EDUCATION FIELD PRACTICE REPORT(PLK)

Supervising Lecturer

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BUILDING ENGINEERING EDUCATION PROGRAM

CIVIL ENGINEERING COURSES

FACULTY OF ENGINEERING

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Foreword

Assalamu'alaikum warahmatullahi wabarakatu

All praise be to Allah SWT who has given us ease so that I can finish this learning tool in a timely manner. Without helpnyes of course I would not be able to finish this learning tool well. Shalawat and greetings may be bestowed to his beloved prophet Muhammad SAW that we will intercede in the hereafter. I thank Allah SWT for the abundance of his healthy favors, both in the form of physical health and reason, so that I was able to finish making learning devices as the final report of the Educational Field Experience (PLK) that I have been living for 3 months.

Not to forget I also thanked the principal, head of department, father / mother of teachers for accepting me to carry out plk in SMK Negeri 1 Padang and Mr. Syaiful Ikhwan, S.Pd as my pamong who has given a lot of knowledge, lessons, experiences and many sharing knowledge to me during this plk period. I certainly realize that this learning tool is far from perfect and there are still many mistakes and flaws in it. Therefore, I expect criticism and suggestions from readers for this learning tool, so that this learning tool can later become a better learning tool. I would also like to thank all parties, especially to my plk supervisor, Mr. Drs. Revian Body, M.Sa whoguided me during thisplk.

Thus, hopefully this learning tool can be useful. Thank.

Padang, 22 September 2020

Nabilah Nur Qori'ah

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CHAPTER I

Introduction

A. Background of PLK Implementation

Educational Field Experience (PLK) is one of the requirements in completing studies for students of educational programs. This activity aims to provide experience to students through teaching exercises and non-teaching exercises in the field in a guided and integrated manner in order to improve the quality of future educators.

In addition, PLK also aims to form and produce professional educators, spirited pancasila, berqwa, and uphold the 1945 Constitution. Qualified educators not only have adequate knowledge, attitudes and skills, but also must have a steady experience in the learning process.

During the COVID-19 virus pandemic, the implementation of teaching and learning activities for all levels of education was abolished. Thus, PLK activities are conducted online. However, students still go to school to do virtual learning.

B. PLK Objectives

1. General purpose

   To provide real experience to undergraduate students of education in applying knowledge, attitudes and skills that can support the achievement of pedagogic competency mastery, personality, social and mastery of the subject matter as a whole.

2. Special purpose

In particular, PLK activities have the following objectives:

a. Know carefully the physical, administrative, academic and social psychology environment in the school where the pre-service training takes place.

b. Mastering the sharing of basic learning skills.

c. Applying a variety of professional teaching skills in a complete and integrated in a real atmosphere.

d. Able to develop personal and social aspects in the school environment.

e. Draw conclusions of educational value from his passion and experience during training through reflection and pouring the results of that reflection in the form of the final report on the implementation of PLK activities.

C. PLK Time and Place

1. PLK Time

   The implementation time of Lanpangan Ke pendidikan practice in the odd semester of the 2020/2021 school year.

2. Plk Place

   Lanpangan Ke pendidikan practice is conducted at SMK Negeri 1 Padang with the address On Jl, Mahmud Yunus, Anduring, Kec. Kuranji, Padang City, West Sumatra 25152.

CHAPTER II

INTRODUCTION TO THE SCHOOL ENVIRONMENT

A. School Brief History

SMK Negeri 1 Padang is the first vocational school in West Sumatra that was founded in 1952 named Sekolah Teknologi Menengah (STM) Padang with Principal Mr. YOHAN ELANT, the first campus at SMA Negeri 1 Padang now for 6 months, and in SMP 3 now for 18 months. In 1954 STM Padang got a new campus in Simpang Haru now become SMKN 2 Padang. The increasing number of school-age population and the development of technology and the magnitude of community animo towards STM Padang, while the capacity is limited then in 1975 STM Padang was developed into two, STM Negeri 1 Padang in Simpang Haru and STM Negeri 2 Padang in Andalas is now SMP 31 Padang. STM Negeri 2 Padang moved to a new location in Lolong Padang is now smk Negeri 5 Padang.

STM Negeri 1 Padang continues to grow, progress and achievements are always increasing, the location of Simpang Haru needs to be developed in 1980 built a new building on Jl. Mahmud Yunus Kampung Kelawi Kuranji Padang District. The use of this new building was inaugurated by Dr. Daoed Yoesoef, Minister of Education and Culture of the Republic of Indonesia on Monday, March 8, 1982. Now it is called SMK Negeri 1 Padang. Seeing the condition of Padang city and population growth data is always increasing every year ± 2%, the number of students who can study at SMKN 1 Padang as many as 45 classes for 9 skills programs, the conditions above SMKN 1 Padang need to be developed again. So in 2002 SMK Negeri 1 Padang opened a new department namely Fisheries and Marine Engineering with the Marine FisheriesNautika Expertise Program and Marine Fisheries Engineering prepared to become prospective students of SMK Negeri 10 Padang. InsyaAllah year of study 2007/2008 Marine Fisheries Engineering Program (NPL) and Marine Fisheries Engineering (TPL) will occupy the new location smkn 10 Padang, campus

SMK N 10 Padang has begun to be built in 2005 located at Jalan Mega No. 5 Lubuk Buaya Subdistrict Koto Tangah Padang City.

B. School Profile

1. Vision

In the teacher council meeting, it has been determined that in the 20 20/2021 year the vision of SMK Negeri 1 Padang is: ***"The realization of Smart, Competitive, Independent, and Bera**k**hlak Mulia"***

Table 2.1. Vision Achievement Indicators

№.	Vision Components	Achievement Indicators
1.	SmartPass L	*a)* Excel in achieving a Final School Exam (UAS) score above the *School* average b) Excel in entering college c) Excel in making innovative work
2.	Competitive	a) Excel in various Mapel competitions b) Excel in various sports competitions c) Excel in various art competitions d) Excel in religious competitions e) Excel in speech competitions f) Excel in Skills competition g) Excel in creative writing competitions (literature)
3.	Mandiri	a) Excel in entering the world of work inside and outside the region b) Excel in entrepreneurship c) Excel in the skills possessed
4.	Berakhlak Mulia	a) Excel in discipline b) Excel in religious activities c) Excel in social care

2. School Mission

Furthermore, based on the above vision, the mission of SMK Negeri 1 Padang is as follows:

a. Conducting education based on faith and taqwa
b. Provide life skills-oriented education services
c. Develop teacher professionalism in improving the quality of learning in the classroom
d. Producing graduates with competitive advantage in the global era
e. Instilling a sense of responsibility for the cleanliness, beauty and comfort of the school.
f. Improving the orderly administration and orderly activities in accordance with the main duties and functions of each

3. School Objectives

In general the purpose of the education unit:

a. Creating a tamatan that has a noble personality and noble character.
b. The creation of a mid-level workforce that is kompeten and able to compete at theinternational level.
c. The creation of graduates who are able to have a career, independent, and able to adapt in the field of employment.
d. Masyarakat school has a clean, beautiful, and healthy culture and discipline.
e. The establishment of an administrative order in accordance with the agreed procedures and rules.
f. There is an inten cooperation and mutual benefits with the business world / domestic and foreign industries.

a. Objectives of Construction and Property Engineering Skills Program

Specifically the purpose of the Construction and Property Engineering Skills Program is to equip learners with the skills, knowledge and attitude to be competent :

1) Produce a godly, intelligent and able to compete in the global market.

2) Produce a creative and innovative tamatan in accordance with the development of Technology Engineering and have a kompetensi on Ilmu engineering drawings,Ilmu Mechanical Engineering,Dasar-basic building construction and soil measurement practices as well as Mastering simulation and digital communication.

b. Objectives of Competency Expertise

The purpose of Competency Expertise is to produce graduates who are ready to work, present themselves as human beings who believe and trust in God Almighty, virtuous, healthy physically and spiritually, have a steady and independent personality and have a sense of civic and national responsibility and have skills, knowledge and competent attitudes on:

1) Completion of Building Modeling and Information Design Competency

The completion of The Competency of Modeling Design and Building Information must present itself as a human being who believes and believes in God Almighty, virtuous, healthy physically and spiritually, has a steady and independent personality and has a sense of civic and national responsibility and has the ability in terms of :

№	Subjects
1	Building Interior Design and Software Applications
2	Road and Bridge Construction
3	Estimated Construction Costs
4	Building Construction and Utilities
5	Creative and Entrepreneurial Products

2). Completion of Construction and Property Business Competency

The end of competence bisnis konstruksi and properti must present itself as a human being who believes and believes in God Almighty, virtuous, healthy physically and spiritually, has a steady and independent personality and has a sense of civic and national responsibility and has the ability in terms of :

№	Subjects
1	Construction and Property Business Planning
2	Implementation and Supervision of Construction and Property
3	Estimated Construction and Property Costs
4	Construction and Property Business Management
5	Creative and Entrepreneurial Products

C. School Situation

1. Physical Condition of School

a. Office Space

SMK Negeri 1 Padang with The Department of Buildings has three office spaces namely Kepala Sekolah room, teacher room, and TUroom.The Principal and TU rooms are located right at the entrance or in front of the gate, the teacher'smoney is behind the TU and thePrincipal's room consists of teacher tables and chairs equipped with wall clocks, teacher cupboards and other teaching and learning devices.

b. Classroom

SMK Negeri 1 Padang with The Department of Buildings has rclass money used for teaching and learning activities with standard size, good condition, clean, there are whiteboards, erasers and markers. There are 12 classes, including:

1) 4 X-class rooms
2) 4 XI classrooms
3) 4 classrooms XII

a. Workshop

SMK Negeri 1 Padang with The Department of Buildings has three workshoprooms, including concrete workshop, wood workshop, and drawing workshop. Concrete workshop has tools such as iron cutting scissors, water hoses, shovels, cement spoons and other concrete tools. Wood worshop has tools one

wood cutting machine and tools such as hammers, chisels and so on. The drawing workshop has tools such as pencil tapers, elbows, whiteboards, erasers and markers.

b. Library

The library is located on the2nd floor of the office and is located behind the Principal and TU rooms. The library is used as a self-learning place with a wide collection of fiction and non-fiction books. Inthis erpustakaancan wc for students or other visitors who want to read and borrow books in the library and the main room there are shelves to put library books, desk chairs and classification of reading places and rlast money is a warehouse that is used as a storage of books that are no longer used.

c. Sports Facilities

Sports Facilities located in SMK Negeri 1 Padang with Building Departments, among others:

1) Volly Field
2) Basketball Court
3) Badminton Court
4) Table Tennis Court
5) Footsal Field
6) Warehouse used as storage of sports equipment.

d. Supporting Facilities

Supporting facilities available in SMK Negeri 1 Padang with the Department of Buildings are:

1) The UKS room, which is used to improve school health efforts, first aid in the event of an accident.

2) BK room, this room is used as a counseling service that is divided into two rooms, namely collective counseling room and individual counseling.
3) Student Council Room, is a place to organize various student activities but currently the student council room is still disabled.
4) School Cooperative Room (KOPSIS), is a place to learn / practice cooperative in school, in addition to providing stationery, KOPSIS also provides snacks at an adequate price. But currently KOPSIS is still disabled.
5) Place of Worship (Mosque) is used to increase faith and piety to Allah SWT and sometimes used as a proper meeting Rohis.
6) The bathroom / WC is adequate, the student bathroom is located next to the wooden workshop,while the teacher and employee bathroom is located to the north of the teacher's room.
7) The Security Room and School Guards are located in front of the gate of SMK Negeri 1 Padang.

2. School Environment

The state of the school in the odd semester 2020/2021 is in contrast to the previous semester that carried out face-to-face learning and in the odd semester 2020/2021 this learning was diverted into online. Through the Ministry of Education and Culture, the Government has prohibited schools from carrying out conventional learning and ordered to conduct lectures or learning online (Circular Letter of the Ministry of Education and Higher Education No. 1 of 2020). From this circular, some schools in Indonesia have been carrying out online learning, this learning is diverted because of the outbreak of diseases that we often call coronavirus or Covid-19, during this pandemic

people are not allowed to crowd and keep a distance of 2 meters from others.

3. The Situation of Teachers and Students

The school is still open while complying with civid-19 health protocols, including always wearing masks, maintaining cleanliness, and washing hands after touching objects, this regulation applies to all school parties, both technicians, janitors, library officers, TU officers and teachers in schools, teachers are required to be able to use existing media as tools and materials to carry out online learning such as *e-learning*,edmodo, *WhatsApp Group* (WAG), and Zoom *Meeting*.

4. Social Interaction

As explained at a glance at the previous point that people are not allowed to crowd, always wear a mask, often wash tamham and keep a distance of 2 meters from others, this is because the virus can be transmitted by the way we come into contact with the sufferer, touch objects that have been touched by the sufferer and also if the sufferer sneezes or coughs then it can cause the virus to spread to our body.

D. School Discipline

1. Teacher Code of Conduct

Teacher discipline training program:

a. Morning entry hours 07.15 WIB and noon 14.30 WIB

b. Have attended school 15 minutes before PBM starts.

c. Fill out the attendance of each duty.

d. It is not allowed to wear t-shirts or the like in providing subject matter whether it is theory or practice.

e. Attend the flag ceremony every Monday morning for the teacher on duty, and once a month for the off-duty teacher (attendance is taken in the teacher assembly room).

f. Do not wear batik shirts / shirts and do not wear jeans or the like and mamakai shoes (not sandals similar to shoes).

g. Not leaving class prematurely.

h. For teachers who are sick ± 3 days there should be a sick certificate from the Doctor.

i. For teachers assigned to picket to carry it out.

j. Bring complete learning materials into the classroom.

k. Adjust the student's sitting position before delivering the material. Provide complete learning materials that contribute to improving the quality of students. Complete here means in accordance with the curriculum and the Teaching Program Plan (RPP) that has been prepared. According to the observations of the authors of the learning materials provided by the teacher is in accordance with the RPP and curriculum.

l. Enforce student rules or discipline.

m. Students late ± 10 minutes are not allowed to follow pbm before being processed by the picket teacher by carrying an entry permit.

n. When PBM takes place do not allow students to excuse themselves out more than 1 person and do not let students out too long.

o. For students who do not attend 2 times in a row or more than 2 times a month, parents and students are called and processed together with bp's homeroom/teacher.

p. Always follow national ceremonies and islamic holidays in schools or certain places.

q. Follow the meeting / service meeting until completion.

r. Provide good teaching to each student.

s. Processing troubled students in their classrooms with parents and filling out control cards (located in the BP room).

t. Conducting exam activities / replays on each competency / topic that has been completed taught.

u. The following month provides a list of student grades no later than the 10th to BP teachers.

v. Implement remedial (improvement) value on each topic / competency for students whose grades are below the minimum standard.

w. Do not collect money / other objects under any pretext to students, without the permission of the principal.

2. Student Code of Conduct

a. Student Obligations

1) Every student everywhere must uphold religious values, morals, manners and customs Every student is obliged to maintain the good name of SMK Negeri 1 Padang wherever it is located.

2) Every student must comply with and obey the rules and regulations applicable in SMK Negeri 1 Padang and all decisions stipulated.

3) Every student is required to attend the flag ceremony and kultumJumat morning.

4) Each student mustfollow all subjects in accordance with the list provided to maintain the atmosphere of the process

5) teaching and learning (PBM) that prioritizes discipline, honesty and perseverance.

6) Respect, obedience and obedience to parents and teachers.

7) Speak politely wherever you are.

8) Mutual respect for fellow students, school residents and the community outside the school.

9) Every student is obliged to maintain and maintain

a) Security d)) Beauty.

b) Cleanliness) Family

c) Order f) Convenience

10) Each student is obliged to comply with every decision and agreement between thestudent council and MPK.

11) For self-development each student must choose and participate in curricular activities according to his interests and talents.

b. Student Rights

1) Every student is entitled to both intracuriular and extra-curricular education and teaching as well as career guidance.

2) Every student has the right to use library facilities, sports and other educational facilities and infrastructure.

3) Each student is entitled to be proposed to get a scholarship in accordance with the requirements set.

4) Every student has the right to be active in the student council as a member and administrator.

5) Each student is entitled to be proposed as an invited student to the college through the PMDK line in accordance with the established requirements.

c. Uniform

1) Each student must wear a uniform that has been determined completely, neatly, cleanly in accordance with the schedule of the applicantwiththe following provisions:

1) School clothes shirt/ blouse in white and pants/skirts are gray complete with attributes such as name, school

location, student council emblem and Department / Study Program worn every Monday, Tuesday and Thursday.

2) Every Wednesday students dress in school batik.

3) Female students, every Friday wear Muslim clothing (clothes brackets) and male students wear Muslim clothes (koko shirt).

4) Every Saturday wearing a full Scout outfit.

5) Wear the complete sportswear that has been set at the time of Physical Education and Sports Education lessons.

6) Every Monday morning all students must wear school uniform hats.

2) Students must wear appropriate black shoes.
3) The shirt must be inserted into the pants.
4) Students must wear a black belt and a small bandage.
5) Practice Time wearing complete practice clothing.
6) Hair for male students should not be long hair (do not cover the krah clothes, ears) with a size of 0.1.2 cm is not bald, should not be painted (colored)and does not maintainjambang and mustache.

d. Teaching and Learning Activities

1) Students must already be in the school environment before the entrance bell sounds (7:15 a.m.).

2) Students must be in class 5 minutes before the lesson starts.

3) Late students must obtain permission from the picket before entering the class.

4) Students who are unable to attend must present a license known to parents and if sick there must be a certificate from the Doctor.

5) Students who are forced to leave the lesson hours must have the permission of the teacher who teaches as well as picket approval.

6) The class leader picks up teachers who are not in the classroom at the time of the lesson.

7) Each student tidys up tables and chairs before and after the implementation of teaching and learning activities.

8) Pray together before and after teaching and learning activities led by the class leader.

9) Every student must maintain calm, order and smooth teaching and learning process during the lesson.

10) If required to ask permission,Each student must request permission inturn.

11) During the change of lesson hours, students must be in the classroom in a calm and orderly manner

12) Each student must do the homework and assignments given by the teacher and delivered on time.

13) Each student must maintain the safety of the book, attendance list of lesson limits and other lesson equipment.

14) Every student is not allowed to wear a hat and jacket in the study room.

15) Every student maintains and is responsible for K7 in the study room and in the school environment.

16) Tomaintain security, the cleanliness of books and learning tools students are recommended to wear bags.

17) Attendance of each student in PBM is at least 90%.

18) Assessment is conducted per subcompetence in accordance with the ability of training participants and must be completed in the relevant semester.

e. Prohibition

1) It is forbidden to carry/store sharp weapons in the school environment.

2) It is forbidden to fight to the teacher both verbally and physically.

3) Smoking or bringing cigarettes to school is prohibited

4) It is forbidden to sit on parked motorcycles in schools, parks and others that are not in place.

5) Parking of vehicles/motorcycles other than the parking space provided is prohibited.

6) It is forbidden to bring speeding vehicles, not to use exhaust filters that cause disruption to others.

7) It is forbiddento use and distribute illegal drugs(drugs).

8) It is forbiddento read andread/watch pictures /porn movies.

9) No fighting anywhere.

10) Gambling is prohibited.

11) It is forbidden to makeexpensivejewelry/gold in school, except for the ear earrings of the female students.

12) Forbidden memakai narrow //short wearcolored mencbanter.

13) Forbidden memakai make-up beauty tools.

14) Dilarang leave school more than 3 days in a row without news.

15) No wearing/storing hats other than school uniform hats.

16) It is forbidden to wear accessories/perhiasan/ikat waist thatmenybanter/excessive/ inappropriate.

17) It is forbidden to bring outsiders into the school environment, and if there is a need to obtain permission and report to the Security Guard or picket.

18) Dilarang damage/mencoret tools and mobilers that exist in the classroom and in the school and garden environment (tables, chairs, walls, mushalla, wc and others).

19) Dilarang enter the front office living room unless there is permission from the picket / officer.

20) Dilarang damage library facilities, sports and other educational facilities and infrastructure.

21) Dilarang climbing / jumping school fence.

22) It is forbidden to deal in the office/ rmoney teachers in groups/beramai-ramai.

23) It is forbidden to use mobile phones in the learning process except for the purposes of learning with the permission of the teacher.

24) Donot use or useschool facilities without permission.

f. Student Promise

1) Taqwaan to The One True God.

2) Topractice Pancasila as the philosophy of life of the Indonesian nation.

3) Berbakti to parents, teachers, nation and areligion.

4) Sethen studied diligently, , disciplined, accomplished and responsible.

5) Keeping the good name of the school wherever it is.

6) Manners and unpretentiousness.

7) Anti-fighting, peace-loving and knightly.

g. Organization

1) OSIS is the only legitimate student organization in the school as a forum for students to organize.

2) The student coaches are the Principal, Vice Principal, Ka.Prodi, Kabeng,Teachers and other Education Personnel responsible for the development and development of student councils in schools.

3) All student council activities must support curricular activities which at the same time is the fulfillment of the desire of individual and group organizations as a whole, so that in this organization students can learn to lead and be led.

4) Each student must participate in student council activities in accordance with their respective roles.

h. Sanctions

1) Types of punishments given in the form of:

a) Reprimand

b) Parent / Guardian call

c) Coaching from BK & Making agreements on seals

d) Scoring within the all-time

e) Expenses from the school.

2) Students who steal / rob, trigger fights between schools, memakai / distribute illegal drugs (drugs), immoral (sexual deviance, adultery, rapeetc.) are expelled from school / returned to parents without going through the process.

3) Mechanism / implementation of sanctions / Scoring

i. In the study class

1) Phase 1: Teachers, - Class Guardians - BK Teachers,

2) Phase 2: Head of Department.

3) Phase 3 : Waka Student.

4) Phase 4: Principal.

5) Phase 5: Authorities / Police / Courts

j. Outside the classroom.

1) Phase 1: Picket Teacher,- Student Council Teacher -HomeRoom Teacher - BK Teacher,

2) Phase 2: Head of Department.

3) Phase 3 : Waka Student.

4) Phase 4: Principal.

5) Phase 5: Authorities / Police / Courts

k. Outside the school

1) Phase 1 : Student Council & Student Council

2) Phase 2 : Head of Department.& Teacher BK

3) Phase 3 : Principal

4) Phase 4: Authorities / Police / Buskersn

1. Score and Sanction Violations

Code	**TYPES OF VIOLATIONS**	**Score**	**SANCTIONS ON VIOLATIONS**
A.	**Very Serious Violations**		
A.1.	Physically resisting school personnel	100	Returned to parents without going through the process / expelled from school
A.2.	Proven to steal/rob	100	
A.3.	Proven as a trigger for inter-school brawls	100	
A.4.	Proven to use / distribute drugs	100	
A.5.	Proven to commit immorality (adultery, etc.)	100	
A.6.	Proven to be married	100	
A.7.	Sentenced to a minimum of 3	100	

	months		
B.	**Gross Misconduct**		
B.1.	Carrying / consuming liquor	75	Drinks confiscated, parental calls & Coaching from BK teachers make a letter of agreement on the seal.
B.2.	Carrying / storing VCD / pictures / HP pictorial porn	75	Evidence confiscated, the calling of parents & Coaching from bk teachers made a letter of agreement on the seal.
B.3.	Using school facilities to view/store pornographic data	75	Guidance from BK teachers, letter of agreement on seal with parents
B.4.	Gambling while dressed in school uniform/ practice	75	Gambling equipment confiscated, parental calls & coaching from BK teachers made a letter of agreement on seal.
B.5.	Damaging school facilities	75	Students anticipate damage to school facilities
B.6.	Sexual harassment likes/ doesn't	75	Parent calling & coaching from BK teacher makes letter of agreement on seal
B.7.	Provoking/defamatory	75	Parent calling & coaching from BK teacher makes letter of agreement on seal
B.8.	Bring a friend to commit a crime	75	Handed over to the authorities

B.9.	Against teachers/components of the school (being disrespectful) when acted upon for violations	75	Strictly acted upon, the calling of parents & coaching of bk teachers make a letter of agreement on the seal
B.10	Fight in school uniform	75	Parental Summons and making a letter of agreement, guidance from BK and suspension for two days
B.11	Carrying sharp weapons to school without permission	75	Weapons confiscated & coaching from BK calling Parents
C	**Moderate violations**		
C.1.	Removing profanity to teachers	50	guidance from BK, letter of agreement written on the seal
C.2.	Fighting in school uniform	50	coaching from BK , Suspension for 2 days
C.3.	Blackmailing friends at school	50	10-fold fine, coaching from BK & calling parents
C.4.	Carrying sharp weapons to school without permission	50	Confiscated weapons, coaching from BK & parental summons
C.5.	Falsifying documents from/for schools	50	The student is not allowed to attend the lesson before his parents come with the student to make a letter of agreement on the seal, coaching from BK
C.6.	Revoke in lesson hours	25	Calling parents and making a letter of agreement, coaching from BK

C.7.	Not heeding teacher's call/reprimand	20	Oral warning & cleaning school environment
C.8.	Playing cards (gambling component) while in school uniform	20	Confiscated equipment & parental calls
C.9.	Not attending the flag ceremony	20	Sanctioned and coaching the defense of the country
C 10	Carrying/smoking in the school environment	20	Cigarettes confiscated & cleaned the school environment
D.	**Minor Violations**		
D.1.	Bring a friend who is not a student of SMK N 1	15	Not allowed & students told to take their friends out of the school environment
D.2.	Carrying a speeding vehicle – speeding	15	Vehicle keys confiscated
D.3.	Shopping/sitting in cafes/stalls during lesson hours	5	Cleaning the school environment
D.4.	Not present without explanation	5	Processed by kela guardian, maple eye teacher & BK
D.5.	Sitting – sitting on the side of the road or near the school area wearing a uniform during lesson hours	5	Cleaning the WC
D.6.	Do not wear school uniforms or practice clothes	5	Told to go home to change uniforms and go back to school

D.7.	Not following lessons in an orderly manner	5	Assignment /coaching / reprimand mapel teacher
E.	**Very Minor Violations**		
E.1.	Doesn't use school attributes or isn't complete	3	Clean up the school environment and install attributes.
E.2.	Late attendance at school	3	Cleaning the school environment (adapted to the conditions
E.3.	Wearing a hat that is not a school uniform in the school environment	2	Confiscated goods & cleaning school environment
E.4.	Wearing a belt is not a standard school uniform (excessive fashionable, has harmful elements, military)	2	Confiscated goods & cleaning school environment
E.5.	Scribble school clothes	2	Told to go home to change uniforms and go back to school
E.6.	Removing clothes for male students	2	crossed shirts, Cleaning the school environment
E.7.	Wearing jewelry / accessories that are striking (bracelets, necklaces, earrings etc.)	2	Confiscated goods & cleaning school environment
E.8.	Leave school without permission	2	Cleaning the school environment
E.9.	Don't take the report card in time	2	Report card taken by parents

E.10.	Dumping trash in any place	2	Cleaning the environment
E.11.	Do not carve the vehicle into place	2	Cleaning the environment
E.12.	Jumping fences/ breaking into school environments without going through the front door	2	Cleaning the school environment (adapted to conditions)
E.13.	Request permission to leave more than 1 person within lesson hours	2	Processed by maple eye teacher
E.14.	Late entry during change of lesson hours	2	processed by the training eye teacher
E.15.	Using hp is not in accordance with the provisions when studying / exams	2	HP confiscated & parental calls
E.16.	Scrapping school facilities	2	Cleaning facilities that have been crossed out
E.17.	Wear narrow or striking clothing (loose or prolonged)	2	Students told to go home to change uniforms
E.18.	Long hair/long/bald/color wear	2	Hair cut in place
E.19	Long crated / in paint / not clean	2	Nails cut/cleaned on the spot
E.20.	Using a vehicle without an exhaust filter	1	Exhaust replaced & while vehicles are not allowed to be parked in school environments

E.21.	Sitting on a motorbike at a parking location	1	Cleaning the parking environment

a. Sanctions to be received for students who commit violations:

1) Score 01-20 : Oral Warning and submitted to the Class Guardian for processing

2) Score 21-40 : Call I Parents and submitted to Walas and BK guidance.

3) Score 41-60 : Call II Parents and submitted to Walas and bk guidance.

4) Score 61-80 : Letter of Agreement above Seal with Parents, guidance bk.

5) Score 81-99 : Suspended (not allowed to follow PBM min 6 days)

Score 100 : Returned to Parents without process.

E. School Administration

The school building is only used by SMK Negeri 1 Padang. The schedule of PBM implementation there is 1 shift every day of the week (according to the attachment). The implementation time of PBM is from Monday to Saturday, while sunday or calendar date is red and holidays with school provisions based on the education office.

F. Teaching and Learning Process

Learn from home for students and teach or **work from home for teachers of all levels** of education. Learning from home or conceptually is distance learning is new to elementary, junior high and high school / vocationalschool, thus implicating the implementation process. Teachers no longer manage learning as in school, nor can parents hand over all children's learning activities to teachers, but parents and teachers work together to assist students in their

learning activities. This change is felt by students, teachers and also parents, so a strategy is needed for the effectiveness of communication.

The interaction of teachers and parents in the process of children's learning activities requires strategies that can adjust the characteristics of students, teachers, parents who meet the criteria of distance learning. Teachers are required to be more creative so that students who are taught can understand and understand the learning such as making learning videos and any way that can be used for the student learning process, as well as students are required to read more and learn from sources such as using You Tobe to view learning videos and google to searcing material that is and will be learned otherwise so that the understanding gained more widely and does not rely on learning from teachers only.

CHAPTER III

PLK ACTIVITIES

A. Teaching Activities (*Teaching*)

1. Facilities and Infrastructure

During the plk period, the facilities and infrastructure used consist of:

Facilities: WIFI

Infrastructure: l Room to teach Google Classroom

2. Classes taught

During the plk period, the author conducted teaching activities in classes X BKP A, X BKP B, X DPIB A and X DPIB B with the subjects Of Mechanical Engineering.

3. Learning materials

During the period of PLK the materials provided are: Understanding the elements of the structure Understand the factors that affect the structure of the building based on design criteria and loading,, Understand the various styles in the structure of the, Apply how to compose the style in the structureof thebuilding, and Analyze the styles - styles in (moment, slide and normal) on the structure ofthe building.

The activities carried out are:

During this pandemic, learning activities at every level of education were diverted into *online*learning. Therefore, PLK this time is also done *online.* Learning activities are conducted using the *Google Classroom*app. The activities carried out are:

A. Load materials according to the teaching schedule and each class

B. Create a task for each material

C. Perform a replay

D. Zoom a meeting

If in the teaching and learning process, students have difficulty, then students are allowed to communicate privately with the teacher through Whattsapp or Email.

B. Non Teaching Activities)

a. Library Picket

PLK students assigned to picket libraries, tasked to help library officers in the Library Service in accordance with the provisions of the library. During the plk period the students who picketed in the library were tasked with helping the library officer to collect books, moving the book to the designated place.

b. School Picket

In addition to teaching, PL students are also involved with the task as a daily picket where every day there are people who picket, while the picket schedule starts at 07.00 WIB is done alternately in accordance with the schedule that has been determined.

C. Cases and Settlements

a. Case

1. Not all students participate in learning activities conducted in Google *Classroom*

2. Not all students work on assignments provided through Google *Classroom*

3. The material provided is difficult for students to understand

b. Resolution

1. Contact students who do not follow the learning 3 times more, then ask what problems are obstacles so that the student does not follow the learning in Classroom

2. Re-upload assignments and remind students who haven't collected assignments to collect their assignments immediately.

3. Create innovative learning media so that students are passionate in following the learning and understanding the material.

CHAPTER IV

A. Conclusion

Educational field practice activities consist of 2 activities, namely teaching and non teaching activities.. While non teaching activities in the form of **library** pickets and lobby pickets.

In this PLK activity, we provide a lot of information about the condition or condition of a training school, so that we can know more about the school. In addition, it also provides information on how the real conditions in the field, which we will face during our teaching exercises in school.

B. Advice

To all friends and brothers who will undergo PLK do the best thing. Do not waste the opportunity provided by the University because PLK is the best experience for the future.

Attachment

PROVINCIAL GOVERNMENT OF WEST SUMATRA
EDUCATION OFFICE
S M K N E G E R I 1 P A D A N G
Campus : Jln.M. Yunus Kampung Kalawi Kel. Lubuk Lintah Kec. Kuranji Padang
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KUR 2013

TA

EFFECTIVE WEEK ANALYSIS OF ODD AND EVEN SEMESTERS YEAR 2020-2021

Odd Semester

№	Months	Number of Weeks/Months	Number of Weeks		Description (ineffective meeting)
			Effective	Ineffective	
1	July	5	3	2	Sunday to July 1, tp smt.even holiday. 2019-2020, week 2 July MPLS kls X
2	August	4	3	1	Daily Exams
3	September	4	4	0	
4	October	4	3	1	MID Smt odd
5	Novbucket	5	5	0	
6	December	4	0	4	Week 1 December Odd Smt Exam, week 2 kls meeting, week 2 odd smt holiday and week 4 odd smt holiday

Amount	30	18	8	

Even Genap

№	Months	Number of Weeks/Months	Number of Weeks		Description (ineffective meeting)
			Effective	Ineffective	
1	January	5	5	0	
2	February	4	4	0	
3	March	5	1	4	Week 1 March MID Smt Even, week 2 US, week 4 AKM
4	April	4	1	3	Week 3 and 4 PBM month of Ramadan / Pesantren Ramadhan
5	May	4	1	3	Sunday to May 1, Pesantren Ramadhan. Week 2 and 3 of Eid al-Fitr holiday
6	June	4	0	4	Week 1 June even semester exam, Sunday to June 2 kls meeting,Week 3 even semester holiday,week 4 Smt even holiday.
Amount		24	12	14	

- Number of weeks effective odd semester = 18 weeks
- Number of weeks effective even semester = 12 weeks
- Number of weeks effective for 1 year = 30 weeks

Know

Principal,

Drs. DASRIZAL, MM **.**
NIP.19621226 198803 1 002

Padang, July 2020

Subject Teachers

SYAIFUL IKHWAN, S.Pd
Nip. 19780127 200801 1 002

PROVINCIAL GOVERNMENT OF WEST SUMATRA
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KUR 2013	**Syllabus**
TA	

Education Unit : SMK NEGERI **1 PADANG**

Area of Expertise : TECHNOLOGY AND ENGINEERING

Skills Program : CONSTRUCTION AND PROPERTY **ENGINEERING**

Competency Skills : BUSINESS CONSTRUCTION AND **PROPERTY, DESIGN MODELING AND INFORMATION**

Building

Subjects : : MECHANICAL ENGINEERING

Class / Semester : X / I **(ODD)& II (GENAP)**

Duration : 99 X @45 MINUTES

Core Competencies:

KI-3	Understand, apply, analyze, and evaluate factual, conceptual, basic operational, and metacognitive knowledge in accordance with the field and scope of work of Building Modeling and Information Design at the technical, specific, detailed, and complex level, with regard to science, technology, art, culture, and humanities in the context of developing self-potential as part of the family, school, world of work, national, regional, and international community.
KI-4	Carrying out specific tasks using tools, information, and procedures that are commonly done and solving problems in accordance with the field of work Modeling Design and Building Information. Display independent performance with measurable quality and quantity in accordance with work competency standards.

	Demonstrate the skills of reasoning, processing, and studying effectively, creatively, productively, critically, independently, collaboratively, communicatively, and solutively in the abstract realm related to the development of what it learns in school, as well as being able to carry out specific tasks under direct supervision. Demonstrate the skills of perceiving, readiness, imitation, familiarity, proficient motion, making natural motion in the concrete realm related to the development of what he learned in school, as well as being able to carry out specific tasks under direct supervision

Basic Competencies	**Competency Achievement Indicators**	**Subject Matter**	**Time Allocation (JP)**	**Learning Activities**	**Assessment**	**Learning Resources**
1	**2**	**3**	**4**	**5**	**6**	**7**
3.1 Memahami structural elements	3.1.1 Analyzing the history of the development of the building structure system. 3.1.2 Detailing the classification of building structures	Classification of structures based on rigidity: rigid and flexible Classification of structures based on forming materials: wood, steel, concrete The main elements of the structure: beams and columns, frames, rod frames, arches, walls and plates, cylindrial	**12X45**	Observe: · Read information related to structural elements Ask: · Condition students to actively ask questions about topics related to structural elements · Direct students to discuss structural elements	**Task** Results of reading research on structural elements **Observation** The process of carrying out observations about the elements of the structure **Portfolio** Related capabilities in structural elements (if any). **Test**	Beaufait, Fred. W. (1978), *Basic Concepts of Structural Analysis*, John Wiley & Sons, Inc. Dayaratman, Pasala (1976), *Analysis of Statically Determinate Structures*, East-West Press Put. LTD, New Delhi. Hibbeler, RC.

4.1 Reciting structural elements	4.1.1 Analyzing the division of building structures 4.1.2 Analyzing the main elements of the structure	shells and tunnels, domes and ball shells, cables.		Explore: · Collect data about structural elements in several groups according to the results of discussions in the classroom Associate · Categorising data/information and determining the relationship, it is then concluded in a sequence from simple to more complex related to structural elements Communicate · Delivering conceptualized results in the form of	Oral/written tests related to structural elements	(1999), *Structural Analysis Fourth Edition*, Prentiee Hall, Upper Saddle River, New Jersey. Reference Rajan, SD (2001), *Introduction to Structural Analysis & Design*,John Wiley & Sons, Inc. Salter, Graham R. (2003), *Computer-Aided Statics and Strength Materials*,Prentice Hall, Upper Saddle River, New Jersey. Soemono R (1977), Statika 1, Publisher of ITB

				the application of procedures and rules of structural elements · Presenting observations on structural elements		University, Bandung. Soemono R. (1983), Voltage 1, Publisher of ITB University, Bandung. Timoshenko, SP & Young, DH (1965), *Theory of Structures, International Student Edition,*Tokyo.
3.2 Memahami factors that affect the structure of the building based on design criteria and loading	3.2.1 Understanding structure design and structure loading design criteria 3.2.2	Structure design criteria: serviceability, efficiency, construction, economy, etc. Structure loading criteria :	**12X45**	Observe: · Read information related to factors affecting building structure Ask: · Condition students to actively ask questions about topics related to	Task Results of reading research on factors that affect the structure of buildings Observation The process of conducting observations on factors affecting the	Beaufait, Fred. W. (1978), *Basic Concepts of Structural Analysis*, John Wiley & Sons, Inc. Dayaratman, Pasala (1976), *Analysis of Statically*

4.2 Presenting factors that affect the structure of the building based on design criteria and loading	Understanding the factors that affect the structure of buildings 4.2.1 Explaining structure design criteria and structure loading design criteria 4.2.2 Explaining factors that affect the structure of buildings based on	static and dynamic force Static Force : dead load, live load, Dynamic Force : wind load, earthquake load. Modeling Earthquake Analysis		factors that affect building structure · Direct students to discuss the factors that affect the structure of the building Explore: · Collect data on factors that affect the structure of buildings in several groups according to the results of discussions in the classroom Associate · Categorising data /information and determining the	structure of buildings Portfolio Related capabilities in factors that affect the structure of buildings Test Oral/written tests related to factors affecting the structure of the building	*Determinate Structures,* East-West Press Put. LTD, New Delhi. Hibbeler, RC. (1999), *Structural Analysis Fourth Edition*, Prentiee Hall, Upper Saddle River, New Jersey. Reference Rajan, SD (2001), *Introduction to Structural Analysis & Design,*John Wiley & Sons, Inc. Salter, Graham R. (2003), *Computer-Aided Statics and Strength Materials,*Prentice Hall, Upper

	design criteria and loading			relationship, then concluded in a sequence from simple to more complex related to factors that affect the structure of the building Communicate · Conveying conceptualized results in the form of the application of procedures and rules of factors that affect the structure of buildings · Presenting observations on factors affecting building structure		Saddle River, New Jersey. Soemono R (1977), Statika 1, Publisher of ITB University, Bandung. Soemono R. (1983), Voltage 1, Publisher of ITB University, Bandung. Timoshenko, SP & Young, DH (1965), *Theory of Structures, International Student Edition,*Tokyo.
3.3 Memahami various styles in	3.3.1 understan	Analysis of external	**12X45**	Observe: · Read information	Task Results of reading	Beaufait, Fred. W. (1978), *Basic*

the structure of the building 4.3 Menjikan various styles in the structure of the building	ding the style in building structures 3.3.2 understanding structural stability 4.3.1 explaining the style in the structure of the building 4.3.2 explaining	forces on the structure : tensile force, press, bending, shear, torque, fulcrum pressure Structural stability; relationships, strengths and rigidity of elements Introduction to load modeling approach		related to various styles in building structures Ask: · Condition students to actively ask questions about topics related to different styles in building structures · Direct students to discuss different styles in building structures Explore: · Collect data about structural elements in several groups according to the results of discussions in the classroom	research on various styles in the structure of buildings Observation The process of implementing observations on various styles in the structure of buildings Portfolio Related capabilities in various styles in building structures Test Oral/written tests related to various styles in building structures	*Concepts of Structural Analysis*, John Wiley & Sons, Inc. Dayaratman, Pasala (1976), *Analysis of Statically Determinate Structures*, East-West Press Put. LTD, New Delhi. Hibbeler, RC. (1999), *Structural Analysis Fourth Edition*, Prentiee Hall, Upper Saddle River, New Jersey. Reference Rajan, SD (2001), *Introduction to Structural Analysis &*

	structural stability			Associate · Categorising data/information and determining the relationship, it is further summed up in a sequence from simple to more complex related to the various styles in the structure of the building Communicate · Conveying conceptualized results in the form of the application of procedures and rules of various styles in the structure of buildings · Presenting		*Design,*John Wiley & Sons, Inc. Salter, Graham R. (2003), *Computer-Aided Statics and Strength Materials,*Prentice Hall, Upper Saddle River, New Jersey. Soemono R (1977), Statika 1, Publisher of ITB University, Bandung. Soemono R. (1983), Voltage 1, Publisher of ITB University, Bandung. Timoshenko, SP & Young, DH (1965), *Theory of Structures,*

				observations on various styles in building structures		*International Student Edition,*Tokyo.
3.4 Applying how to style a building structure 4.4 Makingarrangements and calculations of styles in building structures	3.4.1 Understanding the concept of magnitude 3.4.2 Understanding unit concepts 3.4.3 Understanding the concept of	Concept of Magnitude and unit: scalar and vector magnitude SI Unit Concept Style : style direction Normal Style Latitude Style Moment Outline and combine styles Newton's Law : analytical and graphical	**12X45**	Observe: Read information related to how to style a building structure Ask: · Condition students to actively ask questions about topics related to how to style in building structures · Direct students to discuss how to structure a building structure Explore:	Task The results of reading research on how to arrange styles in building structures Observation The process of implementing observations on how to arrange styles in the structure of buildings Portfolio Related ability in how to arrange styles in the structure of buildings (if any). Test	Beaufait, Fred. W. (1978), *Basic Concepts of Structural Analysis*, John Wiley & Sons, Inc. Dayaratman, Pasala (1976), *Analysis of Statically Determinate Structures*, East-West Press Put. LTD, New Delhi. Hibbeler, RC. (1999), *Structural Analysis Fourth Edition*, Prentiee Hall, Upper Saddle River, New Jersey.

	momen ts 3.4.4 Underst anding newton' s law 4.4.1 Explain ing the concept of magnit ude 4.4.2 Explain ing the concept of units	ways		· Collecting data on how to arrange styles in building structures in several groups according to the results of discussions in the classroom Associate · Categorizing the data / information and determining the relationship, then concluded in a sequence from simple to more complex related to how to arrange the style in the structure of the building Communicate · Conveying	Oral/written tests related to how to structure a building structure	Reference Rajan, SD (2001), *Introduction to Structural Analysis & Design*,John Wiley & Sons, Inc. Salter, Graham R. (2003), *Computer-Aided Statics and Strength Materials*,Prentice Hall, Upper Saddle River, New Jersey. Soemono R (1977), Statika 1, Publisher of ITB University, Bandung. Soemono R. (1983), Voltage 1, Publisher of ITB University,

	4.4.3 Explaining the concept of the moment 4.4.4 Explaining newton's law			conceptualized results in the form of the application of procedures and rules on how to arrange styles in building structures · Presenting observations on how to arrange styles in building structures		Bandung. Timoshenko, SP & Young, DH (1965), *Theory of Structures, International Student Edition,*Tokyo.
3.5 Analyzing the inner style (moment, slide and normal)) of the structure of the building (	3.5.1 understanding inner styles (bending moments, sliding styles and	Inner style : -moments -slide -Normal	**12X45**	Observe: · Read information related to styles in Ask: · Condition students to actively ask questions about topics related to style in · Direct students to discuss style in	Task The results of reading research on the style in Observation The process of carrying out observations about the style in Portfolio	Beaufait, Fred. W. (1978), *Basic Concepts of Structural Analysis*, John Wiley & Sons, Inc. Dayaratman, Pasala (1976), *Analysis of Statically Determinate*

4.5 Calculating the inner styles (moments, slides and norms)) of building structures (	normal styles) in buildin g structur es 4.5.1 explaini ng the styles (flexibl e momen ts, sliding styles and normal styles) in buildin g			Explore: · Collect data about styles in groups according to the results of discussions in the classroom · Associate · Categorising data/information and determining the relationship, it is then concluded in a sequence from simple to more complex related tothe stylein Communicate 4 Delivering conceptualized results in the form of the application of procedures and rules of style in	Related capabilities in deep style(if any). Test Oral/written tests related to	*Structures,* East-West Press Put. LTD, New Delhi. Hibbeler, RC. (1999), *Structural Analysis Fourth Edition*, Prentiee Hall, Upper Saddle River, New Jersey. Reference Rajan, SD (2001), *Introduction to Structural Analysis & Design,*John Wiley & Sons, Inc. Salter, Graham R. (2003), *Computer-Aided Statics and Strength Materials,*Prentice Hall, Upper Saddle River,

	structures			5 Presenting observations about the style in the		New Jersey. Soemono R (1977), Statika 1, Publisher of ITB University, Bandung. Soemono R. (1983), Voltage 1, Publisher of ITB University, Bandung. Timoshenko, SP & Young, DH (1965), *Theory of Structures, International Student Edition,*Tokyo.
3.6 Analyzing force balance on simple block construction	3.6.1 Understanding building structure parts	Kbalancing style on simple beam construction	**9X45**	Observe: · Read information related to style balance on simple beam construction Ask:	Task The results of the study read about the balance of style in simple	Beaufait, Fred. W. (1978), *Basic Concepts of Structural Analysis*, John Wiley & Sons, Inc.

4.6 Calculating style miserlyness on simple block construction	3.6.2 Understanding building mounts 3.6.3 Understanding the focus of static beam analysis of course 4.6.1 Explaining the structure of the building			· Condition students to actively ask questions about topics related to style balance on simple block construction · Direct students to discuss style balance on simple block construction Explore: · Collecting data on force balance on simple block constructions · several groups according to the results of discussions in the classroom Associate · Categorising	beam construction Observation The process of carrying out observations on the balance of force in the construction of simple beams Portfolio Related ability in style balance on simple beam construction	Dayaratman, Pasala (1976), *Analysis of Statically Determinate Structures*, East-West Press Put. LTD, New Delhi. Hibbeler, RC. (1999), *Structural Analysis Fourth Edition*, Prentiee Hall, Upper Saddle River, New Jersey. Reference Rajan, SD (2001), *Introduction to Structural Analysis & Design*,John Wiley & Sons, Inc. Salter, Graham R. (2003), *Computer-*

	4.6.2 Understanding building mounts 4.6.3 Understanding the focus of static beam analysis of course			data/information and determining the relationship, it is further inferred in order from simple to more complex related to the balance of forces in simple beam construction Communicate · Conveying conceptualized results in the form of the application of procedures and rules of force balance in simple beam construction · Presenting observations on the balance of force in simple beam	Test Oral/written tests related to force balance on simple beam construction	*Aided Statics and Strength Materials,*Prentice Hall, Upper Saddle River, New Jersey. Soemono R (1977), Statika 1, Publisher of ITB University, Bandung. Soemono R. (1983), Voltage 1, Publisher of ITB University, Bandung. Timoshenko, SP & Young, DH (1965), *Theory of Structures, International Student Edition,*Tokyo.

				construction		
3.7 Analyzing bar styles on simple skeletal construction 4.7. Calculatethe bar style on a simple frame construction	3.7.1 Understanding the style of the rod on a simple frame construction 3.7.2 Understanding the magnitude of the bar's style	Style – bar style on simple frame construction	**9X45**	Observe: · Read information related to the style – bar style on a simple skeletal construction Ask: · Condition students to actively ask questions about topics related tostyle – bar style on simpleskeletal construction · Direct students to discuss the style of rods in a simple skeletal construction	Task Results of reading research on Analyzing the styles of rods in simple skeletal construction Observation The process of carrying out observations Analyzing the styles of rods on simple skeletal construction Portfolio Related capabilities in voltage on the structure	Beaufait, Fred. W. (1978), *Basic Concepts of Structural Analysis*, John Wiley & Sons, Inc. Dayaratman, Pasala (1976), *Analysis of Statically Determinate Structures*, East-West Press Put. LTD, New Delhi. Hibbeler, RC. (1999), *Structural Analysis Fourth Edition*, Prentiee Hall, Upper Saddle River, New Jersey. Reference

	4.7.1 Determining the style of the rod on a simple frame construction 4.7.2 Determining the magnitude of the bar style			Explore: · Collecting data on bar styles on simple frame constructions · several groups according to the results of discussions in the classroom Associate · Categorizing data/information and determining the relationship, it is further summed up in a sequence from simple to more complex related to Analyzing the styles of rods in simple	Test Oral/written tests related to Analyzing rod styles on simple skeletal construction	Rajan, SD (2001), *Introduction to Structural Analysis & Design*,John Wiley & Sons, Inc. Salter, Graham R. (2003), *Computer-Aided Statics and Strength Materials*,Prentice Hall, Upper Saddle River, New Jersey. Soemono R (1977), Statika 1, Publisher of ITB University, Bandung. Soemono R. (1983), Voltage 1, Publisher of ITB University, Bandung.

				skeletal construction Communicate · Conveying conceptualized results in the form of the application of procedures and rules Analyzing the styles of rods on simple skeletal construction · Presenting the results of observations on Analyzing the styles of rods on simple skeletal construction		Timoshenko, SP & Young, DH (1965), *Theory of Structures, International Student Edition,*Tokyo.
3.8. Menganalysis of the voltages that occur in the	3.8.1 Understanding	The voltages that occur in the beam	**9X45**	Observe: · Read information related to the	Task The results of the reading research on	Beaufait, Fred. W. (1978), *Basic Concepts of*

beam	the voltage voltage that occurs in the beam			analysis of the voltages that occur in the beam · Ask: · Condition students to actively ask questions about topics related to the analysis of the voltages that occur in the beam	the analysis of the voltages that occur in the beam	*Structural Analysis*, John Wiley & Sons, Inc. Dayaratman, Pasala (1976), *Analysis of Statically Determinate Structures*, East-West Press Put. LTD, New Delhi. Hibbeler, RC. (1999), *Structural Analysis Fourth Edition*, Prentiee Hall, Upper Saddle River, New Jersey. Referensi Rajan, SD (2001), *Introduction to Structural Analysis & Design*, John
4.8. Counting the voltages that occur in the beam	3.8.2 Understanding the voltage voltage that occurs in the beam 4.8.1 Determining the			· Direct students to discuss the analysis of the voltages that occur in the beam Explore: · Collecting data on the analysis of the voltages that occur in the beam · in several groups according to the	Observation The process of conducting observations about the voltages that occur in the beam Portfolio Related to the ability in the analysis of the voltages that occur in the beam (if any). Test Oral/written tests	

	voltage voltage that occurs in the beam 4.8.2 Determining the voltage voltage that occurs in the beam			results of discussions in the classroom Associate · Categorising the data /information and determining the relationship, then concluded in a sequence from simple to more complex related to the analysis of the voltages that occur in the beam Communicate · Delivering conceptualized results in the form of the application of procedures and rules of analysis of	related to the analysis of the voltages occurring in the beam	Wiley & Sons, Inc. Salter, Graham R. (2003), *Computer-Aided Statics and Strength Materials*, Prentice Hall, Upper Saddle River, New Jersey. Soemono R (1977), Statika 1, Penerbit Universitas ITB, Bandung. Soemono R. (1983), Tegangan 1, Penerbit Universitas ITB, Bandung. Timoshenko, SP & Young, DH (1965), *Theory of Structures*,

				the voltages that occur in the beam · Presenting the results of observations on the analysis of the voltages that occur in the beam		*International Student Edition*, Tokyo.
3.9. Evaluate simple beam strength based on the voltage 4.9 Conducting a simple beam strength check based on the voltage occurring	3.9.1 Understanding the principles of beam design 3.9.2 Understanding beam analysis	Simple beam strength based on the voltage	**12X45**	Observe: · Read information related to simple beam strength based on voltage occurring · Ask: · Condition students to actively ask questions about topics related to simple beam strength based on the voltage	Task he results of the study read about the strength of simple beam strength based on the voltage that occurred Observation he process of conducting observations on the strength of the beam strength is	Beaufait, Fred. W. (1978), *Basic Concepts of Structural Analysis*, John Wiley & Sons, Inc. Dayaratman, Pasala (1976), *Analysis of Statically Determinate Structures*, East-West Press Put. LTD, New Delhi.

	4.9.1 Explaining the principles of block design 4.9.2 Explaining the analysis of blocks			occurring · Direct students to discuss the power of simple beam strength based on the voltage occurring Explore: · Perform data collection on simple beam strength based on voltage · in several groups according to the results of discussions in the classroom Associate · Categorising the data/information and	simple based on the voltage that occurs Portfolio elated ability in simple beam strength based on voltage occurring (if any). Test ral/written tests related to simple beam strength based on the voltage occurring	Hibbeler, RC. (1999), *Structural Analysis Fourth Edition*, Prentiee Hall, Upper Saddle River, New Jersey. Reference Rajan, SD (2001), *Introduction to Structural Analysis & Design*,John Wiley & Sons, Inc. Salter, Graham R. (2003), *Computer-Aided Statics and Strength Materials*,Prentice Hall, Upper Saddle River, New Jersey. Soemono R (1977), Statika 1,

				determining the relationship, it is then concluded in a sequence from simple to more complex related to the strength of a simple beam strength based on the voltage that occurs Communicate · Delivering conceptualized results in the form of the application of simple beam strength procedures and strength rules based on the voltage that occurs · Presented the results of observations on the strength of		Publisher of ITB University, Bandung. Soemono R. (1983), Voltage 1, Publisher of ITB University, Bandung. Timoshenko, SP & Young, DH (1965), *Theory of Structures, International Student Edition,*Tokyo.

				simple beam strength based on the voltage that occurs		

Find out, Padang, July 2020

Head of SMKN 1 Padang

Teacher Subjects

Drs. DASRIZAL, MM
NIP. 19621226 198803 1 002

SYAIFUL IKHWAN, S.Pd
NIP. 19780127 200801 1 002

PROVINCIAL GOVERNMENT OF WEST SUMATRA
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KUR 2013

PROMES/TA

ODD SEMESTER PROGRAM TECHNICAL MECHANICS SUBJECTS

No KD	Basic Competencies	Qty Hours	Month / Week																							
			July			August				September				October				Novbucket					December				
			3	4	5	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	5	1	2	3	4	5
3.1	Understanding the elements of structure	12																						UAIAN SEMESQER	QEMBAGIAN LAQOR	LIBUR SEMESQER	LIBUR SEMESQER G
4.1	Presenting structural elements																										
3.2	Understand the factors that affect the structure of a building based on design criteria and loading	12																									
4.2	Presents factors that affect the structure of the building based on design criteria and																										
3.3	Understanding the different styles in building structures	12																									
4.3	Presents a variety of styles in building structures																										

3.4	Apply how to style a building structure	12																								GANAIL	ANAIL
4.4	Make arrangements and calculations of styles in building structures																										
3.5	Analyze the inner style (moment, slide and normal) of the building structure	12																									
4.5	Calculates inner styles (moments, slides and norms) on the structure of the buildn																										
NUMBER OF SEMESTER 1 HOURS		60																									

Knowing Padang, July 2020

Principal,

Subject Teacher

Drs.DASRIZAL,. M.M
NIP.19621226 198803 1 002

SYAIFUL IKHWAN, S.Pd
NIP. 19780127 200801 1 002

PROVINCIAL GOVERNMENT OF WEST SUMATRA
EDUCATION OFFICE
S M K N E G E R I 1 P A D A N G
Campus : Jln.M. Yunus Kampung Kalawi Kel. Lubuk Lintah Kec. Kuranji Padang
Telp. 0751 27917
E-mail : web smkn1pdgsumbar@yahoo.com : http://smkn1padang.sch.id/

KUR 2013

PROMES/TA

EVEN SEMESTER PROGRAM OF MECHANICAL ENGINEERING SUBJECTS

No KD	Basic Competencies	Qty Hours	Month / Week																									
			Auari				February				March				April				May					June				
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		1	2	3	4	
3.6	Analyzes the balance of forces on a simple beam construction	9									UAIAN QENGAH	US / USBN		UN SMK DAN SMA			QESANQRENRAMAD	QESANQRENRAMAD	QESANQRENRAMAD	QESANQRENRAMAD	LIBUR IDHUL FIQ	LIBUR IDHUL FIQ			UAIAN SEMESQER	LIBUR SEMESQER	LIBUR SEMESQER	
4.6	Calculate keseimbangan style on simple block construction																											
3.7	Analyzing the styles of rods on the construction of a sederhan frame	9																										
4.7	Calculates the style – bar style on a simple skeletal construction																											
3.8	Analyzing the voltages that occur in the beam	9																										

No KD	Basic Competencies	Qty Hours	Month / Week																									
			Auari				February				March				April				May					June				
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		1	2	3	4	
4.8	Calculates the style – bar style on a simple skeletal construction										**SEMESQER**						HAN	HAN	HAN	HAN	RI	RI				**GENAQ**	**GENAQ**	
3.9	Evaluates the strength of a simple beam strength based on the voltage occurring																											
4.9	Perform a simple beam strength check based on the voltage occurring	12																										
NUMBER OF SEMESTER 2 HOURS		39																										

Knowing Padang, July 2020
Subject Teacher

Principal,

Drs.DASRIZAL,. M.M
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KUR 2013	**PROTA**
PROTA/TA	

Subjects : MECHANICAL ENGINEERING
Class : X

№.	CORE COMPETENCIES / BASIC COMPETENCIES	TIME ALLOCATION
1	Elements – structural elements based on their characteristics	12
2	Factors that affect the structure of buildings based on design criteria and loading	12
3	Sorts – kinds of styles in building structures	12
4	How to arrange styles in building structures	12
5	Analyze inner (moment, slide and normal) styles on building structures	12
6	Analyzing the balance of forces in the construction of beams	9
7	Analyzing rod styles on simple skeletal construction	9
8	Analyzing the voltages that occur in the beam	9

9	Evaluates the strength of a simple beam based on the voltage that occurs.	12
Total (Hours)		**99**
Number of Meetings		**33**

EDUCATION OFFICE	
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SMKN 1 PADANG	
KUR 2013	RPP
RPP	

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RPP

LEARNING IMPLEMENTATION PLAN

School Name : SMK N 1 PADANG
Subjects : MECHANICAL ENGINEERING
Competency Skills : DPIB & BKP
Class/Semester : X/1 (Odd)
Year of Study : 2020 / 2021
Time Allocation : 3 JP x @ 45 Minutes
Meeting to : 1, 2 , 3 and 4

Basic Competency : 3.1. Memahami structural elements

: 4.1. Citing structural elements

Learning Objectives	**Learning Steps**	**Assessment of Learning Outcomes**
Through group discussion learning, students can explain the elements of the structure and present the elements of the structure	Meeting 1 : · Students observe materials related to the history of the development of the building structure system that was aired by the teacher. • Students ask questions about topics related to the history of the development of the building structure system (foster curiosity) • Teachers divide students into groups. • Students discuss the historical topic	• Attitude Assessment: observe the attitude of the student's character directly made through the attitude journal. • Knowledge Assessment: Testertulis,Q&A or kuiz. • ValuationProfessity: Performance

	of building structure system development (fostering a sense of cooperation and conscientiousness) • Students do tasks about the history of the development of the building structure system (fostering honesty character) • Students report on the history of the development of the building structure system (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 2 : • Students observe materials related to the classification of building structures displayed by teachers through power points. • Students ask questions about topics related to the classification of building structures (foster curiosity) • Teachers divide students into groups. • Students discuss the topic of classification of building structures (fostering a sense of cooperation and conscientiousness) • Students do tasks on the classification of building structures (fostering honesty character) • Students reporton the classification of building structures (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 3 : • Students observe materials related to the main elements of the structure of the building that are aired by the teacher through a power point.	Assessment: observe the assignment process made through the observation sheet.

	• Students ask questions about topics related to the main elements ofthe structure of the building (foster curiosity) • Teachers divide students into groups. • Students discuss the topic of the main elements of building structure (fostering a sense of cooperation and conscientiousness) • Students work on tasks about the main elements of building structure (fostering honesty character) • Students reporton the main elements of the structure of the building (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 4 : • Students observe material related to the main elements of the building structure (continued) that are aired by the teacher through a power point. • Students askquestions about topics related to the main elements of the structure of the building (foster curiosity) • Teachers divide students into groups. • Students discuss the main topics of building structure (fostering a sense of cooperation and conscientiousness) • Students work on tasks about the main elements of the structure of the building (fostering the character of honesty) • Students reporton tasks about the main management of building structures (fostering discipline and responsibility)	

	• Students conclude lesson materials with teacher guidance	

Known By: Padang, July 2020

Principal

Teacher Subjects

Drs. DASRIZAL, MM
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SYAIFUL IKHWAN, S.Pd
NIP. 19780127 200801 1 002

Appendix : ASSESSMENT

a. Attitude Observation

- *Observed aspects:*

  Gratitude, Cooperation, Manners, Discipline, Honesty, Responsibility, Confidence.

- *Techniques:*

  Direct observations set forth in the attitude journal

- *Assessment Instruments :*

  Attitude journal

ATTITUDE JOURNAL NOTES

School Name : SMKN 1 PADANG
Class/Semester : X/Odd
Subjects : Mechanical Engineering
Year : 2020/2021
Teacher Name : SYAIFUL IKHWAN, S.Pd

№	Time	Student	Class	Behavior Notes	Key Values of

		Name			**Character Education Strengthening**
1					
2					
3					
4					
5					
6					
7					
Dst					

b. Knowledge Assessment

- *Daily Deuteronomy Questions*

Problem Essay :

1. Part of a building system that works to channel the burden by the existence of buildings on the ground is the understanding of ?
2. Mention One of the functions of the structure of the building?
3. Name the Basic Classification of building structure elements?
4. Mention Fungsidarijeniselemenstrukturrangka?
5. Suatu lembaran bahn yang sangat tipis, fleksibeldan hanya dapat menahan gaya tarik murni,merupakanelemenst

- *Answer Key*

Problem	**Answer Key**	**Score**
1	Building structure	0 - 10
2	Provide the strength and rigidity needed to prevent buildings from collapse	0 - 25
3	Geometrics, arrangement of elements, characteristics,	0 - 30

	forming materials	
4	Struktur utama untuk meneruskan berat bangunan dan beratbeban yng ditopang bangunan (manusia dan b a r a ng) , s e r t a he m b u s a n a ng i nbarang),serta hembusanangin.	0 - 25
5	Kabel	0 - 10
TOTAL SCORE		100

- *Assessment Formula*
  Essay Score : (Gain Score / Max Score) X 100 = ...

c. Skills Assessment

- *Assessed aspects*
  Results of assignment process / presentation of tasks

- *Techniques*
  ShowTime Observations

- *Assessment Instruments*

Rating Indicators	**Rating Item**	**Score**	**Weights**
1. Getting Started	1. Arrange and organize the place well 2. Provide presentation equipment well	1 - 2	10
2. Process	3. Implement the presentation in accordance with the working steps 4. Work independently	1 - 2	30
3. Results	5. presentation according to the topic 6. presentation results according to the requested item	1 - 2	40
4. Time	7. Faster than the specified time 8. On time 9. Not in accordance with the time	1 - 3	20
Total Value			100

- *Assessment Formulation*

Rating Indicators	**Value**	**Value**
1. Getting Started	(Total Score / Max Total) X Weight = Total Score / 2 X 10	10
2. Process	(Total Score / Max Total) X Weight = Total Score / 2 X 30	30
3. Results	(Total Score / Max Total) X Weight = Total Score / 2 X 40	40
4. Time	(Total Score / Max Total) X Weight = Total Score	20

	/ 3 X 20	
Total Value		100

- Recapitulation of Values

№	Name	Values / Indicators				Total Value
		Preparation	Process	Results	Time	
1						
2						
3						

EDUCATION OFFICE PROVINCIAL GOVERNMENT OF WEST SUMATRA SMKN 1 PADANG	**PROVINCIAL GOVERNMENT OF WEST SUMATRA** **EDUCATION OFFICE** **S M K N E G E R I 1 P A D A N G** *Campus : Jln.M. Yunus Kampung Kalawi Kel. Lubuk Lintah* *Kec. Kuranji Padang Telp. 0751 27917* *E-mail : web smkn1pdgsumbar@yahoo.com :* *http://smkn1padang.sch.id/*
KUR 2013 **RPP**	**RPP**

LEARNING IMPLEMENTATION PLAN

School Name : SMK N 1 PADANG
Subjects : MECHANICAL ENGINEERING
Competency Skills : DPIB & BKP
Class/Semester : X/1 (Odd)
Year of Study : 2020 / 2021
Time Allocation : 3 JP x @ 45 Minutes
Meeting to : 5, 6 , 7 and 8

Basic Competencies : 3. 2.. Understand the factors that affect the structure buildings based on design criteria and loading

: 4.2.. Presents factors that affect the structure of buildings based on design criteria and loading

Learning Objectives	**Learning Steps**	**Assessment of Learning Outcomes**
Through group discussion learning, students can explain the elements of the structure and	Meeting 1 : • Students observe materials related to structural design criteria through modules provided by the teacher • Students ask questions about topics related to structural design criteria	• Attitude Assessment: observe the attitude of the student's character directly made through the attitude journal.

present the elements of the structure	(foster curiosity) • Teachers divide students into groups. • Students discuss the topic of structural design criteria (fostering a sense of cooperation and conscientiousness) • Students work on tasks on structural design criteria (fostering honesty character) • Students reporton structural design criteria assignments (foster discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 2 : • Students observe materials related to the criteria for loading structures through modules provided by the teacher • Students ask questions about topics related to structural loading criteria (foster curiosity) • Teachers divide students into groups. • Students discuss the topic of structural loading criteria (fostering a sense of cooperation and conscientiousness) • Students do tasks on the criteria of loading structures (fostering honesty character) • Students reporton the criteria for burdening the structure (fostering discipline and responsibility) • Students conclude lesson materials	• Knowledge Assessment: Testertulis,Q&A or kuiz. • ValuationProfessity: Performance Assessment: observe the assignment process made through the observation sheet.

	with teacher guidance Meeting 3 : • Students observe material related to static models of loading on structures. • Students ask questions about topics related to static models of loading on structures (fostering curiosity) • Teachers divide students into groups. • Students discuss the topic of static modeling on the structure (fostering a sense of cooperation and conscientiousness) • Students work on tasks about static modeling on structure (fostering honesty character) • Students reporton the static model of imposition on the structure (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 4 : • Students observe materials related to the basic concept of earthquake resistant building construction. • Students ask questionsabout topics related to the basic conceptof earthquake-resistant building construction (foster curiosity) • Teachers divide students into groups. • Students discuss the basic concept topic of earthquake resistant building construction (fostering a	

	sense of cooperation and conscientiousness) • Students work on tasks on the basic concept of earthquake resistant building construction (fostering honesty character) • Students reporton basic concepts of earthquake-resistant building construction (foster discipline and responsibility) • Students conclude lesson materials with teacher guidance	

Known By: Padang, July 2020

Principal

Teacher Subjects

Drs. DASRIZAL, MM

NIP. 19621226 198803 1 002

SYAIFUL IKHWAN, S.Pd

NIP. 19780127 200801 1 002

Appendix : ASSESSMENT

a. Attitude Observation

- *Observed aspects:*

  Gratitude, Cooperation, Manners, Discipline, Honesty, Responsibility, Confidence.

- *Techniques:*

  Direct observations set forth in the attitude journal

- *Assessment Instruments :*

  Attitude journal

ATTITUDE JOURNAL NOTES

School Name : SMKN 1 PADANG

Class/Semester : X/Odd

Subjects : Mechanical Engineering

Year : 2020/2021

Teacher Name : SYAIFUL IKHWAN, S.Pd

№	**Time**	**Student Name**	**Class**	**Behavior Notes**	**Key Values of Character Education Strengthening**
1					
2					
3					
4					
5					
6					
7					
Dst					

b. Knowledge Assessment

- *Daily Deuteronomy Questions*

Problem Essay :

1. Which part of the slope can be used as a place to build buildings?
2. Write in your opinion the definition of the building?
3. Mention the building is reviewed from the composition?
4. Mention various structural safety requirements?

5. Mention the types of soil that support the creation of foundations?

- Answer Key

Problem	Answer Key	Score
1	The slope land section on the land is stable and not on the hills	0 - 10
2	A building is a man-made structure consisting of walls and roofs that are permanently erected somewhere. Buildings are also commonly referred to as houses and buildings,namely all facilities, infrastructure or infrastructure in the culture or human life in building civilization.	0 - 25
3	Judging from the arrangement, buildings can be distinguished into 2, namely: 1. Lower buildings: i.e. parts of buildings located below ground level, such as sloof and foundation. The lower building is a construction made to hold the entire building. 2. Buildings above: yatu parts of the building located above ground level, such as walls, columns, doors & windows, ringbalk, roof frame, roof, eternity etc.	0 - 30
4	Structural safety requirements include: ● Horizontal reinforcement on the wall is required to transfer the building load from the horizontal plane from the inertia load to the wall ● Walls must be effectively bound to each other to prevent separators on vertical joints because the ground vibrates ● Elements of the roof or floor must be fastened together and able to show diaphragm action	0 - 25
5	Types of soil on the foundation: 1. Hard ground 2. Soft soil 3. Weak soil	0 - 10

TOTAL SCORE	100

- *Assessment Formula*
  Essay Score : (Gain Score / Max Score) X 100 = ...

c. Skills Assessment

- *Assessed aspects*
  Results of assignment process / presentation of tasks

- *Techniques*
  Observation of The Show of Kerja
- *Assessment Instruments*

Rating Indicators	**Rating Item**	**Score**	**Weights**
1. Getting Started	1. Arrange and organize the place well 2. Provide presentation equipment well	1 - 2	10
2. Process	3. Implement the presentation in accordance with the working steps 4. Work independently	1 - 2	30
3. Results	5. presentation according to the topic 6. presentation results according to the requested item	1 - 2	40
4. Time	7. Faster than the specified time 8. On time 9. Not in accordance with the time	1 - 3	20
Total Value			100

- *Assessment Formulation*

Rating Indicators	**Value**	**Value**
1. Getting Started	(Total Score / Max Total) X Weight = Total Score / 2 X 10	10
2. Process	(Total Score / Max Total) X Weight = Total Score / 2 X 30	30
3. Results	(Total Score / Max Total) X Weight = Total Score / 2 X 40	40
4. Time	(Total Score / Max Total) X Weight = Total Score /	20

	3 X 20	
Total Value		100

- Recapitulation of Values

№	Name	Values / Indicators				Total Value
		Preparation	Process	Results	Time	
1						
2						
3						

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KUR 2013 **RPP**	**RPP**

LEARNING IMPLEMENTATION PLAN

School Name	:	SMK N 1 PADANG
Subjects	:	MECHANICAL ENGINEERING
Competencies	:	DPIB & BKP
Class/Semester	:	X/1 (Odd)
Year of Study	:	2020 / 2021
Time Allocation	:	3 JP x @ 45 Minutes
Meeting to	:	9, 10 , 11 and 12

Basic Competencies : 3.3 Memahami various styles in structure

Building

4.3 Citing various styles in the structure

Building

Learning Objectives	**Learning Steps**	**Assessment of Learning Outcomes**
Through group discussion learning, students can explain the elements of the structure and present the elements of the structure	Meeting 1 : • Students observe materials related to various styles in building structures through modules given by the teacher • Students ask questions about topics related to different styles in building structures (foster curiosity) • Teachers divide students into groups. • Students discuss the topic of various styles in the structure of the building (fostering a sense of cooperation and conscientiousness) • Students do tasks about various styles in the structure of the building (fostering honesty character) • Students report assignments about different styles in building structures (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 2 : • Students observe materials related to various styles in building structures (continued) through modules provided by the teacher • Students ask questions about topics related to different styles in building structures (foster curiosity) • Teachers divide students into groups. • Students discuss the topic of	• Attitude Assessment: observe the attitude of the student's character directly made through the attitude journal. • Knowledge Assessment: Testertulis,Q&A or kuiz. • ValuationProfessity: Performance Assessment: observe the assignment process made through the observation sheet.

	various styles in the structure of the building (fostering a sense of cooperation and conscientiousness) • Students do tasks about various styles in the structure of the building (fostering honesty character) • Students report assignments about different styles in building structures (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 3 : • Students observe materials related to the stability of building structures. • Students ask questions about topics related to the stability of building structures (foster curiosity) • Teachers divide students into groups. • Students discuss the topic of stability of building structures (fostering a sense of cooperation and conscientiousness) • Students do tasks about the stability of building structures (fostering honesty character) • Students reporton the stability of building structures (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 4 : • Students observe materials related to the stability of building structures (continued). • Students ask questions about topics related to the stability of building structures (foster curiosity) • Teachers divide students into groups.	

	• Students discuss the topic of stability of building structures (fostering a sense of cooperation and conscientiousness) • Students do tasks about the stability of building structures (fostering honesty character) • Students reporton the stability of building structures (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance	

Known By: Padang, May 2020

Principal — Teacher Subjects

Drs. DASRIZAL, MM — **SYAIFUL IKHWAN, S.Pd**

NIP. 19621226 198803 1 002 — NIP. 19780127 200801 1 002

Appendix : ASSESSMENT

a. Attitude Observation

- *Observed aspects:*

  Gratitude, Cooperation, Manners, Discipline, Honesty, Responsibility, Confidence.

- *Techniques:*

  Direct observations set forth in the attitude journal

- *Assessment Instruments :*

  Attitude journal

ATTITUDE JOURNAL NOTES

School Name : SMKN 1 PADANG

Class/Semester : X/Odd

Subjects : Mechanical Engineering

Year : 2020/2021

Teacher Name : SYAIFUL IKHWAN, S.Pd

№	Time	Student Name	Class	Behavior Notes	Key Values of Character Education Strengthening
1					
2					
3					
4					
5					
6					
7					
Dst					

b. Knowledge Assessment

- *Daily Deuteronomy Questions*

Problem Essay :

1. Explain the influence of force on a building structure?
2. Mention the types of stability of building structures?
3. The inner force of the beam that is directed parallel to the elongated axis of the beam is called?
4. The inner force that is directed perpendicular to the elongated axis of the structure element is called
5. The occurrence of buckling is caused by ?

- *Answer Key*

Problem	Answer Key	Score
1	the influence of force press on a building structure is the force press can cause buckling. Buckling is an instability that causes elements to be unable to withstand any additional loads that can occur without excess material	0 - 30
2	Types of structural stability: - Complete stability - Relationship stability - Strength and rigidity of the structure - Structural stability	0 - 25
3	Gaya Lintang	0 - 10
4	Normal Style	0 - 25
5	Moment	0 - 10
TOTAL SCORE		100

- *Assessment Formula*
  Essay Score : (Gain Score / Max Score) X 100 = ...

c. Skills Assessment

- *Assessed aspects*
  Results of assignment process / presentation of tasks

- *Techniques*
  ShowTime Observations

- *Assessment Instruments*

Rating Indicators	Rating Item	Score	Weights
1. Getting Started	1. Arrange and organize the place well 2. Provide presentation equipment well	1 - 2	10
2. Process	3. Implement the presentation in accordance with the working steps 4. Work independently	1 - 2	30
3. Results	5. presentation according to the topic 6. presentation results according to the requested item	1 - 2	40
4. Time	7. Faster than the specified time 8. On time 9. Not in accordance with the time	1 - 3	20
Total Value			100

- *Assessment Formulation*

Rating Indicators	**Value**	**Value**
1. Getting Started	(Total Score / Max Total) X Weight = Total Score / 2 X 10	10
2. Process	(Total Score / Max Total) X Weight = Total Score / 2 X 30	30
3. Results	(Total Score / Max Total) X Weight = Total Score / 2 X 40	40
4. Time	(Total Score / Max Total) X Weight = Total Score / 3 X 20	20
Total Value		100

- Recapitulation of Values

№	**Name**	**Values / Indicators**				**Total Value**
		Preparation	**Process**	**Results**	**Time**	
1						
2						
3						

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KUR 2013 **RPP**	**RPP**

LEARNING IMPLEMENTATION PLAN

School Name	:	SMK N 1 PADANG
Subjects	:	MECHANICAL ENGINEERING
Competencies	:	DPIB & BKP
Class/Semester	:	X/1 (Odd)
Year of Study	:	2020 / 2021
Time Allocation	:	3 JP x @ 45 Minutes
Meeting to	:	13, 14 , 15 and 16

Basic Competencies : 3.4 Applying how to structure a structure

Building

4.4 Makingarrangements and calculations of styles in building structure

Learning Objectives	**Learning Steps**	**Assessment of Learning Outcomes**
Through group discussion learning, students can explain the elements of the structure and present the elements of the structure	Meeting 1 : • Students observe materials related to the concept of magnitude through modules provided by the teacher • Students ask questions about topics related to the concept of magnitude (growing curiosity) • Teachers divide students into groups. • Students discuss the topic of magnitude concept (fostering a sense of cooperation and conscientiousness) • Students do tasks about the concept of magnitude (fostering honesty character) • Students reporton the concept of magnitude (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 2 : • Students observe material related to the concept of units • Students ask questions about topics related to the concept of units (foster curiosity) • Teachers divide students into groups. • Students discuss the topic of unit concept (fostering a sense of cooperation and conscientiousness) • Students do tasks about the concept of units (fostering	• Attitude Assessment: observe the attitude of the student's character directly made through the attitude journal. • Knowledge Assessment: Testertulis,Q&A or kuiz. • ValuationProfessity: Performance Assessment: observe the assignment process made through the observation sheet.

	honesty character) • Students reporton unit concepts (foster discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 3 : • Students observe material related to the concept of the moment. • Students askquestions about topics related to the concept of the moment (foster curiosity) • Teachers divide students into groups. • Students discuss the topic of the concept of the moment (fostering a sense of cooperation and conscientiousness) • Students work on tasks about the concept of moments (fostering the character of honesty) • Students reportassignments about the concept of moments (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 4 : • Students observe material related to Newton's law. • Students ask questionsabout topics related toNewton's law (growing curiosity) • Teachers divide students into groups. • Students discuss the topic of Newton's law (fostering a sense of cooperation and conscientiousness) • Students work on newton's law assignments (fostering honesty) • Students reportassignments about Newton's hokum (fostering discipline and responsibility) • Students conclude lesson materials	

	with teacher guidance	

Known By: Padang, May 2020

Principal

Teacher Subjects

Drs. DASRIZAL, MM
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SYAIFUL IKHWAN, S.Pd
NIP. 19780127 200801 1 002

Appendix : ASSESSMENT

a. Attitude Observation

- *Observed aspects:*

  Gratitude, Cooperation, Manners, Discipline, Honesty, Responsibility, Confidence.

- *Techniques:*

  Direct observations set forth in the attitude journal

- *Assessment Instruments :*

  Attitude journal

ATTITUDE JOURNAL NOTES

School Name : SMKN 1 PADANG
Class/Semester : X/Odd
Subjects : Mechanical Engineering
Year : 2020/2021
Teacher Name : SYAIFUL IKHWAN, S.Pd

№	Time	Student Name	Class	Behavior Notes	Key Values of Character Education Strengthening
1					
2					
3					
4					
5					
6					
7					
Dst					

b. Knowledge Assessment

- *Daily Deuteronomy Questions*

Problem Essay :

1. Explain the difference between the principal magnitude and the amount of derivatives!
2. Mention the sound of Newton's Law I !

- *Answer Key*

Problem	Answer Key	Score
1	The principal amount is the amount whose unit has been determined / standardized to be used as the basis in determining units at othermagnitudes. While the derived amount is the amount whose	0 - 50

	unit is derived from the principal.	
2		0 - 50
TOTAL SCORE		100

- *Assessment Formula*
  Essay Score : (Gain Score / Max Score) X 100 = ...

c. Skills Assessment

- *Assessed aspects*
  Results of assignment process / presentation of tasks

- *Techniques*
  ShowTime Observations

- *Assessment Instruments*

Rating Indicators	**Rating Item**	**Score**	**Weights**
1. Getting Started	1. Arrange and organize the place well 2. Provide presentation equipment well	1 - 2	10
2. Process	3. Implement the presentation in accordance with the working steps 4. Work independently	1 - 2	30
3. Results	5. presentation according to the topic 6. presentation results according to the requested item	1 - 2	40
4. Time	7. Faster than the specified time 8. On time 9. Not in accordance with the time	1 - 3	20
Total Value			100

- *Assessment Formulation*

Rating Indicators	**Value**	**Value**
1. Getting Started	(Total Score / Max Total) X Weight = Total Score / 2 X 10	10
2. Process	(Total Score / Max Total) X Weight = Total Score / 2 X 30	30
3. Results	(Total Score / Max Total) X Weight = Total Score / 2 X 40	40
4. Time	(Total Score / Max Total) X Weight = Total Score / 3 X 20	20
Total Value		100

- Recapitulation of Values

№	**Name**	**Values / Indicators**				**Total Value**
		Preparation	**Process**	**Results**	**Time**	
1						
2						
3						

EDUCATION OFFICE

PROVINCIAL GOVERNMENT OF WEST SUMATRA

SMKN 1 PADANG

PROVINCIAL GOVERNMENT OF WEST SUMATRA
EDUCATION OFFICE
S M K N E G E R I 1 P A D A N G

Campus : Jln.M. Yunus Kampung Kalawi Kel. Lubuk Lintah
Kec. Kuranji Padang Telp. 0751 27917
E-mail : web smkn1pdgsumbar@yahoo.com :
http://smkn1padang.sch.id/

KUR 2013

RPP

RPP

LEARNING IMPLEMENTATION PLAN

School Name	:	SMK N 1 PADANG
Subjects	:	MECHANICAL ENGINEERING
Competency Skills	:	DPIB & BKP
Class/Semester	:	X/1 (Odd)
Year of Study	:	2020 / 2021
Time Allocation	:	3 JP x @ 45 Minutes
Meeting to	:	17, 18 , 19 and 20

Basic Competencies : 3.5 Analyzing inner styles (moments, slides and normal) on the structure of the building

: 4.5 Calculating inner styles (moments, slides and

normal) on the structure of the building

Learning Objectives	**Learning Steps**	**Assessment of Learning Outcomes**
Through group discussion learning, students can explain the elements of the structure and present the elements of the structure	Meeting 1 : • Students observe the material related to the inner style (moment) aired by the teacher. • Students ask questions about topics related to inner style (moments) (foster curiosity) • Teachers divide students into groups. • Students discuss the topic of inner style (moments) (fostering a sense of cooperation and conscientiousness) • Students work on tasks about inner style (moments) (fostering honesty character) • Students reportassignments about inner style (moments) (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 2 : • Students observe material related to the inner style (slide) displayed by the teacher through a power point. • Students ask questions about topics related to inner style (sliding) (foster curiosity) • Teachers divide students into groups. • Students discuss the topic of inner style (sliding) (fostering a sense of cooperation and	• Attitude Assessment: observe the attitude of the student's character directly made through the attitude journal. • Knowledge Assessment: Testertulis,Q&A or kuiz. • ValuationProfessity: Performance Assessment: observe the assignment process made through the observation sheet.

	conscientiousness) • Students work on tasks about inner style (sliding) (fostering honesty character) • Students reportassignments about inner style (sliding) (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 3 : • Students observe material related to the (normal) inner style displayed by the teacher through a power point. • Students ask questions about topics related to inner (normal) style (foster curiosity) • Teachers divide students into groups. • Students discuss the topic of inner style (normal) (fostering a sense of cooperation and conscientiousness) • Students do tasks about inner (normal) style (foster honesty character) • Students reportassignments about inner (normal) style (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance Meeting 4 : • Students observe material related to the advanced (normal) inner style displayed by the teacher through a power point. • Students ask questions about topics related to inner (normal) style (foster curiosity) • Teachers divide students into groups. • Students discuss the topic of inner style (normal) (fostering a sense of cooperation and	

	conscientiousness) • Students do tasks about inner (normal) style (foster honesty character) • Students reportassignments about inner (normal) style (fostering discipline and responsibility) • Students conclude lesson materials with teacher guidance	

Known By: Padang, May 2020

Principal

Teacher Subjects

Drs. DASRIZAL, MM
NIP. 19621226 198803 1 002

SYAIFUL IKHWAN, S.Pd
NIP. 19780127 200801 1 002

Appendix : ASSESSMENT

a. Attitude Observation

- *Observed aspects:*

  Gratitude, Cooperation, Manners, Discipline, Honesty, Responsibility, Confidence.

- *Techniques:*

  Direct observations set forth in the attitude journal

- *Assessment Instruments :*

  Attitude journal

ATTITUDE JOURNAL NOTES

School Name : SMKN 1 PADANG

Class/Semester : X/Odd

Subjects : Mechanical Engineering

Year : 2020/2021

Teacher Name : SYAIFUL IKHWAN, S.Pd

№	Time	Student Name	Class	Behavior Notes	Key Values of Character Education Strengthening
1					
2					
3					
4					
5					
6					
7					
Dst					

b. Knowledge Assessment

- *Daily Deuteronomy Questions*

Problem Essay :

1. Ichsan Pushed the Table to the right with a style of 25 N, then Bagus came to help Evan push in style 23 N. From the other direction, Dewi pushed the same table to the left with a style of 18 N, then Marisa came to help Dewi with Style 15 N. Determine the resultant and direction of her style!
2. A beam is pulled through a rope by two children in a style of 60 N and 40 N. **H** is the resultant style of the two children if
   a. the two styles of the person are in the same direction,
   b. the two styles of the person are in the opposite direction.

- *Answer Key*

Problem	Answer Key	Score
1	Resultant Style :	0 - 50

	= (25+23) - (18+15) = 48 - 33 = 15 N to the right	
2	a. 60 + 40 = 100 N b. 60 - 40 = 20 N	0 - 50
TOTAL SCORE		100

- *Assessment Formula*
  Essay Score : (Gain Score / Max Score) X 100 = ...

c. Skills Assessment

- *Assessed aspects*
  Results of assignment process / presentation of tasks

- *Techniques*
  ShowTime Observations

- *Assessment Instruments*

Rating Indicators	**Rating Item**	**Score**	**Weights**
1. Getting Started	1. Arrange and organize the place well 2. Provide presentation equipment well	1 - 2	10
2. Process	3. Implement the presentation in accordance with the working steps 4. Work independently	1 - 2	30
3. Results	5. presentation according to the topic 6. presentation results according to the requested item	1 - 2	40
4. Time	7. Faster than the specified time 8. On time 9. Not in accordance with the time	1 - 3	20
Total Value			100

- *Assessment Formulation*

Rating Indicators	Value	Value
1. Getting Started	(Total Score / Max Total) X Weight = Total Score / 2 X 10	10
2. Process	(Total Score / Max Total) X Weight = Total Score / 2 X 30	30
3. Results	(Total Score / Max Total) X Weight = Total Score / 2 X 40	40
4. Time	(Total Score / Max Total) X Weight = Total Score / 3 X 20	20
Total Value		100

- Recapitulation of Values

№	Name	Values / Indicators				Total Value
		Preparation	Process	Results	Time	
1						
2						
3						

DAFTAR HADIR DAN NILAI SISWA SMK NEGERI 1 PADANG
TAHUN PELAJARAN 2020/2021

KELAS : X DPIB - A

KOMPETENSI KEAHLIAN : Desain Pemodelan dan Informasi Bangunan

NO	NAMA SISWA / I	L/P	NIS	NISN	AGUSTUS 2020														% Kehadiran			NILAI AKHIR KD 1
					PERTEMUAN KE/TANGGAL																	
					1			2			3			4			5					
					03/08/2020	Nilai Tugas 2		10/08/2020	Nilai Tugas 3		17/08/2020	Nilai Tugas 4		24/08/2020	Nilai Tugas 5		31/08/2020	Nilai Ulangan	S	I	A	
A	**GROUP A**																					
1	Adithya Alvarez	L	20/31623	0046458285	√	0		√	0		L	T		×	0		×	0	-	-	2	0
2	Alam Gufron	L	20/31624	0049336199	√	75		√	75		I	I		√	75		√	90	-	-	-	78,75
3	Alessio Armando Zahwa	L	20/31625	0055466677	×	0		√	75		B	D		√	80		√	90	-	-	1	61,25
4	Ardiyan Pratama	L	20/31626	0047383981	√	75		√	0		U	A		×	0		√	65	-	-	1	35
5	Devine Rahman Denis	L	20/31627	0058199103	×	0		×	0		R	K		×	0		×	0	-	-	4	0
6	Farhan Nugraha	L	20/31628	0059283356	√	90		√	90					√	90		√	90	-	-	-	90
7	Fikih Maulana Sidik	L	20/31629	0035359798	√	80		√	88			A		√	90		√	90	-	-	-	87
8	Gusri Hendra	L	20/31630	0046473296	×	0		×	0			D		×	0		×	0	-	-	4	0
9	Ibnu Eka Putra	L	20/31631	0052736841	√	90		√	90			A		√	90		√	90	-	-	-	90
10	Indra Efendi	L	19/31095		×	0		×	0					√	85		×	0	-	-	3	21,25
11	Indra Maulana Pratama Saputra	L	20/31632	0046253079	×	0		√	90					×	0		√	90	-	-	2	45
12	***Julia Adinda Fitriani***	***P***	20/31633	0053033004	√	90		√	90					√	90		√	90	-	-	-	90
13	Kevin Perdana	L	20/31634	0053055069	√	71		√	90					√	80		√	65	-	-	-	76,5
14	M. Indra Wiguna	L	20/31635	0029993335	×	0		√	90					×	0		×	0	-	-	3	22,5
15	M. Sayyid Bani Agil	L	20/31636	0042648764	√	75		√	75					√	75		×	0	-	-	1	56,25
16	M. Setiangga	L	20/31637	0047877001	√	75		√	78					√	85		×	0	-	-	1	59,5
17	Malfin Zaenal Fanany	L	20/31638	0053058749	√	88		√	88					√	75		√	75	-	-	-	81,5
B	**GROUP B**																					
18	***Merry Anggraini Putri***	***P***	20/31639		√	90		√	90					√	90		√	65	-	-	-	83,75
19	Muhamad Risqy Solihudin	L	20/31640	0057384689	√	0		√	0					×	0		×	0	-	-	2	0
20	Muhammad Al Fadly	L	20/31641	0053375494	×	0		×	0					×	0		×	0	-	-	4	0
21	Muhammad Aldi Setiawan	L	20/31642	0046459185	√	90		√	90					√	90		√	65	-	-	-	83,75
22	Muhammad Aqil Brigjules	L	20/31643	0053517330	√	90		√	90					√	75		√	80	-	-	-	83,75
23	Muhammad Arif	L	20/31644	0048772779	×	0		×	0					×	0		×	0	-	-	4	0
24	Muhammad Fajri	L	20/31645	0055990030	√	90		√	90					√	85		√	90	-	-	-	88,75
25	***Nada Aulia Putri***	***P***	20/31646	0041455988	√	88		√	89					√	90		√	65	-	-	-	83
26	Nando Arya Pratama	L	20/31647	0059897181	√	90		√	90					×	0		√	65	-	-	1	61,25
27	Qadri Frima Surya	L	20/31648	0046453477	√	90		×	0					×	0		×	0	-	-	3	22,5
28	Ragil Hidayat	L	20/31649		×	0		×	0					×	0		×	0	-	-	4	0
29	Randi Noviandri	L	20/31650	0041455966	×	0		√	0					×	0		×	0	-	-	-	0
30	Reihanda Aditia	L	20/31651	0057691208	√	88		√	0					√	75		√	80	-	-	-	60,75
31	Reski Anugra Pratama	L	20/31652	0052965156	√	87		√	84					√	80		√	60	-	-	-	77,75
32	Rifqi Al Hadi Effendi	L	20/31653	0053174043	×	0		×	0					×	0		×	0	-	-	4	0
33	Steffano Defedino Pratama	L	20/31654	0041151183	×	0		×	0					×	0		×	0	-	-	4	0
34	Stevanus Aditya Virginis Usfal	L	20/31655	0036442458	√	75		×	0					×	0		×	0	-	-	3	18,75
35	Vanessa Belia Mukri	L	20/31656	0053031392	√	0		√	0					×	0		×	0	-	-	2	0
	Kamal Rahman				√	75		×	0					√	75		√	65	-	-	1	53,75

Padang, Agustus 2020

Kaprodi T Konstruksi dan Properti | Wali Kelas, | Guru Mata Pelajaran

SYAIFUL IKHWAN, S.Pd
NIP. 19780127 200801 1 002

Drs. MEIZETRI
NIP.196605071997021001

SYAIFUL IKHWAN, S.Pd
NIP. 19780127 200801 1 002

DAFTAR HADIR DAN NILAI SISWA SMK NEGERI 1 PADANG
TAHUN PELAJARAN 2020/2021

KELAS : X DPIB - A **SEMESTER** : GANJIL (1)

KOMPETENSI KEAHLIAN : Desain Pemodelan dan Informasi Bangunan **M. PELAJARAN** : MEKANIKA TEKNIK

NO	NAMA SISWA / I	L/P	NIS	NISN	BULAN : SEPTEMBER 2020												% Kehadiran			NILAI AKHIR KD
					PERTEMUAN KE/ TANGGAL															
					1			2			3			4						
					07/09/2020	Nilai Tugas 1	Keterampilan	14/09/2020	Nilai Tugas 2	Keterampilan	21/09/2020	Nilai Tugas 3	Keterampilan	28/09/2020	Nilai Tugas 4	Keterampilan	S	I	A	
A	**GROUP A**																			
1	Adithya Alvarez	L	20/31623	0046458285	√	90		x	0		x	0		x	0		—	—	3	22,5
2	Alam Gufron	L	20/31624	0049336199	√	80		√	90		√	75		√	85		—	—	0	82,5
3	Alessio Armando Zahwa	L	20/31625	0055466677	√	90		√	90		x	0		x	0		—	—	2	45
4	Ardiyan Pratama	L	20/31626	0047383981	x	0		x	0		x	0		x	0		—	—	4	0
5	Devine Rahman Denis	L	20/31627	0058199103	x	0		√	90		√	75		√	85		—	—	1	62,5
6	Farhan Nugraha	L	20/31628	0059283356	√	90		√	90		√	75		√	75		—	—	0	82,5
7	Fikih Maulana Sidik	L	20/31629	0035359798	√	90		x	0		x	0		x	0		—	—	3	22,5
8	Gusri Hendra	L	20/31630	0046473296	x	0		x	0		x	0		x	0		—	—	4	0
9	Ibnu Eka Putra	L	20/31631	0052736841	√	90		√	90		√	75		√	75		—	—	0	82,5
10	Indra Efendi	L	19/31095		x	0		√	90		x	0		x	0		—	—	3	22,5
11	Indra Maulana Pratama Saputra	L	20/31632	0046253079	x	0		x	0		x	0		x	0		—	—	4	0
12	***Julia Adinda Fitriani***	***P***	20/31633	0053033004	√	90		√	90		x	0		x	0		—	—	2	45
13	Kevin Perdana	L	20/31634	0053055069	x	0		√	90		x	0		x	0		—	—	3	22,5
14	M. Indra Wiguna	L	20/31635	0029993335	x	0		x	0		x	0		x	0		—	—	4	0
15	M. Sayyid Bani Agil	L	20/31636	0042648764	√	90		√	90		x	0		x	0		—	—	2	45
16	M. Setiangga	L	20/31637	0047877001	x	0		x	0		x	0		x	0		—	—	4	0
17	Malfin Zaenal Fanany	L	20/31638	0053058749	√	88		√	85		x	0		√	85		—	—	1	64,5
B	**GROUP B**																			
18	***Merry Anggraini Putri***	***P***	20/31639		√	80		√	90		x	0		√	85		—	—	1	63,75
19	Muhamad Risqy Solihudin	L	20/31640	0057384689	x	0		x	0		x	0		x	0		—	—	4	0
20	Muhammad Al Fadly	L	20/31641	0053375494	√	90		x	0		x	0		x	0		—	—	3	22,5
21	Muhammad Aldi Setiawan	L	20/31642	0046459185	√	90		x	0		√	0		√	0		—	—	1	22,5
22	Muhammad Aqil Brigjules	L	20/31643	0053517330	√	90		√	90		√	0		√	0		—	—	0	45
23	Muhammad Arif	L	20/31644	0048772779	x	0		√	88		x	0		x	0		—	—	3	22
24	Muhammad Fajri	L	20/31645	0055990030	√	88		√	85		x	0		√	80		—	—	1	63,25
25	***Nada Aulia Putri***	***P***	20/31646	0041455988	√	80		√	85		x	0		√	85		—	—	1	62,5
26	Nando Arya Pratama	L	20/31647	0059897181	√	90		√	90		x	0		x	0		—	—	2	45
27	Qadri Frima Surya	L	20/31648	0046453477	x	0		√	90		x	0		x	0		—	—	3	22,5
28	Ragil Hidayat	L	20/31649		x	0		x	0		x	0		x	0		—	—	4	0
29	Randi Noviandri	L	20/31650	0041455966	x	0		x	0		x	0		x	0		—	—	4	0
30	Reihanda Aditia	L	20/31651	0057691208	√	90		√	90		√	0		√	0		—	—	0	45
31	Reski Anugra Pratama	L	20/31652	0052965156	√	90		√	90		√	75		√	85		—	—	0	85
32	Rifqi Al Hadi Effendi	L	20/31653	0053174043	x	0		x	0		x	0		x	0		—	—	4	0
33	Steffano Defedino Pratama	L	20/31654	0041151183	x	0		x	0		x	0		x	0		—	—	4	0
34	Stevanus Aditya Virginis Usfal	L	20/31655	0036442458	x	0		x	0		x	0		x	0		—	—	4	0
35	Vanessa Belia Mukri	L	20/31656	0053031392	x	0		x	0		x	0		x	0		—	—	4	0
	Kamal Rahman				x	0		√	90		x	0		x	0		—	—	3	22,5

Padang, September 2020

Kaprodi T Konstruksi dan Properti

SYAIFUL IKHWAN, S.Pd

NIP. 19780127 200801 1 002

Wali Kelas,

Drs. MEIZETRI

NIP.196605071997021001

Guru Mata Pelajaran

SYAIFUL IKHWAN, S.Pd

NIP.

DAFTAR HADIR DAN NILAI SISWA SMK NEGERI 1 PADANG
TAHUN PELAJARAN 2020/2021

KELAS : X DPIB - A
SEMESTER : GANJIL (1)
KOMPETENSI KEAHLIAN : Desain Pemodelan dan Informasi Bangunan
M. PELAJARAN : MEKANIKA TEKNIK

NO	NAMA SISWA / I	L/P	NIS	NISN	BULAN : OKTOBER 2020														% Kehadiran			NILAI AKHIR KD
					PERTEMUAN KE/ TANGGAL																	
					1			2			3			4							
					05/10/20200	Nilai Tugas 1	Keterampilan	12/10/2020	Nilai Tugas 2	Keterampilan	19/10/2020	Nilai Tugas 3	Keterampilan	26/10/2020	Nilai Tugas 4	Keterampilan	Nilai Ulangan					
A	GROUP A																		S	I	A	
1	Adithya Alvarez	L	20/31623	0046458285				X	0		X	0		X	0				-	-	3	0
2	Alam Gufron	L	20/31624	0049336199				√	75		X	0		√	90				-	-	1	55
3	Alessio Armando Zahwa	L	20/31625	0055466677				X	0		X	0		X	0				-	-	3	0
4	Ardiyan Pratama	L	20/31626	0047383981				X	0		X	0		X	0				-	-	3	0
5	Devine Rahman Denis	L	20/31627	0058199103				X	0		X	0		X	0				-	-	3	0
6	Farhan Nugraha	L	20/31628	0059283356				√	75		√	90		√	90				-	-	-	85
7	Fikih Maulana Sidik	L	20/31629	0035359798				X	0		X	0		X	0				-	-	3	0
8	Gusri Hendra	L	20/31630	0046473296				X	0		X	0		X	0				-	-	3	0
9	Ibnu Eka Putra	L	20/31631	0052736841				√	90		√	90		X	0				-	-	1	60
10	Indra Efendi	L	19/31095					X	0		X	0		X	0				-	-	3	0
11	Indra Maulana Pratama Saputra	L	20/31632	0046253079				X	0		X	0		X	0				-	-	3	0
12	***Julia Adinda Fitriani***	***P***	20/31633	0053033004				√	90		√	90		√	90				-	-	-	90
13	Kevin Perdana	L	20/31634	0053055069				X	0		√	80		√	90				-	-	1	56,66666667
14	M. Indra Wiguna	L	20/31635	0029993335				X	0		X	0		X	0				-	-	3	0
15	M. Sayyid Bani Agil	L	20/31636	0042648764				X	0		X	0		√	88				-	-	2	29,33333333
16	M. Setiangga	L	20/31637	0047877001				X	0		X	0		X	0				-	-	3	0
17	Malfin Zaenal Fanany	L	20/31638	0053058749				√	70		√	90		X	0				-	-	1	53,33333333
B	GROUP B																					
18	***Merry Anggraini Putri***	***P***	20/31639					X	0		X	0		√	80				-	-	2	26,66666667
19	Muhamad Risqy Solihudin	L	20/31640	0057384689				X	0		X	0		X	0				-	-	3	0
20	Muhammad Al Fadly	L	20/31641	0053375494				X	0		X	0		√	90				-	-	2	30
21	Muhammad Aldi Setiawan	L	20/31642	0046459185				√	88		X	0		X	0				-	-	2	29,33333333
22	Muhammad Aqil Brigjules	L	20/31643	0053517330				√	70		√	90		√	90				-	-	-	83,33333333
23	Muhammad Arif	L	20/31644	0048772779				X	0		X	0		X	0				-	-	3	0
24	Muhammad Fajri	L	20/31645	0055990030				√	70		√	85		√	90				-	-	-	81,66666667
25	***Nada Aulia Putri***	***P***	20/31646	0041455988				√	80		√	80		X	0				-	-	1	53,33333333
26	Nando Arya Pratama	L	20/31647	0059897181				X	0		X	0		X	0				-	-	3	0
27	Qadri Frima Surya	L	20/31648	0046453477				X	0		X	0		X	0				-	-	3	0
28	Ragil Hidayat	L	20/31649					X	0		X	0		X	0				-	-	3	0
29	Randi Noviandri	L	20/31650	0041455966				X	0		X	0		X	0				-	-	3	0
30	Reihanda Aditia	L	20/31651	0057691208				√	45		√	90		√	90				-	-	-	75
31	Reski Anugra Pratama	L	20/31652	0052965156				√	0		√	90		√	88				-	-	-	59,33333333
32	Rifqi Al Hadi Effendi	L	20/31653	0053174043				X	0		X	0		X	0				-	-	3	0
33	Steffano Defedino Pratama	L	20/31654	0041151183				X	0		X	0		X	0				-	-	3	0
34	Stevanus Aditya Virginis Usfal	L	20/31655	0036442458				X	0		X	0		X	0				-	-	3	0
35	Vanessa Belia Mukri	L	20/31656	0053031392				X	0		X	0		X	0				-	-	3	0
	Kamal Rahman							X	0		X	0		X	0				-	-	3	0

UTS

Padang, Oktober 2020

Kaprodi T Konstruksi dan Properti
SYAIFUL IKHWAN, S.Pd
NIP. 19780127 200801 1 002

Wali Kelas,
Drs. MEIZETRI
NIP.196605071997021001

Guru Mata Pelajaran
SYAIFUL IKHWAN, S.Pd
NIP.

JOURNAL OF PPL STUDENTS/I OF PADANG STATE UNIVERSITY
SEMESTER JULY-DECEMBER 2020

Name : Nabilah Nur Qori'ah

NIM : 17061101

Study Program : Building Engineering Education

Lecturer : Drs. Revian Body, MSA

Teacher Pamong : Syaiful Ikhwan, S.Pd

School : SMKN 1 Padang

№	Day/Date	Types of Activities
1	Monday/10 August 2020	- Introduction of students with school devices - Division of pamong for each student
2	Tuesday/11 August 2020	- Build learning tools
3	Wednesday/12 August 2020	- Build learning tools
4	Thursday/13 August 2020	- Build learning tools
5	Friday/14 August 2020	- Build learning tools
6	Saturday/15 August 2020	- Learn about the operation of Google Classroom with a pamong
7	Monday/17 August 2020	- NATIONAL HOLIDAY (Indonesian Independence Day)
8	Tuesday/18 August 2020	- Teaching via Google Classroom in class X BKP A and BKP B

9	Wednesday/19 August 2020	- Picket library
10	Thursday/20 August 2020	- NATIONAL HOLIDAY (Hijri New Year)
11	Friday/21 August 2020	- PUBLIC HOLIDAY (Shared Leave)
12	Saturday/22 August 2020	- Picket Lobby
13	Monday/24 August 2020	- Teaching through Google Classroom in grades X DPIB A and X DPIB B
14	Tuesday/25 August 2020	- Teaching via Google Classroom in class X BKP A and BKP B
15	Wednesday/26 August 2020	- Picket Library
16	Thursday/27 August 2020	- Check assignments you've been assigned through Google Classroom
17	Friday/28 August 2020	- Check assignments you've been assigned through Google Classroom
18	Saturday/29 August 2020	- Picket Lobby
19	Monday/31 August 2020	- Teaching through Google Classroom in grades X DPIB A and X DPIB B
20	Tuesday/01 September 2020	- Teaching via Google Classroom in class X BKP A and BKP B
21	Wednesday/02 September 2020	- Picket Library
22	Thursday/03 September 2020	- Check assignments you've been assigned through Google Classroom
23	Friday/04 September 2020	- Check assignments you've been assigned through Google Classroom
24	Saturday/05 September 2020	- Picket Lobby
25	Monday/07 September 2020	- Teaching through Google Classroom in grades X DPIB A and X DPIB B
26	Tuesday/08 September 2020	- Teaching via Google Classroom in class X BKP A and BKP B

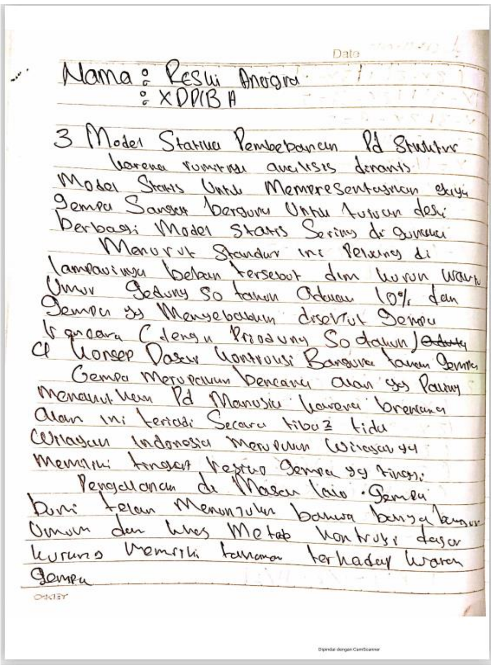
27	Wednesday/09 September 2020	- Picket Library
28	Thursday/10 September 2020	- Check assignments you've been assigned through Google Classroom
29	Friday/11 September 2020	- Check assignments you've been assigned through Google Classroom
30	Saturday/12 September 2020	- Picket Lobby
31	Monday/14 September 2020	- Teaching through Google Classroom in grades X DPIB A and X DPIB B
32	Tuesday/15 September 2020	- Teaching via Google Classroom in class X BKP A and BKP B
33	Wednesday/16 September 2020	- Picket Library
34	Thursday/17 September 2020	- Check assignments you've been assigned through Google Classroom
35	Friday/18 September 2020	- Check assignments you've been assigned through Google Classroom
36	Saturday/19 September 2020	- Picket Lobby
37	Monday/21 September 2020	- Teaching through Google Classroom in grades X DPIB A and X DPIB B
38	Tuesday/22 September 2020	- Teaching via Google Classroom in class X BKP A and BKP B
39	Wednesday/23 September 2020	- Picket Library
40	Thursday/24 September 2020	- Check assignments you've been assigned through Google Classroom
41	Friday/25 September 2020	- Check assignments you've been assigned through Google Classroom
42	Saturday/26 September 2020	- Picket Lobby
43	Monday/28 September 2020	- Teaching through Google Classroom in

		grades X DPIB A and X DPIB B
44	Tuesday/29 September 2020	- Teaching via Google Classroom in class X BKP A and BKP B
45	Wednesday/30 September 2020	- Picket Library
46	Thursday/01 October 2020	- Making midterm exam questions
47	Friday/02 October 2020	- Making midterm exam questions
48	Saturday/03 October 2020	- Picket Lobby
49	Monday/05 October 2020	- MIDTERM EXAMS
50	Tuesday/06 October 2020	- MIDTERM EXAMS
51	Wednesday/07 October 2020	- MIDTERM EXAMS
52	Thursday/08 October 2020	- MIDTERM EXAMS
53	Friday/09 October 2020	- MIDTERM EXAMS
54	Saturday/10 October 2020	- MIDTERM EXAMS
55	Monday/12 October 2020	- Teaching through Google Classroom in grades X DPIB A and X DPIB B
56	Tuesday/13 October 2020	- Teaching via Google Classroom in class X BKP A and BKP B
57	Wednesday/14 October 2020	- Picket Library
58	Thursday/15 October 2020	- Making midterm exam questions
59	Friday/16 October 2020	- Making midterm exam questions
60	Saturday/17 October 2020	- Picket Lobby
61	Monday/19 October 2020	- Teaching through Google Classroom in grades X DPIB A and X DPIB B
62	Tuesday/20 October 2020	- Teaching via Google Classroom in class X BKP A and BKP B
63	Wednesday/21 October 2020	- Picket Library
64	Thursday/22 October 2020	- Making midterm exam questions
65	Friday/23 October 2020	- Making midterm exam questions

66	Saturday/24 October 2020	- Picket Lobby
67	Monday/26 October 2020	- Teaching through Google Classroom in grades X DPIB A and X DPIB B
68	Tuesday/27 October 2020	- Teaching via Google Classroom in class X BKP A and BKP B
69	Wednesday/28 October 2020	PUBLIC HOLIDAY (Shared Leave)
70	Thursday/29 October 2020	NATIONAL HOLIDAY (Maulid Nabi)
71	Friday/30 October 2020	PUBLIC HOLIDAY (Shared Leave)
72	Saturday/31 October 2020	Holiday
73	Monday/02 November 2020	- Complete and collect school reports

BUNDEL PORTOFOLIO

KELAS X DPIB A SMK NEGERI 1 PADANG

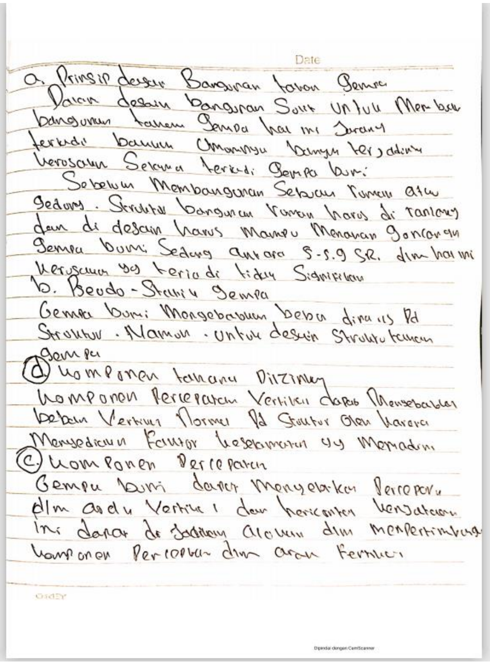


Date

Nama : Resli Anggra
: X DPIB A

3 Model Statika Pembebanan Pd Struktur
karena rumitnya analisis dinamis
Model Statis Untuk Mempresentasikan gaya
gempa Sangat berguna Untuk tujuan desain
Berbagai Model Statis Sering di gunakan
Menurut Standar ini Peluang di
lampauinya beban tersebut dlm kurun waktu
Umur Gedung 50 tahun adalah 10% dan
gempa yg Menyebabkan disebut Gempa
Rencana (dengan Periode ulang 50 tahun) ~~adalah~~
a Konsep Dasar Kontruksi Bangunan tahan Gempa
Gempa Merupakan bencana alam yg Paling
Menakutkan Pd Manusia karena bencana
alam ini terjadi Secara tiba² tidak
Wilayah Indonesia Merupakan Wilayah yg
Memiliki tingkat resiko Gempa yg tinggi
Pengalaman di Masa lalu. Gempa
bumi telah Menunjukan bahwa banyak bangunan
Umum dan khas Metode kontruksi dasar
kurang Memiliki tahanan terhadap Wahan
gempa

Dipindai dengan CamScanner



Date

a. Prinsip dasar Bangunan tahan Gempa
Dalam desain bangunan Sulit untuk Membuat
bangunan tahan Gempa hal ini Jarang
terjadi bahwa Umumnya banyak terjadinya
kerusakan Setelah terjadi Gempa bumi
Sebelum Membangunan Sebuah rumah atau
gedung. Struktur bangunan rumah harus di rancang
dan di desain harus Mampu Menahan goncangan
gempa bumi Sedang antara 5-5.9 SR. dlm hal ini
kerusakan yg terjadi tidak Signifikan
b. Beban-Statik Gempa
Gempa bumi Mengebabkan beban dinamis Pd
Struktur. Namun. untuk desain Struktur tahan
gempa
(d) Komponen tahanan Diizinkan
Komponen Percepatan Vertikal dapat Menyebabkan
beban Vertikal Normal Pd Struktur Oleh karena
Menyediakan Faktor keselamatan yg Memadai
(c) Komponen Percepatan
Gempa bumi dapat menyebabkan Percepatan
dlm arah Vertikal dan horizontal kenyataan
ini dapat di jadikan acuan dlm mempertimbangkan
komponen Percepatan dlm arah Fertikal

Dipindai dengan CamScanner

Nama : Resky Anugrah Pratama
: X DPIB A.

e Menimbulkan Tekanan Bantalan yg Diizinkan
adalah bantalan karet yg di letakan di atas Pondasi. Tekanan yg di izin tanah di tingkat 25 – 50

f Gaya Inersia Horizontal dan Vertikal
Arah dominan dari Gerakan tanah biasanya horizontal.

G Resonasi
Berdasarkan kode resonasi dari jenis sebagai divisualisasikan dlm kondisi mana tidak akan terjadi Gempa

h. Kategori Bangunan tahan Gempa
1 Zona Intensitas Seismik dimana bangunan berada
2 Seberapa Penting bangunan
3 Bagaimana kekuatan tanah Pondasi

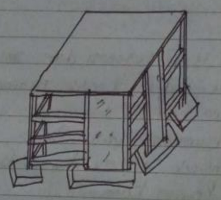
1 Zona Gempa
1 Zona A : resiko kehancuran luas dan kehancuran
2 Zona B : resiko keruntuhan kerusakan berat
3 Zona C : resiko kerusakan kecil

J Bagian Bangunan Penting
Pentingnya Memilih Pondasi yg di inginkan. Seorang Perancang bangunan harus mengetahui Jenis tanah

k. Dukungan Tanah Untuk Pondasi
Sebelum Memilih Pondasi yg diinginkan Seorang Perancang bangunan harus Menyelidiki Jenis 2 tanah

L Pemilihan daerah
1 Stabilitas lereng
2 Wilayah dengan tanah berpasir

m. Persyaratan keselamatan Struktural



ada beberapa Syarat keselamatan kerja.
1 Tulangan horizontal di dinding di Perlukan Mentransfer beban bangunan dari bidang horizontal ke dinding
2 Dinding harus efektif terhadap Suhu Sama lain

Date

3. Dinding Geser harus di buat pd kedua sisi bangunan
4. Dinding Geser harus mampu
5. Elemen atap atau lantai harus di ikat
6. Pengelasan harus melekat

7. Konsep Daktilitas, Deformabilitas dn kemampuan kerusakan

1. Daktilitas: Pengaruh
2. Deformabilitas merupakan kemampuan struktur untuk mengantisipasi atau merusak sebagian
3. Kemampuan kerusakan

(8) Konsep Isolasi

Untuk pengaruh koefesien gerakan antara struktur dn pondasinya

Julia adinda Fitriani
× DP18-A

Senin
12 Oktober 2020

Latihan Pertemuan 9 :

1. Tuliskan secara singkat Faktor-Faktor yang mempengaruhi struktur bangunan!
   = a. Kriteria desain struktur
   - Kemampuan layan (Serviceability)
   - Efisiensi
   - Konstruksi
   - Ekonomi
   b. Kriteria pembebanan struktur
   - Gaya statis
   - Gaya dinamis

2. Tuliskan persamaan umum yang diberikan pada peraturan bangunan untuk menentukan gaya desain gempa!
   = $V = C_s W$ $\quad C_s max = \frac{S_{D1}}{T\left(\frac{R}{I}\right)}$
   $C_s = \frac{S_{DS}}{\left(\frac{R}{I}\right)}$

3. Bagian lereng yang manakah yang dapat dijadikan tempat berdirinya bangunan?
   = lereng bagian tengah perbukitan / lereng datar sampai agak curam (kemiringan 0-25 %)

4. Jelaskan bangunan-bangunan gedung yg harus diperhatikan khusus terkait wilayah rawan gempa!
   = Rumah sakit, klinik, bangunan komunikasi, pemadam kebakaran dan sebagainya.

5. Tuliskan menurut pendapat anda definisi dari bangunan!
   = Bangunan merupakan hasil pekerjaan konstruksi yg dibangun diatas permukaan tanah, di bawah tanah, maupun di dalam ~~tanah~~ tanah.

6. Tuliskan Faktor-Faktor yg mempengaruhi besarnya tekanan / isapan karena adanya angin pada suatu titik!
   = • Struktur yang berada pada lintasan angin menyebabkan angin berkelok dapat berhenti
   • kecepatan angin

7. Sebutkan bangunan gedung ditinjau dari susunannya!
   = 1. Bangunan bawah
   2. Bangunan atas

Juka adinda Fitriani
x PPIB - A

Senin
19 oktober 2020

Pertemuan 10 :

Gaya adalah segala sesuatu yang dapat menyebabkan sebuah benda / objek mengalami perubahan gerak. Gaya memiliki nilai dan arah, sehingga masuk ke dalam besaran vektor.

Untuk melakukan sebuah gaya dipastikan tenaga. Semakin besar gaya yg hendak dilakukan, maka semakin besar pula tenaga yg harus dikeluarkan.

Gaya memiliki beberapa sifat, yaitu: Gaya mampu mengubah arah gerak benda, Gaya mampu mengubah bentuk benda, Gaya mampu mengubah posisi benda dgn cara menggerakkan / memindahkannya.

Hukum - Hukum dalam Menjelaskan Gaya

- Hukum Newton I

dalam hukum newton I dijelaskan bahwa :

"Setiap benda akan mempertahankan keadaan diam / bergerak lurus beraturan kecuali ada gaya yg bekerja untuk mengubahnya."

Persamaannya :

$\sum F = 0$

Maksudnya, benda yg diam akan tetap diam kecuali ada resultan gaya yg tdk ikut bekerja pada benda itu, kemudian benda bergerak, tidak berubah kecepatannya kecuali ada resultan gaya yg tdk ikut bekerja padanya.

- Hukum Newton II

"Benda bermassa M mengalami gaya resultan sebesar F akan mengalami percepatan a yg arahnya sama dgn arah gaya; dan besarnya berbanding lurus terhadap F dan berbanding terbalik dgn M.

Persamaannya :

$F = ma$

force = massa x percepatan

satuan dari gaya berupa kg m/s^2

- Hukum Newton III

"Untuk setiap aksi selalu ada reaksi yg sama besar dan berlawanan arah, gaya dari dua benda pada satu sama lain selalu sama besar dan berlawanan arah."

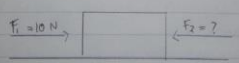
Persamaannya :

$F_{aksi} = -F_{reaksi}$

Contoh, mendorong sebuah dinding, namun dinding tetk bergerak, karena dinding memberi gaya reaksi yg berlawanan terhadap gaya yg besarnya sama.

Contoh soal :

Sebuah kotak bermassa ditarik di atas bidang datar yg licin. kemudian, seorang anak ingin mendorongnya dgn gaya sebesar 10 N. Namun ada anak lain yg mendorong kotak dgn arah yg berlawanan. Akibatnya, kotak menjadi tdk bergerak. Kondisi ini digambarkan pada skema berikut. Berapakah gaya yg dapat diberikan oleh anak ini ?



Jwb :

$\sum F = F_1 + F_2 = 0 \rightarrow 10 + F_2 = 0 \rightarrow F_2 = -10$

Julia Arlinda Fitriani
X DPIB-A
Senin
26 Oktober 2020

Pertemuan II

a. Definisi Gaya

Gaya adalah Segala sesuatu yang dapat menyebabkan sebuah benda/objek mengalami perubahan gerak. Benda yang mendapatkan sebuah gaya akan mengalami pergerakan, perubahan arah dan diam menjadi bergerak.

Contoh gaya : - Saling dorong
- Saling tarik

Ciri-Ciri Gaya :
- Mempunyai besaran
- Mempunyai arah
- Memiliki titik tangkap

b. Satuan Gaya

Satuan gaya menurut SI adalah Newton. Sebagai contoh:
Massa 1 kg. Satuan lain untuk gaya adalah dyne.

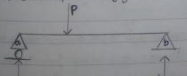
1 Newton = 1 kg m/s²
= 1000 g x 100 cm/s²

1 Newton = 10^5 dyne

c. Macam-Macam Gaya

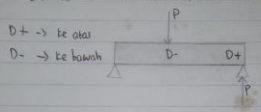
1. Gaya Luar

Adalah gaya yg ada di luar suatu konstruksi biasanya disebut gaya aksi-reaksi. Gaya aksi dpt diartikan gaya yang menghampiri konstruksi tersebut yang direspon oleh gaya reaksi. Perhatikan gambar berikut:

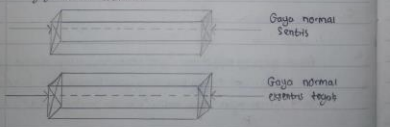


* Beban P merupakan gaya aksi
* Dan kedua tumpuan menimbulkan gaya reaksi yg biasa disebut reaksi tumpuan a Vertikal (RaV) dan reaksi tumpuan b Vertikal (RbV). Gaya reaksi tumpuan dpt berupa:

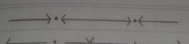
• Gaya Vertikal / Gaya lintang / Gaya geser (S)
adalah gaya yg tegak lurus terhadap sumbu balok



• Gaya horizontal / Gaya Normal (N)
adalah gaya yg bekerja tegak lurus pd bidang dan garis kerja searah / sejajar sumbu batang / balok, disebut gaya normal sentris. Sedangkan jika gaya bekerja di luar garis gaya kerja, maka gaya normal disebut gaya normal eksentris

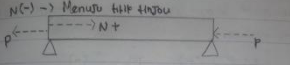


• Gaya normal tekan apabila gaya dalam arahnya menuju titik kumpul, bertanda negatif (-). Sebaliknya gaya normal tarik apabila gaya dalam arahnya ke luar dari titik kumpul, bertanda (+).



Gaya normal tekan (-)
Gaya normal tarik (+)

N(+) -> Meninggalkan titik tinjau
N(-) -> Menuju titik tinjau

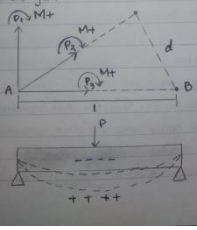


• Momen Lentur (M)

Momen adalah suatu kejadian dimana aksi dan reaksi tdk dalam satu garis kerja. Besarnya momen adalah pertalian gaya berat (P) dgn jarak (l) dr gaya ke titik yg ditinjau. Satuan momen adalah satuan gaya dikali satuan jarak (kg. cm, kg.m, ton.cm, ton.m).

M	= P	x	l
(t.m, kg.m)	(ton, kg)		(meter)

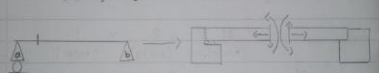
Momen disebut positif (M+) jika menyebabkan bendanya berputar menurut arah jarum jam, dan sebaliknya (M-) berlawanan arah jarum jam.



• Momen Puntir (Torsi)
kecenderungan gaya untuk memutar benda terhadap suatu sumbu disebut momen puntir dari gaya terhadap sumbu putarnya. Momen Puntir adalah besaran gaya, dimana garis kerjanya terletak sejajar sumbu putarnya.

M ↻	(+)	M ↺	(-)
V ↑	(+)	V ↓	(-)
H →	(+)	H ←	(-)

2. Gaya dalam
adalah gaya yg bekerja di dalam suatu konstruksi



↻↺ = Gaya momen (M)
↑↓ = Gaya Lintang (D)
←→ = Gaya normal (N)

1. Kestabilan Struktur

a. kestabilan menyeluruh
Suatu struktur dpt tergulung, tergelincir, atau terpuntir ketika terhadap dasarnya terutama apabila mengalami beban horizontal seperti angin dan gempa. Struktur yg rendah / Struktur yg memiliki dasar yg relatif kecil akan mudah tergulung. Kestabilan keseimbangan terhadap beban sendiri

dpt mengakibatkan terjadinya guling an. Penggunaan pondasi batu dan lebar dpt mencegah terguling nya bangunan.

b. kestabilan hubungan

Suatu bagian struktur yg tdk tersusun / tdk terhubung dgn baik akan dpt runtuh secara internal. Mekanisme dasar dinding pemikul beban, dan rangka atau dgn penambahan elemen diagonal digunakan utk bangunan menjadi stabil.

c. kekuatan dan ketahanan elemen

Permasalahannya bertahan akibat tarik, tekan, lentur, geser, torsi, gaya tumpuan / deformasi yg berlebihan yg timbul secara internal dlm struktur karena adanya beban yg diterima. Adanya beban dan gaya juga menimbulkan tegangan pd material elemen struktur tersebut.

d. kestabilan struktur

Untuk menjamin adanya kestabilan bangunan ditegaskan kondisi pembebanan yg mungkin terjadi. Semua struktur mungkin akan mengalami perubahan bentuk jika mengalami pembebanan pd struktur yg stabil, deformasi, akan terjadi akibat beban pd umumnya kecil, dan gaya internal yang timbul dlm struktur mempunyai kecendrungan mengembalikan bentuk semula apabila beban di hilangkan. Sebuah struktur merupakan gabungan dari elemen disfat. Suatu struktur dalam balok merupakan Sistem struktur yg stabil untuk beban - beban vertikal. Pada perubahan pembebanan yang menimbulkan gaya horizontal, serta tidak memiliki mekanisme yg dapat mengembalikan ke bentuk semula apabila beban horizontal tersebut akan di hilang kan.

2. Pengertian Pendekatan Pemodelan beban.

Struktur dibagi kedalam elemen-elemen yg lebih mendasar dengan cara memisahkannya pd hubungan antara elemen struktur kemudian, mengganti elemen dgn sekumpulan gaya dan momen yg mempunyai efek ekuivalen, dalam hal ini gaya yg dimodelkan adalah gaya reaksi. Pemodelan efektif bergantung pd pengidentifikasian peristiwa nyata struktur pada titik hubung elemen struktur. Untuk memudahkan analisis titik hubung dpt dimodelkan dlm jenis - jenis dasar hubungan yaitu titik sendi, rol, dan jepit, dalam menentukan model yg paling mendekati kondisi nyata di lapangan, diperlukan pertimbangan yg sangat matang.

langkah awal dlm menganalisis suatu titik hubungan adalah dengan mengisolasi apabila titik tersebut dpt menyebabkan rotasi pada suatu elemen struktur ke 2 elemen lainnya akibat adanya suatu beban. Jika titik hubungan tdk menyebabkan moto pemodelan adalah sendi / rol.

Julia aclinda Fitriani
X DPIB A

Senin
2 November 2020

Latihan

1. Jelaskan pengaruh gaya tekan pada sebuah struktur bangunan!

= Semua struktur mungkin akan mengalami perubahan bentuk jika mengalami pembebanan (gaya tekan) pada struktur yang stabil, deformasi, akan terjadi akibat beban pd umumnya kecil, dan gaya internal yang timbul dlm struktur mempunyai kecendrungan mengembalikan bentuk semula apabila beban dihilangkan.

2. Jelaskan jenis - jenis kestabilan struktur bangunan!

=a. Kestabilan menyeluruh

Suatu struktur dpt terguling, tergelincir / terpuntir relatif terhadap daerah nya tertumpu apabila mengalami beban horizontal seperti angin dan gempa. penggunaan pondasi batu dan lebar dpt mencegah terguling nya bangunan.

b. kestabilan hubungan

Suatu bagian struktur yg tdk tersusun / tdk terhubung dgn baik akan dapat runtuh secara internal. Mekanisme dasar dinding pemikul beban untuk bangunan menjadi stabil.

c. kekuatan dan ketahanan elemen

Permasalahannya bertahan dgn tarik, tekan, lentur, geser, torsi, gaya tumpuan / deformasi yang berlebihan yg timbul secara internal dlm struktur karena adanya beban yang diterima

d. kestabilan struktur

Untuk menjamin adanya kestabilan bangunan ditegaskan kondisi pembebanan yg mungkin terjadi

1. Semua bentuk tarikan dan dorongan disebut .... B. Gaya
2. Contoh gaya dpt merubah arah benda adalah .... B. Menggetir mobil
3. Dalam SI, satuan momen lentur adalah .... D. Kg.m
4. Pernyataan yg benar mengenai gaya dan suku ditunjukkan oleh .... B. 1, 2, dan 4
5. Gaya tarik dpt menimbulkan sebuah kabel tambatan - [redacted] C. Tarikan
6. Terjadinya batting disebabkan karena .... D. Gaya geser
7. Jenis dudukan / tumpuan yg hanya menahan gaya vertikal dan horizontal adalah .... B. Jepit
8. Gaya dalam yg berarah tegak lurus sumbu memanjang elemen struktur disebut .... B. Gaya lintang
9. Gaya dlm pada balok yg berada sejajar sumbu memanjang balok disebut .... A. Gaya Normal
10. Tempat terjadinya momen lentur maksimum adalah .... A. di titik C