

**MATHEMATICS EDUCATION** 



#### **UNY VISION:**

To become a superior, creative and innovative educational university based on piety, independence and intelligence in 2025

#### **UNY MISSION:**

- 1. Organizing superior, creative and innovative academic and professional education in the field of education to produce people who are devout, independent and intelligent.
- 2. Organizing superior, creative and innovative academic, professional and vocational education in non-educational fields to produce people who are devout, independent and intelligent.
- 3. Carrying out research to discover, develop and disseminate science, technology and arts that improve the welfare of individuals and society, and support regional and national development, as well as contribute to solving global problems creatively and innovatively based on piety, independence and intelligence.
- 4. Carrying out creative and innovative community service and empowerment that encourages the development of human, community and natural potential to realize community welfare based on piety, independence and scholarship.
- 5. Organizing good, clean and authoritative governance and services in the implementation of higher education autonomy to create a superior, creative and innovative university based on piety, independence and intelligence.
- 6. Creating a learning process and environment that is able to empower students creatively and innovatively to carry out lifelong learning based on piety, independence and intelligence.
- 7. Develop cooperation with other institutions, both national and international, creatively and innovatively to improve the quality of implementation of Tridharma with the principles of equality and mutual benefit based on piety, independence and scholarship.

## **Foreword**

We give thanks to the presence of Almighty God for His blessings and grace so that the Student Handbook of the Mathematics Education Department, Faculty of Mathematics and Natural Sciences, Yogyakarta State University (UNY) can be completed. Unlike the previous version, this book has been adapted to OBE Curriculum which has been implemented simultaneously in all UNY undergraduate study programs since semester 1 of the 2021/2022 academic year.

As the name suggests, this book was prepared to guide students in undergoing lectures in the S1 Mathematics Education and S1 Mathematics study programs. This book also aims to introduce students to various organizations, activities, and facilities available in UNY environments. Thus, students can develop themselves optimally while taking the undergraduate program at UNY.

We always welcome criticism and suggestions from various parties to improve this book in the future.

Yogyakarta, April 2023

**Editor Team** 

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# **UNY Logos**



## **Information:**

The logos is shaped like a pentagonal lotus flower; the base color is blue. Written by Universitas Negeri Yogyakarta, which is made circular with UNY calligraphy writing, the image of the wings of the Garuda Bird is yellow, and in the middle, there is an image of a monument, with a mustaka in the shape of fire split into three stairs, chest, body, and foot of the monument.

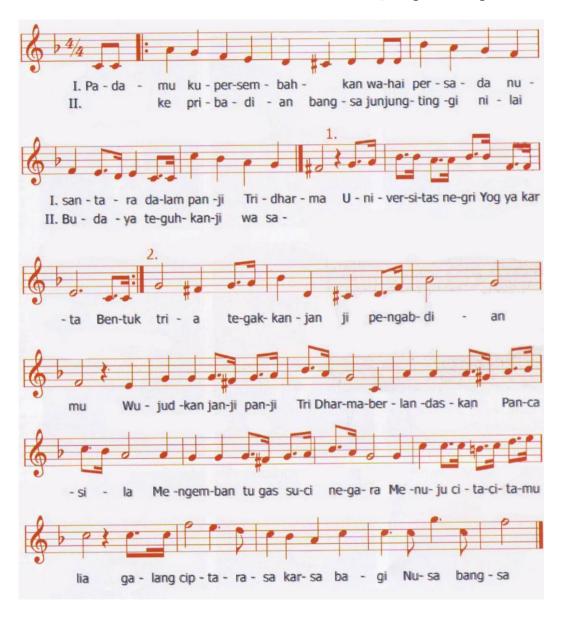
# Yogyakarta State University (UNY) Hymn

L,S: Heni Kusumawati

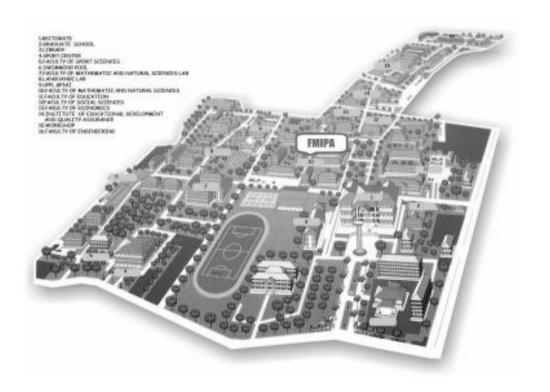


# Mars Universitas Negeri Yogyakarta (UNY)

L,S: Agus Untung Yulianta



# Map of Yogyakarta State University (UNY)



# 1 Profile of The Department of Mathematics Education

## **A. Brief History**

The history of IKIP Yogyakarta cannot be separated from the existence of the Faculty of Pedagogic (FP) Universitas Gadjah Mada (UGM) which was established on September 19, 1955. At that time FP UGM had two parts, namely the Education Section and the Physical Education Section. In addition, there are B1 and B2 courses in Natural Sciences organized by the UGM Faculty of Natural Sciences. On February 2, 1962, the Pedagogic Faculty was divided into three faculties, namely the Faculty of Education (FIP), the Faculty of Physical Education (FPD), and the Faculty of Teacher Training and Education (FKIP). But in 1963 the FPD was included in the Department of Sports environment and became the College of Sports (STO).

At that time the demands of teacher were high. FKIP UGM is very popular so that the number of students in 1962 reached 1,469 people. To overcome this condition, the Minister of Education and Culture Decree No. 92 of 1962 concerning the establishment of the Institute of Teacher Education (IPG). On January 3, 1963 the unification between FKIP and IPG was applied to become the Teaching and Education Institute (IKIP). Likewise with FIP which is then also integrated into IKIP. In 1964, the B1-B2 Course in Natural Sciences and Natural Sciences were also separated from UGM and incorporated into the IKIP.

According to the IKIP Chancellor Decree number 05 of 1965 concerning the Organizational Structure of IKIP Yogyakarta, IKIP Yogyakarta has five faculties, namely the Faculty of Education (FIP), the Faculty of Teacher Training in Exacta (FKIE), the Faculty of Teacher Training in Literature and Arts (FKSS), the Faculty of Teacher Training in Social Sciences (FKIS), and the Faculty of Teacher Training in Engineering (FKT). At that time, FKIE had four majors, namely the Mathematics major, the Physics major, the Life Sciences major, and the Chemistry major.

Based on Indonesia Government Regulation number 27 of 1981 concerning Faculty Arrangement and Presidential Decree number 54 of 1982, on September 7, 1982 there was a change in the name of FKIE to become the Faculty of Education in Mathematics and Natural Sciences (FPMIPA). Starting December 8, 1983, FPMIPA held four majors namely Mathematics Education, Physics Education, Biology Education, and Chemistry Education.

In 1997, as the name of IKIP were changed to Yogyakarta State University (UNY), FPMIPA opened new study programs namely the Physics, Mathematics, Chemistry, and Biology Study Program according to the decree of Director General of the Ministry of Education and Culture Republic of Indonesia's number 1259 / DT / T / 97. The name FPMIPA also changed to the Faculty of Mathematics and Natural Sciences (FMIPA). Since that time, the Department of Mathematics Education of YSU held two study programs, namely the S1 Mathematics study program and the S1 Mathematics Education study program.

## **B. Vision of Mathematics Education Department**

Building a department that has a synergistic cultural system that values learning, justice, peace, and courtesy, as well as being responsible and creative in implementing the Tri Dharma of Higher Education, thus capable of producing exceptionally qualified mathematics educators and non-educators for the global world.

## C. Mission of Mathematics Education Department

To fulfill this vision, the Underrgraduate Mathematics Education department of UNY has the following four mission items.

- 1. To systematically and synergistically develop and establish all faculty elements, thereby creating an effective and efficient system.
- 2. To organize synergictic education and teaching in both mathematical education and non-educational mathematics, producing exceptionally qualified human resources.
- 3. To conduct research in mathematics and mathematics education, provide community service, and widely dissminate their outcomes.
- 4. To establish mutually beneficial collaborations with external parties, both domestic and international, to enhance resources that contribute positively to society.

#### D. Address

Address : Building D15 Faculty of Mathematics and Natural Sciences 3rd

Floor, UNY Campus, Karangmalang, Colombo Street, no. 1,

Yogyakarta, Indonesia.

Kode Pos : 55281

Telepon : +62 274 548203, +62274 568168 psw. 1396

Fax : +62 274 548203 (Faculty of Mathematics and Natural Sciences)

Site : https://pmat.fmipa.uny.ac.id

#### **E. Educator Personnels**

Information related to lecturer profiles can be seen at http://staffnew.uny.ac.id/.

## F. Educational Facilities

Educational facilities that are maintained by the Department of Mathematics Education consists of

- 1. Secretary/ Department Room
- 2. Lecturer Rooms
- 3. Workshop Room
- 4. Computer laboratory
- 5. Audio-visual laboratory
- 6. Micro teaching laboratory
- 7. Rooms for Mathematics Education Media
- 8. Rooms for Undergraduate thesis defence





Computer laboratory (left), Lecturer room (right)

The Faculty of Mathematics and Science also maintain some facilities for the student, such as:

- Lecture rooms
- 2. Mathematics Student Association Room (Himatika)
- 3. Mushola / mosque
- 4. Parking space

### **G. Scientific Publication Media**

The Department of Mathematics Education manages and publishes several scientific journals as follows.

## 1. Pythagoras: Jurnal Pendidikan Matematika

PYTHAGORAS: Jurnal Pendidikan Matematika is a scientific journal in the field of mathematics and mathematics education published in June & December. Accepted and published papers will be freely accessed in this website and the following abstracting & indexing databases:

- 1. Science and Technology Index (SINTA) by Kementerian Riset, Teknologi, dan Pendidikan Tinggi Republik Indonesia.
- 2. Indonesian Scientific Journal Database (ISJD)
- 3. Indonesian Publication Index (IPI)
- 4. Google Scholar
- 5. Directory of Open Access Journals (DOAJ)
- 6. Crossref Search
- 7. Publick Knowledge Project (PKP) Index
- 8. Bielefeld University Library

The journal has been listed in ROAD ISSN and Open Science Directory by EBSCO information service.



Visit: <a href="https://journal.uny.ac.id/index.php/pythagoras">https://journal.uny.ac.id/index.php/pythagoras</a>

## 2. <u>Jurnal Riset Pendidikan Matematika (JRPM)</u>

Jurnal Riset Pendidikan Matematika (JRPM) is a scientific journal in the field of mathematics education published twice a year (in May & November). Since April 2017, the journal has been ACCREDITATED by the Ministry of (RistekDikti) of The Republic of Indonesia as an achievement for the peer-reviewed journal which has excellent quality in management and publication, effective until 2022. This journal is abstracted/Indexed in:

- 1. Science and Technology Index (SINTA) by Kementerian Riset, Teknologi, dan Pendidikan Tinggi Republik Indonesia.
- 2. Directory of Open Access Journal
- 3. Google Scholar
- 4. Indonesian Scientific Journal Database (ISJD)
- 5. Indonesia One Search
- 6. Indonesian Publication Index (IPI)
- 7. Crossref Search
- 8. Public Knowledge Project (PKP) Index

#### 9. OCLC Worldcat

#### 10. ResearchGate

The journal has been listed in ROAD ISSN as well as Open Science Directory by EBSCO information service.



Visit: https://journal.uny.ac.id/index.php/jrpm

## 3. Jurnal Pedagogi Matematika – S1

Contains a collection of articles on the results of research of the Department of Mathematics Education Study Program Mathematics Education (S-1).



Visit: Jurnal Pedagogi Matematika

### 4. Jurnal Kajian dan Terapan Matematika – S1

Contains a collection of articles on the results of research by the Department of Mathematics Education in Mathematics Study Program (S-1)



Visit: Jurnal Kajian dan Terapan Matematika

### 5. Jurnal Statistika dan Sains data - S1

This journal publishes original papers, research articles, case studies, and literature reviews in the fields of statistics and data science.



Visit: Jurnal Statistika dan Sains Data

# 2 Course System

The Bachelor Program (S1) is a study program consisting of 148 - 152 credits with an education time of 8 semesters.

#### A. Academic Guidance

After being accepted as a student of UNY, the Department will appoint an academic advisor / supervisor, also called a guardian lecturer, for each student. Initial guidance will be carried out classically, while subsequent guidance will be carried out 3-4 times each semester individually. The scope of academic guidance includes:

- 1. Consultation on taking courses at the beginning of the semester,
- 2. Monitoring learning progress in the middle of the semester,
- 3. Evaluation the results of studies at the end of the semester,
- 4. Consulting services for students who have problems,
- 5. Provide guidance in selecting and proposing scholarships,
- 6. Directing students to participate in activities outside campus (international seminars).

Students also need to consult with academic advisors when taking Educational Practical Practices (PK), Community Service Program (KKN), and Final Projects or Thesis (TAS). Academic advisors can be found in their respective workspaces, preferably by making an appointment in advance.

## **B. Semester Credit System**

The credit system is the administration of education by stating the burden of student studies, the workload of teaching staff, and the burden of providing educational institutions in the form of credit. By using this system, each student can plan how to filfill their entire study load by considering their personal abilities, talents and interest. The credit system also facilitates the

transfer of credit between departments or between faculties within one university, even between universities.

Semester is a unit of effective learning process time of 16 (sixteen) weeks excluding the final semester exam. In accordance with the regulation of the Chancellor of Yogyakarta State University, for one academic year, three semesters are held:

- 1. Odd semester: September to January of the following year.
- 2. Even semester: February to June of the current year.
- 3. Short semester / between: July to August of the current year.

Overall learning that must be undertaken by each student to complete the undergraduate level is carried out in various forms of educational activities, namely lectures, practical work, seminars, Educational Practical Practices (PK), Community Service Program (KKN), and writing the final project. The implementation of education at UNY is based on the Semester Credit System (SKS), so that each educational activity is measured by a standardized study load unit, namely the semester credit unit (credits/sks).

The allocation of time required to undertake educational activities of one credit per week is as follows.

Types of Learning	Alokasi Waktu 1 sks dalam 1 minggu
Theory (Lecture), tutorial	50 minutes of face-to-face learning
	60 minutes structured learning task
	60 minutes of independent learning
Seminar	100 minutes face to face
	70 minutes of independent activities
Practicum, workshop	170 minutes (including report / response
practice	preparation)
Research and community	170 minutes (including the preparation of
service	proposals and reports)

For example, a student taking a Differential Calculus course weighing 3 credits means needing to spend 150 minutes each week attending lecture activities, 180 minutes to work on structured learning tasks (eg homework), and 180 minutes of independent learning (eg working on practice questions, reread lecture notes, and so on).

## **C. Student Study Load**

The study load of students each semester is determined by considering the individual abilities of students and the average study time in a day. If a student is considered to work normally for 9 hours per day, then in one week there is a study time of around 54 hours or 3,240 minutes. By looking at the time allocation of 1 credit hour which is equivalent to 170 minutes, it is obtained that the student learning load under normal conditions is 20 credit hours per semester. The individual abilities of each student are measured through the achievement of the Achievement Index (IP) in the previous semester, with the following conditions

Previous Semester Performance Index	Maximum Study Load
More than 3,00	24 SKS
2,50 – 3,00	22 SKS
2,00 – 2,49	20 SKS
Less than 2,00	18 SKS

Determination of the study load taken by students in a seminar needs to be consulted with an academic advisor. Fulfilling the maximum study load can be done by adding courses as long as the class is available and the prerequisites are met.

## **D.** Courses

The curriculum of the Undergraduate Program in the Department of Mathematics Education FMIPA UNY is composed of a number of courses, with the respective weight stated in the credits. The amount of credits in each subject is not the same, determined according to the scope of the material and the burden of studying the course. Based on its nature there are two groups of courses:

- Compulsory subjects, must be taken / followed by all students of a study program. There are compulsory courses organized by universities, faculties, and study programs. More than 75% of the courses taken by students are compulsory subjects.
- Elective courses can be selected according to the interests and talents of students to complete graduation requirements. Taking elective courses should also consider the theme of the final project that students want to compile.

Each course also has a **course code** consisting of three letters followed by four numbers. The three-letter code indicates the category of the course, which is:

MKU Compulsory subject in Yogyakarta State University

FMI Compulsory subject in Faculty of Mathematics and Natural

Sciences

MDK Compulsory Education Courses
PMA Educational Mathematics course
PEN Educational Practical Practices

A course can have a **prerequisite**, which is a condition that must be met before taking the course. Prerequisites can be in the form of the number of SKS that have been taken, as well as obtaining certain minimum grades in other subjects.

## E. Registration and Payment of Education Fees

Towards the start of the new semester (December / May / July), students are expected to monitor information on the payment of tuition fees in the form of Single Tuition Fee (UKT) at Yogyakarta State University.

- Payment can be made according to schedule online at Bank BTN, Bank BNI, or Bank Mandiri, Branch Offices / Cash Offices throughout Indonesia, or Bank BPD DIY Branch / DIY Cash Office, stating the Student Identity Number (NIM).
- 2. Students who have finished their studies and will only undergo Judicium at the beginning of the semester can submit an application not to pay the tuition fee / UKT to Deputy Dean I and submit it to the PNBP Sub-Division of Finance and Accounting Section and the Registration and Statistics Sub-Division in the UNY Rectorate complex. If the Judisium date exceeds the specified limit (withdrawal), the student must report back to the PNBP Sub-Division of Finance and Accounting and pay the semester tuition / UKT fees.
- 3. If there are problems with the payment process (for example, difficulty in knowing the amount of the bill, differences in the amount of the bill, etc.), students are requested to contact the UNY Finance and Accounting Department at the West Wing Rectorate Building of the 3rd floor, telephone (0274) 552558 before the deadline for payment of fees education / UKT.

The following are the steps for paying tuition fees at UNY using BNI ATM:

- 1. Prepare a BNI ATM / debit card. Make sure the balance in the account is still sufficient.
- 2. After inserting the card and PIN into the BNI ATM machine, select **OTHER MENUS.**
- 3. Select **PAYMENT**
- 4. Use the **NEXT MENU** option until the **UNIVERSITY** option appears. Select **UNIVERSITY**.
- 5. Select **STUDENT PAYMENT CENTER (SPC)**
- 6. Enter the UNY education institution code (**8015**) followed by your **NIM**.
- 7. Information will appear on the screen in the form of the name of the student, NIM, faculty, and the amount of the cost bill. If the information is correct, select **YES PAY.**
- 8. Select the type of account used to pay.
- 9. Transaction is complete. The ATM machine will issue proof of payment. Keep the evidence well.







Students who do not register by paying tuition fees until the deadline for payment ends will be processed on a status basis for college leave. Further provisions regarding **college leave**.

## F. Filling in Study Plan Cards

Students who have registered have the right to participate in educational activities during the semester. Therefore, students must design learning activities in the coming semester by filling out a Study Plan Card (KRS) online on the **SIAKAD** account (<a href="http://siakad2013.uny.ac.id">http://siakad2013.uny.ac.id</a>). The KRS filling process is as follows.

 Students are requaired to ask the approval from Academic Advisors before completing the online KRS, regarded the course and the number of credits.

- 2. Students open a SIAKAD account with their respective email and password. Furthermore, during the KRS filling period, the system will display a list of courses available during the semester, along with the name of the supporting lecturer, lecture schedule, and the remaining student capacity. Students can choose the course they want to take. Automatically, the SIAKAD system will limit the number of credits of courses that can be taken based on the GPA achievements on the previous semester.
- 3. Academic Advisers provide online approval regarding the number of credits taken by students for the semester to be undertaken based on the GPA achieved in the previous semester.
- 4. Students can cancel courses taken in the current semester no later than the 8th week (eight) counted from the first week of lecture with the approval of online PA lecturers.
- Students can add maximum one course in the current semester no later than the 3rd week (three) counted from the first week of lecture provided that they do not exceed the maximum study load allowed in one semester.

The inclusion of courses in the KRS gives students the right to take the Final Semester Examination (UAS). A student is only permitted to take the UAS for the courses listed in his KRS.

#### **G.** Lectures

At the first meeting or face to face meeting for each course, lecturers generally will explain course descriptions, syllabi, handbooks / references, learning strategies, and assessment systems. Furthermore, lecturers and students will sign lecture contracts, which contain the frequency of assignments, quizzes, insert tests, and the minimum attendance and weight of the assessment agreed between the lecturer and the student. Lectures can be held face-to-face or blended, which is a combination of direct face-to-face and online learning.

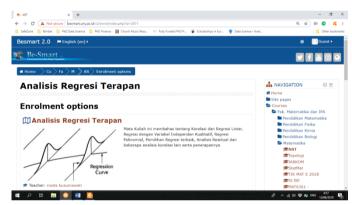
#### **Direct Face-to-Face Lectures**

Lectures in the form of face-to-face are directly conducted in lecture halls available at the Faculty of Mathematics and Natural Sciences of UNY In attending lectures, students must be present on time and obey the rules of lecture at the Faculty of Mathematics and Natural Sciences UNY as well as the rules of

agreement in the lecture contract. Presence for face-to-face lectures is carried out online via http://presensikuliah.uny.ac.id.

## **Lectures with E-Learning**

Online lectures at the Department of Mathematics Education at UNY are carried out through the site <a href="http://besmart.uny.ac.id">http://besmart.uny.ac.id</a>. After logging in by entering the UNY e-mail account and password, users can choose faculties, study programs, to courses. In each course, various files (videos, material summaries, handouts) are available for students to download. Students can also take online quizzes.



Display of online lecture sites at UNY

Online lectures can also be combined with face-to-face lectures, which are known as *blended learning* methods.

#### **H. Assessment and Exams**

Assessment of student abilities in a course is carried out through assessments per course outcome (CO) and final semester exams. CO assessment can come from assignments both individually and in groups, quizzes, and projects, as listed in the module handbook for each course. The Final Semester Examination (UAS) is an exam whose implementation is scheduled according to the academic calendar. The schedule and location of the UAS implementation are announced on the web and FMIPA announcement board. Each maximum student only takes two exams in one day.

The final grade (NA) obtained by students for a course (MK) is an accumulation of grades obtained per sub-achievement learning and final semester exams (UAS), with weights determined in the handbook module. Final

values are expressed in letters and numbers based on the range of values obtained according to the table below.

NA	Score				
(Scale 0 – 100)	Number	letter			
86 – 100	Α	4,00			
81 – 85	A-	3,67			
76 – 80	B+	3,33			
71 – 75	В	3,00			
66 – 70	B-	2,67			
61 – 65	C+	3,33			
56 – 60	С	2,00			
41 – 55	D	1,00			
0 – 40	Е	0,00			

Students who have not completed and submitted assignments related to the subject matter, are not given a grade and the grades are given a K mark. The K mark can be converted to their proper grade if the student has completed and submitted assignments within a maximum period of one semester. If the assignment is not fulfilled, students will get grades according to the achievements of the tasks / components that already exist.

Final arades for each student can be accessed at https://siakad2013.uny.ac.id no later than two weeks after the exam is held (before the registration period for the next semester) by logging in using the accounts of each student. Based on the final grade, the semester achievement index (IP) can be determined by: the number of letter grades that have been transferred to the value of the number / weight multiplied by the number of credits of the course divided by the number of credits taken by the student concerned in a particular semester.

The Performance Index influences the number of credits students can take in the next semester. It is expected that students can find out the maximum number of credits that can be taken in the next semester and can use the results of exam results to consider what courses will be taken in the next semester.

## I. Study Leave

To apply for leave, an Undergraduate Mathematics Education Department student must meet the following requirements:

- 1. Have taken a minimum of one semester of study, with at least 10 credits and the performance index at least 3.00.
- 2. Not a scholarship recipient.
- 3. Have not exceed the limit on the number of study leave.

### Conditions for implementing study leave:

- 1. Study leave is not counted as a period of study and is not required to pay tuition fees.
- 2. The duration of study leave is permitted for 2 (two) semesters while studying.
- 3. Students who do not register at the beginning of the semester will be processed for study leave automatically.
- 4. Automatic tuition leave is given at most twice as long as students still have the right to leave study.
- 5. Students who are on study leave do not have the right to obtain academic services and utilize academic facilities.
- 6. Students who have already done registration can apply for leave of study and cancel their study plans, but the tuition fees that have been paid cannot be withdrawn.
- 7. If after taking college leave for two consecutive semesters, students do not register in the following semester, then the semester during study leave is counted as a period of study. If a student will re-register, the student must pay the tuition fees of the previous semester and that will be pursued.
- 8. Students who have taken study leave for two consecutive semesters and have not registered in the following two consecutive semesters have been declared resigned as students and are entitled to obtain a certificate of having attended college (SKPK).

Submission of college leave is made via <a href="http://eservice.uny.ac.id">http://eservice.uny.ac.id</a> with the procedures as specified and submitted every semester in accordance with a predetermined schedule.

#### J. Transfers and Credit Transfers

Provisions regarding credit transfer or credit transfer (recognition of courses taken by students outside UNY), transfer of study programs (transfer of students from one study program to another study program at UNY), transfer of universities (transferring students from UNY to other universities) has been

regulated in detail in the Chancellor Decree No. 1 of 2019 concerning Academic Regulations.

## **K. Community Service Program (KKN)**

Community Service Program (KKN) is a course with a weight of 3 SKS and has the status of **graduation required** for all UNY S1 students as a form of community service (PPM). The Community Service Program is interdisciplinary in nature and at the same time integrates community education, research and community service activities. Through KKN, students are confronted with the community so that what happens is the nature of mutual give and take between the two.

There are four types of KKN held at UNY. Integrated KKN is a KKN activity carried out in an integrated manner with PK at school in a special semester. Community KKN is a KKN program implemented in the communites, both rural and urban, in a special semester. Independent KKN is a KKN that is held in the community in odd and even semester. Thematic KKN is a KKN with a specific theme determined by UNY, regional government, central government, or state institutions.

The KKN implementation process in the special semester generally consists of three stages as follows.

Step	Information
Preparation	Feasibility study and location licensing of KKN.
	Student registration, group formation.
	Provision of student candidates for KKN.
Implementation	Departure of KKN participants.
	Guidance by lecturers at KKN locations.
	Monitoring the implementation of KKN by the team.
Evaluation	Evaluate the success and implementation of the program.
	Compilation of individual, group and team reports.
	Follow-up of the KKN results.

Further information about KKN and complete guidance can be obtained through LPPM UNY (<a href="http://lppm.uny.ac.id">http://lppm.uny.ac.id</a>).

#### L. Judisium and Graduation

To be declared graduate, an Undergraduate Mathematics Education Department student at UNY must meet the following requirements.

- a. Have passed at least 148 credit hours of courses, consisting of all compulsory courses supplemented with elective courses according to the applicable curriculum.
- b. Have an achievement index of at least 2.50.
- c. The number of SKS courses with maximum D value is 10% of the total number of SKS.
- d. Does not have an E value
- e. Have English skills with a minimum ProTEFL score of 425.

Students who have fulfilled the requirements above are allowed to register for Yudisium, which is the process of determining grades and passing students from all academic processes. Judicium can also be understood as announcing grades to students as the final assessment process of all courses taken by students, assigning grades in academic transcripts, and determining the status of student graduation. The Judicial Decision is taken at a judicial meeting held by the Faculty Senate and declared in the form of a Dean's Decree. Judicium is held every month in each faculty. The Judisium process is also a determination of the predicate of student graduation according to the following table.

Predicate	GPA	Study period
With highest praise (Summa Cum Laude)	4,00	4,0 years
With praise (Cum Laude)	3,51-4,00	< 4,5 years
Very satisfactory	3,01-3,50	-
Satisfactory	2,50-3,00	-

To be able to take part in the Yudisium, students need to prepare a file consisting of:

- 1. Document Study Results (DHS)
- Theory Free Certificate
   The Study Result Documents and Theory Free Certificate must be signed by the academic supervisor (PA) and the Head of the respective Departments.
- Library Borrow Free Loan Certificate
   A certificate of free lending from the library must be obtained from UPT UNY Library and UNY Faculty of Mathematics and Natural Sciences Library. For the UPT Library of UNY, students can obtain the letter online

through <a href="http://library.uny.ac.id/member/login/">http://library.uny.ac.id/member/login/</a>, after completing the obligation to return all books and upload the final thesis script. Guidelines for uploading the final project script can be seen at <a href="https://eprints.uny.ac.id/62905/1/panduan.pdf">https://eprints.uny.ac.id/62905/1/panduan.pdf</a>.

The procedure for registering Judisium is as follows:

- 1. Students who have fulfilled all the requirements take the Judisium registration form in the Sub-Division of Education, Faculty of Mathematics and Natural Sciences (Loket Building D15, 1st floor).
- 2. Students fill out the Judisium registration form, then ask for a signature of endorsement from the Head of the Study Program.
- 3. Students submit the form back to the Education Sub-Division by submitting the requirements in the form of Study Result Documents (DHS), proof of payment of the last semester's tuition fees, approval from the Academic Advisor Lecturer, Theory-Free Certificate, Library Loan-Free Certificate, and Loan-Free Certificate laboratory equipment.
- 4. Students register for the online graduation through **SIAKAD 2013** account (<a href="http://siakad2013.uny.ac.id">http://siakad2013.uny.ac.id</a>) respectively.
- 5. Students check the draft diploma and draft transcript, especially on writing the name, date of birth, and course grades. Writing errors, if any, must be immediately revised.
- 6. Students pay graduation fees as well as graduation fees.
- 7. Students attend the Yudisium ceremony.

The Judicial Ceremony is held by the Faculty and must be attended by all students who have registered for the month. Yudisium participants must arrive on time with the clothes that have been determined (white shirt tops, subordinate trousers / black skirts, black formal shoes instead of sports). Participants who are unable to attend will be included in the next month's graduation.

Graduation is the final process in a series of academic activities at tertiary institutions. As a sign of the confirmation of the completion of the study, the inauguration procession was held through the UNY open senate meeting. Graduation is held by the University four times a year, namely in February, May, August, and November.

# 3 Bachelor of Education in Mathematics

## A. Vision

To be an excellent and innovative study program in producing creative, adaptive, and globally-minded mathematics educators, who master mathematical content, pedagogical-didactic principles, learner development psychology, authentic assessment, and learning technology to create quality education.

#### **B.** Mission

Missions of Mathematics Education Study Program are.

- To provide excellent, creative, and innovative education to produce mathematics educators who master mathematical content, pedagogicaldidactic principles, learners' development psychology, authentic assessment, and mathematics learning technology, as well as possessing adaptive abilities and global perspectives to support quality education in the modern era.
- 2. To conduct in-depth, innovative, and research-based studies in the field of mathematics education, focusing on pedagogical-didactics principles, learners' developmental psychology, authentic asseessment, and mathematics learning technology, to make a real difference to the needs of global society and the development of qualty education.
- 3. To conduct community service oriented towards the application of mathematical didactics through the development of learning strategies based on developmental psychology, the implementation of authentic assessment, and the utilization of educational technology, in order to improve the quality of mathematics learning, empower the educational communities, and provide relevant contributions both locally and globally.
- 4. To implement good, transparent, and accountable study program governance, and to foster strategic and sustainable cooperation with various parties, both nationally and internationally, in the fields of education, research, and community service to support the development of mathematical didactics science based on learning psychology, authentic assessment, and mathematics learning technology.

## C. Purpose

Purposes of FMIPA UNY Mathematics Education Study Program are.

- 1. To produce excellent, creative, adaptive, and globally-minded mathematics educators who master mathematical content, pedagogical-didactic principles, learner developmental psychology, authentic assessment, and learning technology to support quality education in the modern era.
- 2. To produce innovative and in-depth research in the field of mathematics education based on pedagogical-didactic principles, learner developmental psychology, authentic assessment, and learning technology, which makes a

- real contribution to the development of education at both the national and global levels.
- 3. To produce community service programs oriented towards the application of mathematical didactics through learning strategies based on developmental psychology, the implementation of authentic assessment, and the utilization of educational technology, in order to improve the quality of mathematics learning and empower the educational community.
- 4. To produce good, transparent, and accountable program management, which supports the development of mathematical didactics based on learning psychology, authentic assessment, and learning technology, through strategic collaboration with various parties at both the national and international levels

#### D. Graduates Profile

These are the graduate profile for the FMIPA UNY Mathematics Education Study Program.

No	<b>Graduates Profile</b>	Description of Graduates Profile				
1	Mathematic Educators	Graduates of the mathematics education study program can become professional educators in the field of mathematics in both formal and nonformal institutions.				
2	Developer of Mathematics Learning Resources and Media	Graduates of the mathematics education study program can become developers of print and digital learning resources, as well as conventional and digital learning media.				
3	Education Sector Manager	Graduates of the mathematics education study program can become managers of both formal and non-formal education institutions.				

#### **E.Graduates Competence**

Graduates competency of Bachelor's degree in Mathematics Education Study Program stated in these PLO items.

#### ATTITUDE

	<del></del>
PLO 1	To demonstrate religiosity and human values in workplace and society.
PLO 2	To demonstrate responsibility, adaptability, autonomy, and leadership in accomplishing tasks.

## **GENERAL SKILLS**

PLO 3	To demonstrate both written and oral communication and collaboration skills.
PLO 4	To demonstrate the ability to effectively use information and communication technology.

#### **KNOWLEDGE**

PLO 5	To possess profound knowledge of the concepts of basic education,				
	pedagogy, didactic mathematics, and educational research methods.				
PLO 6	To possess profound knowledge of the concepts and principles of				
	school mathematics and advanced mathematics.				

## SPECIFIC SKILLS

PLO 7	To apply basic educational concepts, pedagogical-didactic concepts, or school mathematics and advanced mathematics concepts to solve problems.						
PLO 8	To design meaningful and impelementable mathematics learning.						
PLO 9	To conduct mathematics teaching and learning practices on appropriate pedagogical-didactic concepts.						
PLO 10	To develop innovative mathematics learning media and resources.						
PLO 11	To conduct assessments of mathematics learning.						
PLO 12	To conduct research in the field of mathematics education.						

### ADDITIONAL PLO

There are three additional PLO that cover aspects of attitute, knowledge, and skills to enrich the competencies of graduates from the Mathematics Education Study Program, as follows:

- 1) Students have insight into mathematics learning
- 2) Students are able to apply data management skills more broadly in accordance with the developments in information technology
- 3) Students are able to develop creativity, independence, and entrepreneurship.

# F. Course Structure

## Semester I

No Code		Course	D	Detail sks			Prerequisite
NO	Code	Course	T	P	L	J	
1.	MKU6201	Islam Education	2			2	-
	MKU6202	Catholic Education					
	MKU6203	Christian Education					
	MKU6204	Hindu Education					
	MKU6205	Buddhist Education					
	MKU6206	Konghucu Education					
2.	MKU6212	Digital Transformation	2			2	
3.	FMI6202	Statistics	1	1		2	-
4.	MDK6201	Educational Science	2			2	-
5.	MDK6202	Educational Psychology	2			2	-
6.	PMA6301	Algebra and Trigonometry	3			3	-
7.	PMA6202	Plane Geometry	2			2	-
8.	PMA6303	Logic and Set Theory	3			3	-
9.	PMA6304	Differential Calculus	3			3	-
		Total	20			21	_

# Semester II

NI -	0-1-			Deta	il sk	S	Prerequisite	
No	Code	Course	Т	P	L	J	-	
1.	MKU6208	Pancasila	2			2	-	
2.	MKU6209	Indonesian Language	2			2		
3.	MKU6211	English Language	2			2	-	
4.	MDK6203	Educational Management	2			2	-	
5.	MDK6204	Sociology and Anthropology of Education	2			2	-	
6.	PMA6205	Solid Geometry	2			2	-	
7.	PMA6306	Integral Calculus	3			3	MAA6304	
8.	PMA6307	Elementary Linear Algebra	3			3	MAA6303	
9.	PMA6308	Algorithm and Programming	2	1		3	MKU6212	
10.	PMA6309	Data Analysis and Visualization	2	1		3	FMI6202	
		Total	22	2		24		

# Semester III

No	Codo	Course		)eta	il sk	Prerequisite	
INO	No Code		Т	Р	L	J	
1.	MKU6207	Civics Education	2			2	-
2.	MKU6216	Social and Humanity Literacy	2			2	-

3.	MKU6213	Creativity, Innovation, and Entrepreneurship	2		2	-
4.	PMA6210	Psychology of Learning Mathematics	2		2	-
5.	PMA6211	English for Mathematics Education	2		2	MKU6211
6.	PMA6212	Analytic Geometry (Plane)	2		2	MAA6202
7.	PMA6313	Computer Applications	2	1	3	MAA6308
8.	PMA6314	Differential Equations	3		3	MAA6304
9.	PMA6315	Linear Programming	3		3	MAA6307
10.	PMA6216	Number Theory	2		2	-
		Total sks	22	1	23	

# Semester IV

NI -	0-4-	Code Course		Deta	il sks		
No	Code		Т	P	L	J	Prerequisite
1.	FMI6201	Science and Mathematics Perspective and Studies	2			2	-
2.	PMA6217	Curriculum and Mathematics Learning	2			2	-
3.	PMA6318	Mathematics Learning Strategies	3			3	-
4.	PMA6219	Innovation in Manipulative Mathematics Learning Media	1	1		2	MKU6212
5.	PMA6220	Mathematics Learning Assessment	2			2	-
6.	PMA6221	Philosophy of Mathematics Education	2			2	-
7.	PMA6222	Secondary School Mathematics Studies 1	1	1		2	-
8.	PMA6223	Analytic Geometry (Space)	2			2	-
9.	PMA6324	Discrete Mathematics	3			3	MAA6303
10.	PMA6325	Probability Theory	3			3	MAA6303
		Total sks	21	2		23	

# Semester V

No	Vada	Mata Kuliah	R	incia	n sk	Dunguranat	
	Kode		Т	P	L	J	Prasyarat
1.	PMA6326	Mathematics Learning Planning	3			3	PMA6203
2.	PMA6327	Interactive Mathematics Learning Media	2	1		3	-
3.	PMA6228	Secondary School Mathematics Studies 2	1	1		2	PMA6306
4.	PMA6229	Transformation Geometry	2			2	-

5.	PMA6330	Numerical Methods	3		3	-
6.	PMA6234	Mathematical English	2		2	PMA6202
7.	PMA6235	International Mathematics Education Studies	2		2	PMA6203
8.	PMA6236	Gifted Students Mathematics Learning	2		2	PMA6201
9.	PMA6237	Selected Topics in Mathematics Education	2		2	-
10.	PMA6238	Virtual Mathematics Learning Media	1	1	2	PMA6205
		Total sks	20	3	23	

## Semester VI

NI.	Cada	C		Deta	il sk	S	Duana mulaita
No	Code	Course	T		L	J	Prerequisite
1.	PEN6201	Micro Teaching		1	1	2	-
2.	PMA6310	Research Methodology in Mathematics Education	3			3	-
3.	PMA6232	History of Mathematics	2			2	-
4.	PMA6239	Qualitative Research in Mathematics Education	2			2	-
5.	PMA6240	STEM Learning Approach	2			2	-
6.	PMA6241	Ethnomathematics	2			2	-
7.	PMA6242	HOTS Mathematics Studies	2			2	-
8.	PMA6243	Development of Mathematics Learning Videos	1	1		2	PMA6205
		Total	19	1		21	

# Semester VII

No Coo	Codo	Cource		Deta	il sk	S	Duovonuicito
	Code	Course	Т	P	L	J	Prerequisite
1.	MKU6614	Community Service (KKN)			6	6	-
2.	PEN6601	Teaching Practice (PK)			6	6	-
		Total				12	

# Semester VIII

No	Code	Course		Deta	ail s	ks	Prerequisite
No			T	P	L	J	
1.	PMA6824	Undergraduate Thesis				8	-
		Jumlah sks				8	

#### **Elective Course**

No	Code	Course	Smt	C	)eta	il sk	Prerequisite	
INO	Code	Course	Silit	T	P	L	J	Prerequisite
1.	PMA6234	English for Mathematics	5	2			1	PMA6202
2.	PMA6235	International Mathematics Education Studies	5	2			2	PMA6203
3.	PMA6236	Gifted Students Mathematics Learning	5	2			2	PMA6201
4.	PMA6237	Selected Topics in Mathematics Education	5	2			2	-
5.	PMA6238	Virtual Mathematics Learning Media	5	1	1		2	PMA6205
6.	PMA6239	Qualitative Research in Mathematics Education	6	2			2	-
7.	PMA6240	STEM Learning Approach	6	2			2	-
8.	PMA6241	Ethnomathematics	6	2			2	_
9.	PMA6242	HOTS Mathematics Studies	6	2			2	-
10.	PMA6243	Development of Mathematics Learning Videos	6	1	1		2	PMA6205

Description, learning achievement, references, and evaluation guidelines can be seen at Module Handbook each course

## G. Educational Internship

Educational Internship, is also called Teaching Practice (PK), is an obligatory pass course with 6 SKS amount for the Educational Bachelor's Degree Study Program in UNY, that has purpose to complete the student's competence as educational staff candidate. This course enforcement is arranged by Development and Education Quality Assurance Institute (LPPMP) UNY.

To join Educational Internship course, the student has to fulfill these requirements.

- 1. Registered as active student of UNY Mathematics Education Bachelor Degree in internship enforcement semester (odd semester).
- 2. Taken minimum 90 sks with minimum GPA 2,00.
- 3. Passed Micro Teaching course (PEN6201) with a minimum score B.
- 4. Done the registration entry by online through the website.
- 5. Student who is pregnant can join PK when the departure time her pregnancy age is not more than 5 months or 20 weeks. The student is obligated to give an obstetrician letter that explains about pregnancy age and condition, and a husband letter that gives concern to do PK as well as responsible for every possible risk happened.

By online, student also validates and chooses the school that becomes the location of educational internship. School election can be changed or rearranged

by LPPMP by considering students amount (minimum 10 persons), needs/ subject distribution, school level, school type, gender, and religion. Final location placement after the changes, if there any, will be announced by LPPMP to the student.

In the next step, student will join briefing in group by each Field Supervisor (DPL). Student has to do socialization to the school that becomes the location for PPL, arrange PPL planing program, enforce the program that has been created in PPL location, and arrange PPL final report.

Complete provisions about Educational Internship enforcement can be seen at http://lppmp.uny.ac.id/buku-panduan-ppl-2016.

## H. Final Assignment

The final thesis assignment for the student of Bachelor Degree of Mathematic Education is an obligatory course that has to be passed that contains 8 sks, in a form of a student's scientific paper that shows his/her ability in doing process and scientific thinking pattern through research activity.

The thesis process arrangement gives basics competence to literature study, research, and scientific paper writing procedure. The student who has fulfilled the thesis prerequisite course (110 SKS with GPA minimum 2,0) communicates to academic advisor asking for thesis proposal recommendation. Recommendation and short explanation related to thesis title are consulted to Head of Mathematic Education Study Program to decide supervisor.

Student communicates appointed supervisor to get his/her agreement. After that, student does the bachelor degree thesis under supervisor guidance, by filling final assignment thesis guidelines card every guidance. After finishing the thesis, student is able to propose thesis exam request.

Complete guideline about thesis writing/ arrangement can be downloaded athttp://fmipa.uny.ac.id/pedoman-tas. Topic proposal process to thesis exam proposal decree are done by online using information system SIBIMTA (http://bimbingan.uny.ac.id).

# 4 Students Activities and Organizations

To support self development especially students' soft skill, Yogyakarta State University (UNY) provides several kind of activities and organizations, in department, faculty, as well as university.

# A. Activities and Organizations in Department Level



Student Association of the Department of Mathematics Education (Himatika) is the only one student organization in FMIPA UNY Mathematic Education Department. HIMATIKA FMIPA UNY moves and works based on Pancasila, science, and autonomous as its function.

Some HIMATIKA FMIPA UNY activities which are aimed to students of Mathematic Education Department are Platina, Kurfabeta, Working Discussion (Musker), Raker, Famgath, Professional Seminar, general assembly, Open House, questions bank duplication as well as course book, and others.Besides that, HIMATIKA FMIPA UNY also holds activity that involves non-Mathematic Education Department students and public, such as blood donors and contest as well as mathematics seminar (LSM) which are held once a year. HIMATIKA FMIPA UNY also sends delegation to the activities of IHMSI, IKAHIMATIKA, and others regularly. Further information about HIMATIKA FMIPA UNY can be obtained by visiting this website<a href="http://himatikauny.org">http://himatikauny.org</a>.

# **B. Activities and Organizations in Faculty Level**

Student's activities and organizations in MIPA UNY Faculty cover Student Consideration Board (DPM) and Student Executive Board FMIPA. Related to students' interest and talent, there are some students' activity units (UKM) which are:

- 1. UKM Nature Devotee HANCALA (http://hancala.student.uny.ac.id/).
- 2. UKM Islamic Spirituality HASKA (<a href="http://haska.student.uny.ac.id/">http://haska.student.uny.ac.id/</a>)
- 3. UKM Theater SEKRUP (https://sekrup-uny.blogspot.com/)
- 4. UKM Research KSI MIST
- 5. UKM Bird Observer BIONIC (<a href="https://bionicuny.blogspot.com/">https://bionicuny.blogspot.com/</a>).

Secretariat of organizations above are in FMIPA UNY blocks.

# C. Activities and Organizations in University Level

Student Executive Board – Student Republic (BEM REMA), Student Representative Council (DPM), as well as Student Consultative Assembly (MPM) are students organization in Universitas Negeri Yogyakarta level. Besides that, to accommodate interest, talent, and student's achievement coaching, there are some Students Activity Unit (UKM) in university level that can be categorized based on these scopes.

#### Reasoning Field

To respond the science and technology development, UNY does special strategy to accommodate as well as develop all the students' potential and interestin science and technology field. Activities in reasoning field in UNY covers some UKM, which are:

- 1. UKM Research
- 2. UKM Student Press Institute "Ekspresi"
- 3. UKM Radio "Magenta FM"
- 4. UKM Foreign Language
- 5. UKM Technology Engineering

#### Art Field

Students' creativity and potential in art field are done by UNY through several UKM which are:

- 1. UKM Student Family of Tradition Art (Kamasetra)
- 2. UKM Student Choir (PSM) "Swara Wadhana"
- 3. UKM Music "Sicma"
- 4. UKM Fine Arts and Photography (Serufo)
- 5. UKM Literature and Theater Study Unit (Unstrat)

### Sports Field

Sport ability development for students has purposes to maintain fitness and students' health as well as support UNY students' achievement in sports field. Sports activities are coordinated in several UKM, which are:

- 1. UKM Gymnastics
- 2. UKM Chess
- 3. UKM Swimming
- 4. UKM Archery
- 5. UKM Hockey
- 6. UKM Table Tennis
- 7. UKM Field Tennis
- 8. UKM Judo
- 9. UKM Pencak Silat
- 10. UKM Karate
- 11. UKM Tae Kwon Do
- 12. UKM Nature Devotee Madawirna
- 13. UKM Volleyball
- 14. UKM Basketball
- 15. UKM Sepak Takraw
- 16. UKM Football
- 17. UKM Baseball-Softball
- 18. UKM Marching Band Citra Derap Bahana
- 19. UKM Badminton

### Welfare Sector and Special Interest

Students coaching in this field is a mode to develop students' welfare both physically and spiritually, as well as special interest that the students have.

- 1. UKM Islamic Spiritual Activity Unit(UKKI)
- 2. UKM Christian Student Fellowship (PMK)
- 3. UKM Catholic Student Family Association (IKMK)
- 4. UKM Hindu Dharma Student Family (KMHD)
- 5. UKM Racana WR. Supratman and Racan Fatmawati Scout
- 6. UKM Indonesian Red Cross Volunteer Corps (KSR-PMI)
- 7. UKM Student Regiment (Menwa) "Pasopati"
- 8. UKM Student Union "Kopma UNY"
- 9. UKM Entrepreneurship (KWU)

### **D. Activities and Organizations Cross University**

There are some cross universities Mathematic students' organizations that can be a medium to broaden the relation and enhance students' experiences, such as:

- 1. Indonesian Mathematics Student Association (IKAHIMATIKA)
- 2. Indonesian Statistics Student Association (IHMSI)

# **5** Supporting Facilities

Supporting facilities can be accessed/ used by students of Mathematics Education Study Progam UNY as the effective provisions which are.

## A. Library

UPT Library Yogyakarta State University provides some kind of services for UNY academic community as well as public out of UNY. UNY library public catalog can be accessed online by this website <a href="PERPUSTAKAAN">PERPUSTAKAAN</a> | Universitas Negeri Yogyakarta :: OPAC, while direct access can be done in a library building which is located about 150 meters in the east of Mathematics Education Study Program UNY. UNY Library also has subscribed to some journal both national and international, such as CAMBRIDGE EMERALD, EBSCO, PROQUEST, and others, that can be accessed by the internal network only for UNY academic community (<a href="https://sso.uny.ac.id">http://sso.uny.ac.id</a>).

Moreover, UNY also has Repository Internal that contains scientific paper, bachelor degree thesis, thesis, dissertation, research, and journal that are from UNY academic community that can be accessed by this website <a href="http://lib.uny.ac.id/">http://lib.uny.ac.id/</a>. For bachelor degree thesis, thesis, and dissertation, the full script access can only be done in library building.

Library service for Mathematics Education Study Program UNY academic community is also provided by MIPA faculty library which is located in the 3rd-floor Laboratory and Integrated Library FMIPA UNY. All the students of FMIPA UNY Mathematic Education Study Program can be the library member automatically. Information about catalog and library services are provided in <a href="http://library.fmipa.uny.ac.id/">http://library.fmipa.uny.ac.id/</a>.

## **B. Sport Facilities**

Yogyakarta State University (UNY) blocks in Karangmalang have some sports facilities that are complete enough and can be used by the students as the provisions, such as:

- 1. Swimming pool
- 2. Sportsmart/sport equipment shop
- 3. Sports dormitory
- 4. Tennis Indoor field
- 5. Archery field
- Basketball field
- 7. Public Sport Garden
- 8. Soccer field and athletics
- 9. Fitness Center

### C. Prayer Facilities

UNY Mujahidin Mosque area is 1.920 m² and capable of accommodating up to 3.500 pilgrims which is located exactly in the west of the MIPA Faculty/ Mathematics Education Study Program campus. The mosque that has been renovated three times with early architecture like Nabawi Mosque becomes the Muslim academic community praying center in Mathematic Education Study Program. Besides that, there is an Al-Furqon prayer room inside the MIPA UNY faculty block.

Prayer places for other religions are easy to find around the UNY Campus, such as Bintang Samudera Chapel in Sagan, St. Yohanes Rasul Church in Pringwulung, Gereja Kristen Indonesia (GKI) Gejayan, Jagatnatha Sorowajan Temple, Klenteng Poncowinatan, and others.

## D. Student and Multicultural Center (SMC)

UNY Student and Multicultural Center (SMC) building is the UNY student's activity center that gives freedom for creativity and interaction to each other. Besides the rooms for student affair organizations at university levels such as BEM and UKM, this three-floor building is also provided by meeting hall and broad lobby. This facility is located 100 meters in the north of Mathematics Education Study Program/ UNY MIPA Faculty.

## **E. Banking Facilities**

Some banks have branch offices/ cash in UNY campus which are Bank BPD DIY and bank BNI, both of them are in Gejayan street (about 400 meters east of Mathematics Education Study Program). Moreover, there are Automatic Teller Machines (ATM) in surrounding Mathematics Education Study Program, which is Mini Market Kopma UNY and Plaza UNY.

# **F. Foods and Everyday Needs**

**Mini Market KOPMA UNY Union** provides some students' needs start from stationary, everyday tools and equipment, snacks, drinks, as well as a photocopy. It is placed 50 meters in Mathematics Education Study Program/ MIPA UNY Faculty.

**Food Court UNY** is the snacks and food center that are organized beautifully, complete with leafy tree, ornamental plant, joglo building, and a number of gazebos. It is very comfortable to be used to eat some food or casual conversation. It is placed in East of Mathematics Education Study Program/ MIPA UNY Faculty.

**Garden Café UNY** is a foods and beverages stall that is very suitable to be a discussion and gathering place for students, as well as provided with hot spot area, LCD, Projector, and cable TV. It is placed 50 meters in the north of Mathematic Education Study Program/ MIPA UNY Faculty.

**Plaza UNY** is a four-floor building that is located in the east of Mathematica Education Study Program/ MIPA UNY Faculty. Plaza UNY consists of mini-mart, clothes, electronic repair, and reflexology service.

#### G. Accommodation

UNY Hotel is located inside the campus area, exactly beside MIPA UNY Faculty. This hotel offers comfort, cleanliness, friendliness, and a strong academic feel. As for the students who come from outside the region, the public around UNY (which are Karangmalang, Kuningan, Santren, Karangasem, Deresan, Mrican, Klebengan, and Samirono) provides boarding house with some facilities and prices.

#### H. Health Facilities

UNY Health Facilities (HF) are technical implementation units that have job giving health services for students, lecturers, and educational staff in the UNY environment. Some services provided are medical examination, medication, health consultation, simple laboratory examination (cholesterol, blood glucose, gout, pregnancy tests, blood type tests), examination for pregnant women, service for First Aid to any big scale event, public service, as well as health education by calling the phone number 0274-586168 ext. 1324.

Besides the health facility, UNY also has physical therapy clinic which is located in the west of GOR UNY. The physical therapy clinic handles any kind of injuries, sprains/ twisted, aches, and so on. This clinic opens at 09.00 to 17.00 WIB and is served by professional therapist.

The students who need emergency and inpatient services, there are some hospitals around UNY, which are:

- 1. RSUP Dr. Sardjito, Kesehatan street 1, Sendowo, Yogyakarta (± 2,5 km from FMIPA UNY).
- 2. RS Panti Rapih, Cik Di Tiro Street 30, Yogyakarta (± 1 km from FMIPA UNY).
- 3. Jogjakarta International Hospital (JIH), Pajajaran/North Ring Road street 160 (± 4 km from FMIPA UNY).
- 4. RS Siloam Yogyakarta, Urip Sumoharjo street (± 1,5 km from FMIPA UNY).
- 5. RS Specialized Surgical An-Nur, Colombo Street ( $\pm$  500 m from FMIPA UNY).
- 6. RS Mata Dr. Yap, Cik Di Tiro Street 5 (± 1,5 km from UNY campus).

## J. Counseling Guidance, Career, and Legal Guidance

Counseling guidance and psychological well-being services for UNY academic community are provided by the Guidance and Counseling Services Technical Implementation Unit (UPT LBK), placed in Karangmalang Yogyakarta, phone 0274-589536, 386168 Psw. 314. This service is also able to be accessed online by <a href="http://upt-lbk.uny.ac.id">http://upt-lbk.uny.ac.id</a>. Face to face service is given every Monday to

Friday at 09.00-13.00 WIB or outside the provided time can use appointment time. The students can get counseling services (except psychology tests) for free.

Career development, including employment, career guidance, and consultation, as well as tracer study, are provided by UNY Career Development Center/ CDC through <a href="PPK">PPK</a> website. Besides that, CDC UNY also conducts Job Fair twice in a year, followed by dozens of companies.

UNY also has UPT Law Consultation and Help that can be contacted by phone number 0274-586168 Psw. 420 or 0274 545097. Profile, as well as further information about this service, can be accessed at <a href="http://lkbh.uny.ac.id">http://lkbh.uny.ac.id</a>.

#### K. Bookstore

UNY Press publication books can be bought in UNY Bookstore, 3<sup>rd</sup> Floor Plaza UNY building Colombo Street. As for the general publication books can be obtained in some book shops around UNY, such as Social Agency, Toga Mas, and Gramedia. A cheap book market, that sells new or used books at negotiable price, can be found in sector Terban (Kahar Muzakir Street) and Taman Pintar Yogyakarta (Sriwedani Street).