 ○3 ○2 ○1
18.	Kejelasan informasi tentang penilaian	○5 ○4 ○3 ○2 ○1
19.	Dibandingkan dengan mata kuliah yang lainnya, jumlah waktu yang anda habiskan khusus untuk mata kuliah ini	○ Lebih Sedikit ○ Sama ○ Lebih Banyak
20.	Waktu efektif yang and habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mata kuliah ini (dalam satuan menit)	
B.	**Pembelajaran Masa Pandemi COVID-19 (Pembelajaran di Rumah/Kost/Luar Kampus)**	
1.	Kesesuaian durasi waktu pembelajaran daring dengan jadwal kuliah	○5 ○4 ○3 ○2 ○1
2.	Ketercapaian tujuan perkuliahan melalui pembelajran daring	○5 ○4 ○3 ○2 ○1
3.	Ketepatan metode perkuliahan yang diterapkan dalam pembelajaran daring	○5 ○4 ○3 ○2 ○1
4.	Ketepatan umpan balik yang diberikan dosen dalam pembelajaran daring	○5 ○4 ○3 ○2 ○1
5.	Kemudahan materi daring dipahami	○5 ○4 ○3 ○2 ○1
6.	Kesesuaian tugas yang diberikan dengan Capaian Pembelajaran	○5 ○4 ○3 ○2 ○1
7.	Kesesuaian media pembelajaran yang digunakan dengan karakteristik materi dalam pembelajaran daring	○5 ○4 ○3 ○2 ○1
8.	Kesesuaian teknik penilaian yang digunakan dosen	○5 ○4 ○3 ○2 ○1
9.	Kualitas secara umum perkuliahan ini melalui daring	○5 ○4 ○3 ○2 ○1

In general, the questionnaire in the system is aimed to retrieve data about teaching and learning activities before and after Covid-19 pandemic. Specifically, items related to students' workload are items in section A number 16, 19, and 20.

Table 1. Students' workload questionnaire

Item no.	Statements	Answer Choices
16	Kesesuaian beban pekerjaan dengan kompetensi yang akan dicapai *The suitability of workload with the competencies to be achieved*	○ 5 ○ 4 ○ 3 ○ 2 ○ 1
19	Dibandingkan dengan matakuliah yang lainnya, jumlah waktu yang Anda habiskan khusus untuk mata kuliah *Compared to other courses, the amount of time you spend specifically on this course is*	○ sama ○ lebih sedikit ○ lebih banyak ○ *equal* ○ *less than* ○ *more than*
20	Waktu efektif yang Anda habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mata kuliah ini (dalam menit) *The effective time you spend in a week (outside class hours) to study in this course (in minutes*)	….

B. **The result**

The result of the students' workload survey, for item number 16 was described and converted into categories according to Table 1.

Table 2. Students' Workload Categorization

Score Interval	Score	Category
$X > X_i + 1{,}5\ SB_i$	$X > 4{,}00$	Very Suitable
$X_i + SB_i < X \leq X_i + 1{,}5\ SB_i$	$3{,}67 < X \leq 4{,}00$	Suitable
$X_i - 0{,}5\ SB_i < X \leq X_i + SB_i$	$2{,}67 < X \leq 3{,}67$	Fair
$X_i - 1{,}5\ SB_i < X \leq X_i - 0{,}5\ SB_i$	$2 < X \leq 2{,}67$	Less Suitable
$X \leq X_i - 1{,}5\ SB_i$	$X \leq 2$	Not Suitable

The result was presented in Figure 1. (butir 16)

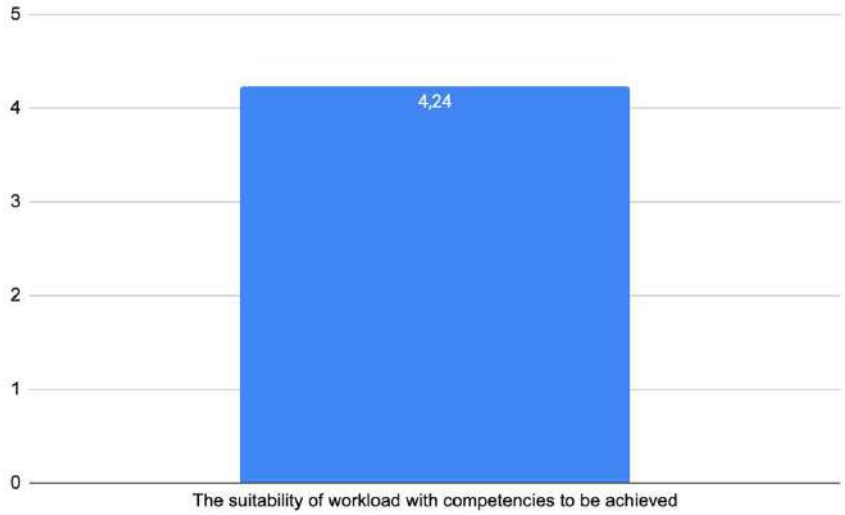


Figure 1. The BIEE Students Workload

Based on the result represented in Figure 1, the workload suitability was in the suitable category with an average of 4,24. This is in accordance with the standard workload of the university.

The result of the students' workload survey item number 19 was depicted in Table 2 and Figure 2. The subject of Web Application Laboratory Work, Web Design Laboratory Work, Network Administration Laboratory Work, Industrial Internship, Differential Equations, Creativity, Innovation and Entrepreneurship, Project Management 1, and Logic, had percentage of students answered "more than" above 50%. The dominating subjects are laboratory work courses that require repeated practice to achieve the desired competencies. For basic science (Differential Equations and Logic), students need more times to learn the material, and for Industrial Internship, students are directly at the industry to complete all their assignments. Meanwhile, for other courses, students generally answered that the time they spent in other courses was equal to that course.

Table 2. Percentage of BIEE Student Responses to Item 19

Course	More Than	Less Than	Equal
Network Administration****	25.00	25.00	50.00
Programming Algorithms	15.63	5.21	79.17
Linear Algebra	9.38	7.29	83.33
Web Applications	14.63	7.32	78.05
English for Engineering	17.07	12.20	70.73
Databases	30.30	2.02	67.68
Web Design*****	31.82	9.09	59.09
Physics	4.00	14.00	82.00
Human Computer Interaction	34.15	7.32	58.54

Course	More Than	Less Than	Equal
Single Variable Calculus	8.00	28.00	64.00
Data Communications	9.18	12.24	78.57
Wireless Communications *2)	10.00	40.00	50.00
Creativity. Innovation and Entrepreneurship	20.51	66.67	12.82
Logic	4.00	86.00	10.00
Project Management 1	13.89	75.00	11.11
Project Management 2	9.38	12.50	78.13
Information Systems Management***	33.33	16.67	50.00
Digital Media	7.14	9.18	83.67
Numerical Methods	8.16	13.27	78.57
Interractive Multimedia*****	35.71	21.43	42.86
Computer Organizations	6.00	8.00	86.00
Programming 1	40.00	2.00	58.00
Visual Programming	12.37	15.46	72.16
Hinduism Education	7.14	14.29	78.57
Islam Education	94.44	2.78	2.78
Confucianism Education	6.67	24.44	68.89
Mobile Application Development *1)	26.32	5.26	68.42
Digital Image Processing*3)	14.29	19.05	66.67
Differential Equations	30.19	64.15	5.66
Web Design Laboratory Work*****	5.88	58.82	35.29
Interractive Multimedia Laboratory Work*****	66.67	6.67	26.67
Scripting Languages Laboratory Work***	80.00	10.00	10.00
Network Administration Laboratory Work****	7.41	59.26	33.33
Programming Algorithms Laboratory Work	86.25	8.75	5.00
Web Applications Laboratory Work	43.48	52.17	4.35
Databases Laboratory Work	80.82	17.81	1.37
Industrial Internship	34.43	60.66	4.92
Data Communications Laboratory Work	93.55	1.61	4.84
Information Systems Management Laboratory Work ***	16.67	33.33	50.00
Programming 1 Laboratory Work	46.15	3.85	50.00
Mobile Application Development Laboratory Work*1)	29.41	11.76	58.82
Digital Image Processing Laboratory Work *3)	14.29	14.29	71.43
Digital Electronics Laboratory Work	28.85	1.92	69.23
Software Engineering	45.92	5.10	48.98
Scripting Language***	5.88	35.29	58.82
Digital Electronics	26.00	2.00	72.00
Probability Theory	4.88	21.95	73.17
Digital Transformation	2.00	20.00	78.00
Vectors and Matrices	28.00	10.00	62.00

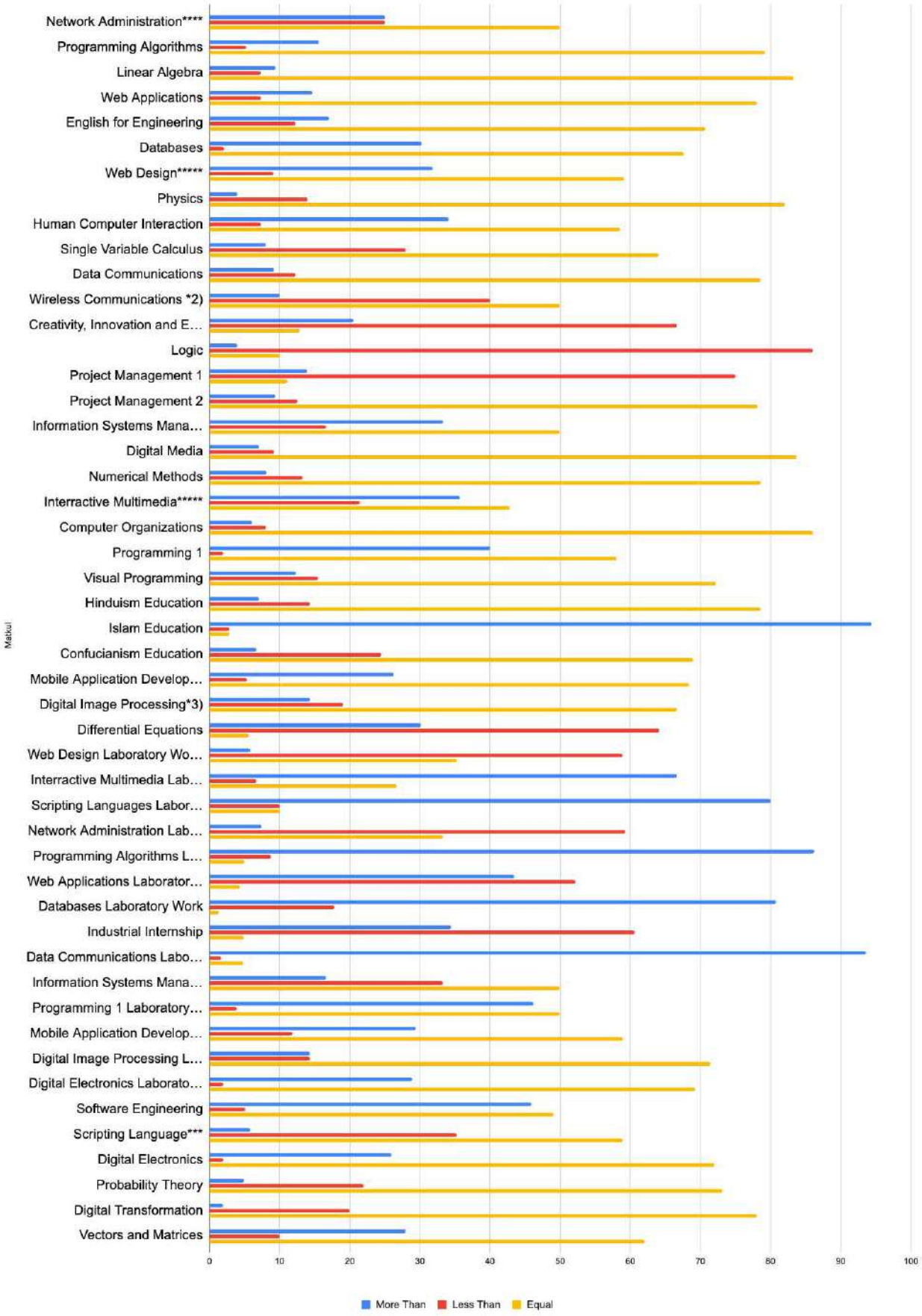


Figure 2. Percentage of Student Responses to Item 19

Based on the results of a survey related to item number 20 *"The effective time you spend in a week (outside class hours) to study this course (in minutes)"*, there were two courses that get a dominant time spend of more than 180 minutes/week, namely Information Systems Management Laboratory Work (44,44%) and Network Administration (50%). These courses are concentration courses, elective courses, and laboratory works elective courses. These courses are also intended for students from the second year onwards. So they need more time to learn to get a comprehensive understanding.

The results also showed that there were nine courses which study time spend were less than or equal to 1 hour/week, namely Islam Education (76%), course that required less than 60 minutes of time were dominated by universitary courses and a small portion of specific study program courses. In general, the average percentage of students' time spend to study was 60-120 minutes. Table 3 and Figure 3 depict the more details.

Table 3. Percentage of Study Time Outside Class Hours (in minutes) (butir 20)

Course	0-60	61-120	121-180	>180
Network Administration****	50.00	0.00	0.00	50.00
Programming Algorithms	43.75	41.67	3.13	11.46
Linear Algebra	41.67	42.71	4.17	11.46
Web Applications	41.46	53.66	4.88	0.00
English for Engineering	48.78	43.90	4.88	2.44
Databases	36.36	41.41	07.07	15.15
Web Design*****	45.45	31.82	09.09	13.64
Physics	24.00	72.00	4.00	0.00
Human Computer Interaction	36.59	46.34	4.88	12.20
Single Variable Calculus	16.00	76.00	6.00	2.00
Data Communications	47.96	36.73	04.08	11.22
Wireless Communications *2)	40.00	40.00	20.00	0.00
Creativity. Innovation and Entrepreneurship	46.15	51.28	2.56	0.00
Computer Organizations	41.46	53.66	4.88	0.00
Confucianism Education	47.96	36.73	04.08	11.22
Data Communications Laboratory Work	40.48	40.48	11.90	7.14
Databases Laboratory Work	36.36	41.41	07.07	15.15
Differential Equations	20.00	72.00	4.00	4.00
Digital Electronics	20.00	72.00	4.00	4.00
Digital Electronics Laboratory Work	24.00	72.00	4.00	0.00
Digital Image Processing Laboratory Work *3)	48.78	43.90	4.88	2.44
Digital Image Processing*3)	46.15	51.28	2.56	0.00
Digital Media	50.00	35.00	15.00	0.00

Digital Transformation	36.36	41.41	07.07	15.15
Hinduism Education	36.59	46.34	4.88	12.20
Industrial Internship	45.45	31.82	09.09	13.64
Information Systems Management Laboratory Work ***	33.33	11.11	11.11	44.44
Information Systems Management***	55.56	22.22	0	22.22
Interractive Multimedia Laboratory Work*****	33.33	66.67	0.00	0.00
Interractive Multimedia*****	44.44	33.33	22.22	0.00
Islam Education	76.00	16.00	6.00	2.00
Logic	20.00	72.00	4.00	4.00
Mobile Application Development Laboratory Work*1)	41.46	53.66	4.88	0.00
Mobile Application Development *1)	40.00	40.00	20.00	0.00
Network Administration Laboratory Work****	46.15	51.28	2.56	0.00
Numerical Methods	43.75	41.67	3.13	11.46
Probability Theory	35.14	51.35	5.41	8.11
Programming 1	48.78	43.90	4.88	2.44
Programming 1 Laboratory Work	41.67	42.71	4.17	11.46
Programming Algorithms Laboratory Work	20.00	72.00	4.00	4.00
Project Management 1	35.14	51.35	5.41	8.11
Project Management 2	36.36	41.41	07.07	15.15
Scripting Language***	46.15	51.28	2.56	0.00
Scripting Languages Laboratory Work***	40.00	40.00	20.00	0.00
Software Engineering	40.00	40.00	20.00	0.00
Vectors and Matrices	45.45	31.82	09.09	13.64
Visual Programming	24.00	72.00	4.00	0.00
Web Applications Laboratory Work	35.14	51.35	5.41	8.11
Web Design Laboratory Work*****	35.14	51.35	5.41	8.11

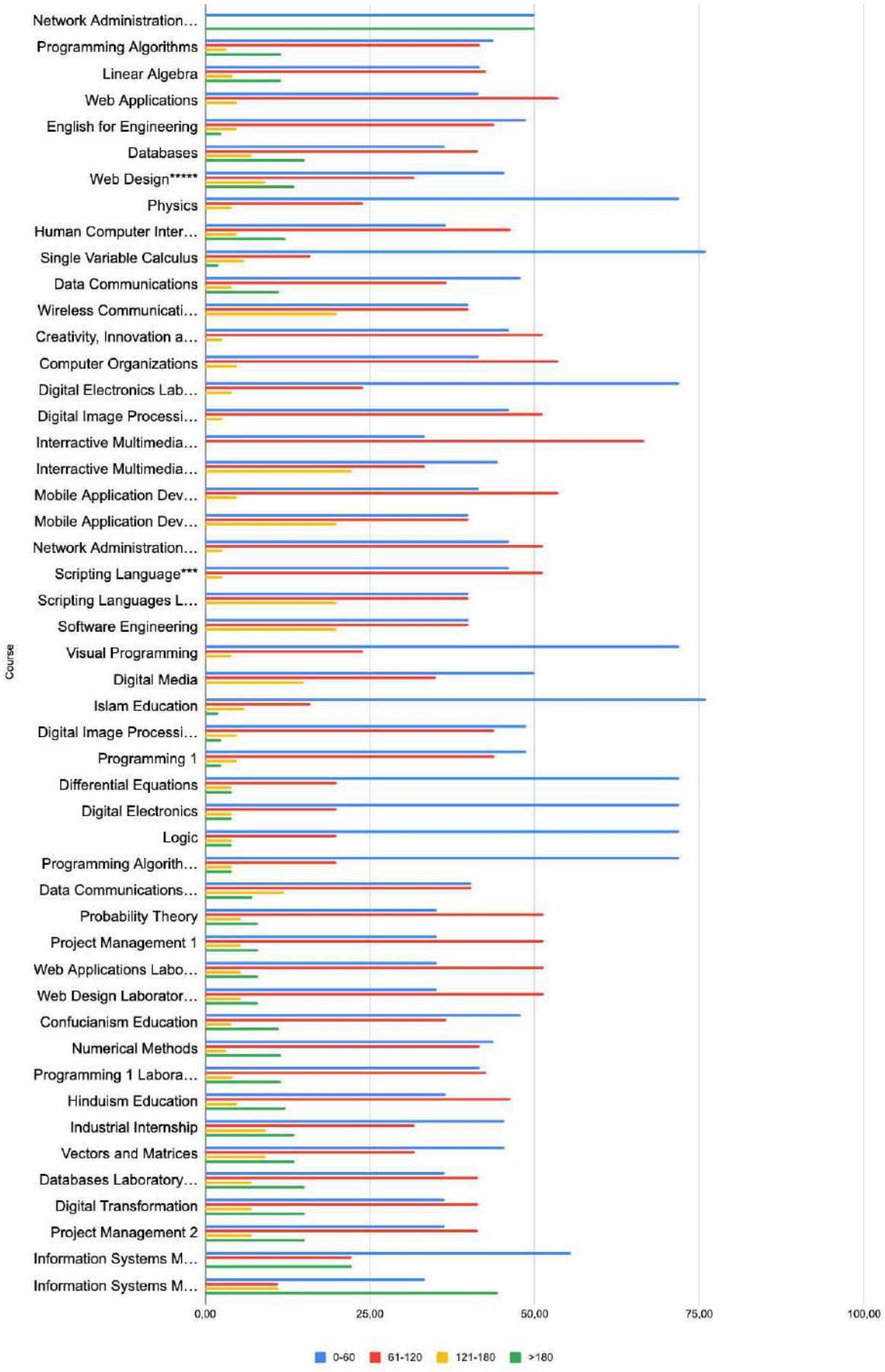


Figure 3. Percentage of Study Time Outside Class Hours

The survey results that have been carried out show that the student workload has demonstrated the standard workload following the Academic Regulations. Specifically for general university courses, the survey revealed that students spent time for independent study is less than studying concentration courses from the study program.

C. **Suggestions**

Here are some suggestions which are obtained from the survey.

In relation to *The suitability of workload with the competencies to be achieved*

The suitability of the workload with competence has been responded to by students and produced good results, but efforts are needed to improve to become excellent. For courses whose response results are still lacking, efforts are needed to improve the suitability of student workloads for the quality of service to become better.

In relation to *Compared to other courses, the amount of time you spend specifically on this course is*

Overall, the amount of time required to study Concentration Courses (according to the study program) is more than General Courses from universities, especially for laboratory work courses with confident choices/concentrations. This result is following the number of credits per course taken by students. General courses and introductory education courses provide essential competencies for prospective informatics teachers to use good teaching strategies and methods. Meanwhile, special courses (concentration/electives) provide students with the information skills needed to work in the future.

In relation to *The effective time you spend in a week (outside class hours) to study in this course (in minutes*)

Students' adequate independent study time in a week is at most 61-120 minutes for one course, four courses are 180 minutes, while other courses are less than 1 hour. Courses that require 180 minutes or more of independent study are laboratory works. In comparison, theoretical subjects dominate the courses with the 1-hour study category. Students only need 1 hour of independent study time because the lecturers during class can explain well and are structured.

D. **Action plans**

With these suggestions, the study program plans to take the following action.

No.	Category	Action Plan
1	Increase student' motivation to spend more time on self-study	They conducted a routine evaluation by conducting discussion and sharing information between lecturers, especially lecturers whose students are less active in self-study.
2	Less self-study time than standard workload for the University Common Courses	Emphasize the importance of University Common Courses through such an academic activity conducted by the study program and with the help of students' academic supervisor
3	Maintaining positive responses from students on the suitability of workloads with competencies	It updates the curriculum according to the latest global trends. For example, era 4.0 demands 4C, digital literacy, data literacy, and human literacy. Updating the curriculum will have implications for student responses because it is following the expected competencies.

Quality Assurance Unit
Faculty of Engineering
Yogyakarta State University