SELF ASSESSMENT REPORT

BACHELOR OF SCIENCE EDUCATION

FMIPA
UNIVERSITAS NEGERI SURABAYA

2019/2020

STANDARD I
THE DEGREE PROGRAMME: CONCEPT, CONTENT AND IMPLEMENTATION

1.1 Objectives and Program Learning Outcomes of A Degree Programme (Intended Qualifications Profile)

A. Objective

The Undergraduate Program of Science Education (UPSE) belongs to Department of Natural Science at Faculty of Mathematics and Natural Sciences (FMNS) in Universitas Negeri Surabaya (UNESA). This study program was established on 21 December 2006 based on the Decree of General Director of Higher Education of the National Education Department of Indonesia No. 4905/D/T/2006.

TheProgramEducationalObjectives(PEOs) of Program Sciences education focusonproducinggraduateswhoarecapableofbecoming science educators particularly at middle school level, researchers of science education, and entrepreneurs in the fields of applied science or science education. In detail, the PEOs of UPSE are asfollows:

1. Mastering knowledge / skills in the field of pedagogical integrated science (physics, chemistry, and biology) to carry out their professional or entrepreneurial tasks.
2. Having responsibility in carrying out his professional duties based on professional ethics.
3. Having a strong and tough personality and be able to compete globally in carrying out the tasks of his profession or entrepreneurship.
4. Having capability to communicate and work together in carrying out professional tasks.
5. Having capability to do self-development and innovations sustainably based on the situation and challenges in their professional duties.

The PEOs were formulated by considering the input from alumni and science education experts, curriculum for middle school students, evaluation results of tracer studies, and National Science Education Standards (NSES) 1996. These PEOs also have significant relevancies with the Indonesian National Qualification Framework (KKNI). Table 1 indicates the relationship between PEO(s) of UPSE and the 6th level (the level for bachelor education) of the National Qualification Framework. Through these PEOs, the graduates of UPSE are expected to have capability to compete locally and globally.

B. Programme Learning Outcomes(PLO)

The process of PLO formulation has Derived from the PEOs, the UPSE proposed Program Learning Outcomes (PLOs) as shown in Table 1.

Table 1. PLO of UPSE

Competency SSC-ASIIN	Aspect	PLO	DESCRIPTION
Specialist competences	**Knowledge**	PLO 1	Demonstrate basic knowledge of physics, chemistry, and biology.
		PLO 2	Demonstrate knowledge of integrated science (physics, chemistry, and biology).
		PLO 3	Demonstrate pedagogical knowledge of designing, implementing, and evaluating integrated science learning.
		PLO 4	Demonstrate knowledge related to science education research.
	Special Skills	PLO 5	Design, implement, and evaluate science learning using ICT.
		PLO 6	Design and conduct research about learning of integrated science, and acquire, analyze, and interpret the research data.
Social competences	**General Skills**	PLO 7	Communicate ideas and research results effectively both in oral and written forms.
		PLO 8	Make decisions based on data / information in order to complete tasks and evaluate the performance that has been done.
		PLO 9	Work effectively both individually and in groups, and have entrepreneurial spirits and environmental awareness.
	Attitude	PLO 10	Demonstrate scientific, critical, and innovative attitudes in integrated science learning, laboratory activities, and professional-related tasks.
		PLO 11	Demonstrate religious and cultural values as well as academic ethics in carrying out their professional-related duties.

C. QualificationProfile

Undergraduate Program of Science Education **(UPSE)** has two graduate profiles, namely the main graduate profile and additional profiles. Explain the details as follows:

1. Main Profile

Science educators (science teachers) who characterized, environmentally friendly, innovative and entrepreneurial.

Profile Description: as a science teacher in SMP / MTs, characterized by having the character of: faithful, intelligent, independent, honest, caring, and tough (ideal dream), environmentally-minded, global-minded by using local potential in the field of science education, having a desire to

innovating by utilizing ICT, and having an entrepreneurial spirit who is ready to be trained and trained to become a professional science teacher, and able to learn for life.

2. Additional Profiles

a. Educational Researcher

Profile Description: as an instrument developer, surveyor, observer, data analyst and report on education research, both individually and as members of the education research team.

b. Management of Educational Institutions

Profile Description: as head or member of the management team of an educational institution, formal or informal.

c. School Laboratory Manager

Profile Description: as a manager of the junior high school science laboratory.

d. Entrepreneur

Profile Description: as an entrepreneur in the field of science education and other field

For all that, graduates must have the following abilities:

1. Applying his field of expertise in the field of pedagogical integrated science and utilizing IPTEKS to design, implement, and evaluate integrated science learning and solve learning problems professionally in accordance with the situations and challenges faced.
2. Mastering natural science, pedagogics, and problem-solving methodologies as well as applications in the field of work to support the task of his profession and to solve problems of learning integrated science (Professional).
3. Able to take appropriate decisions based on analysis of information and data to solve integrated science learning problems and integrated science learning innovation products, both independently and in groups.

Graduates must also have responsibility for carrying out the duties of his profession and can be given responsibility in his professional organization to solve the problem of learning integrated science.

1.2. The Title of DegreeProgramme

Graduates from the science education program are given a bachelor of education degree (S.Pd.) and have been installed in it to be given special teaching authority at the junior high school level.

1.3. Curriculum

Similar to the formulation of PEOs, the current curriculum of UPSE was Similar to the formulation of PEOs, the current curriculum of UPSE was formulated based on the inputs from stakeholders, alumni, and science education experts. In addition, the current national curriculum for middle school (K13 curriculum), National Science Education Standards (NSES) 1996 were also considered to develop the current curriculum of UPSE. The structure of the curriculum has been designed and aligned with the SSC ASIIN, PLO, Profile and also have significant relevancies with the Indonesian National Qualification Framework (KKNI) the 6th level (the level for bachelor education). The Undergraduate Program of Science Education curriculum as presented on (link kurikulum Pendidikan sains yang ada di siadaku Unesa.)

SSC-ASIIN competence in Undergraduate Program of Science Education is divided into specialist competencies and social competencies . Specialist competencies which include two aspects, namely knowledge and special skills. The knowledge aspect supports PLO 1,2 and 3, while the special skills aspect supports PLO no 4. Social competence, which includes general aspects and aspects of attitude. General apek support PLO 5,6,7,8 and 9, while aspects of attitude support PLO 10 and PLO 11. Mapping of competence and also PLO can be shown in the following table 2.

Furthermore, the development of UPSE curriculum was conducted by adopting five principles of UNESA curriculum development.For detail follows this Link Pedoman kurikulum Unesa. The five principles includes relevancy, flexibility, continuity, efficiency, and effectiveness. UPSE curriculum is relevant to social needs because it was developed based on national standard (e.g., KKNI, SN DIKTI) and international standards (e.g., NSES 1996) and the input from alumni, experts, and stakeholders. In other words, the UPSE curriculum is preparing the graduates to meet users' requirements. UPSE curriculum is also flexible as it is always adjusted to the current national issues in education, such as K13 curriculum. Continuity of UPSE curriculum is illustrated in Figure 3 and Roadmap PLO. Figure 3 shows that one course subject may support one or more other subjects from the same or different disciplines indicating the relationship among the parts of the curriculum. To improve efficiency and effectiveness of UPSE curriculum, all relevant aspects (see Figure 1) were considered and combined to achieved the proposed PEOs.

The proposed curriculum structure as well as the course syllabus have been

revised and applied within the period of 2015 - 2020. Continuous evaluation of the implementation of the UPSE's curriculum is conducted annually.

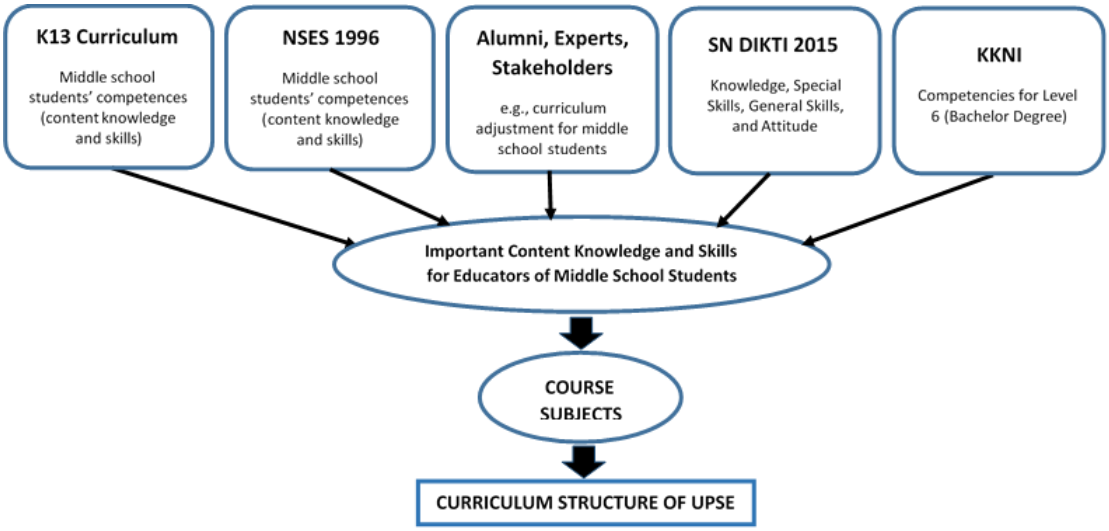

Figure 1. The development process of curriculum structure of UPSE

The curriculum of UPSE is delivered in 4 phases/years through 3 main structures: basic knowledge, interdisciplinary knowledge and pedagogical knowledge, as shown in Figure 2. In this structure, the learning process to gain the main competencies is modelled as a house. Basic and interdisciplinary knowledge are the foundation or the main requirement for students to learn pedagogical knowledge which is represented as the pillars of the house. Both basic and interdisciplinary knowledge function as pedagogical content knowledge. Without the content knowledge, pedagogical knowledge is meaningless. As a student mastery both content and pedagogical knowledge, they are expected to have competencies of science educators or teachers as the roofwhichcoverallscience educationknowledge.

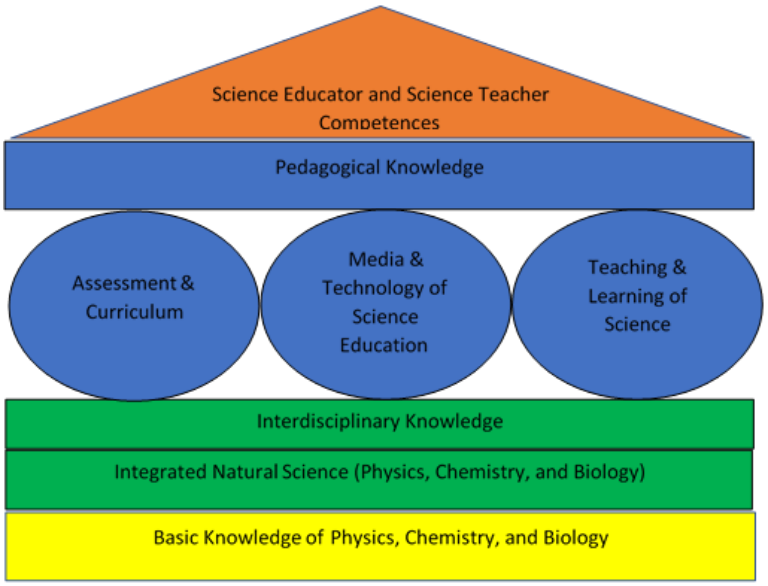

Figure 2. Model of curriculum structure of UPSE

The minimum workload of UPSE is 146 credit units (CU) which correspond to 6,132 hours[1] or 204.4 ECTS[2], and are generally distributed in 8 regular semesters. The normal workload for each regular semester is limited to 924 hours, corresponds to 22 CU (30.8 ECTS).

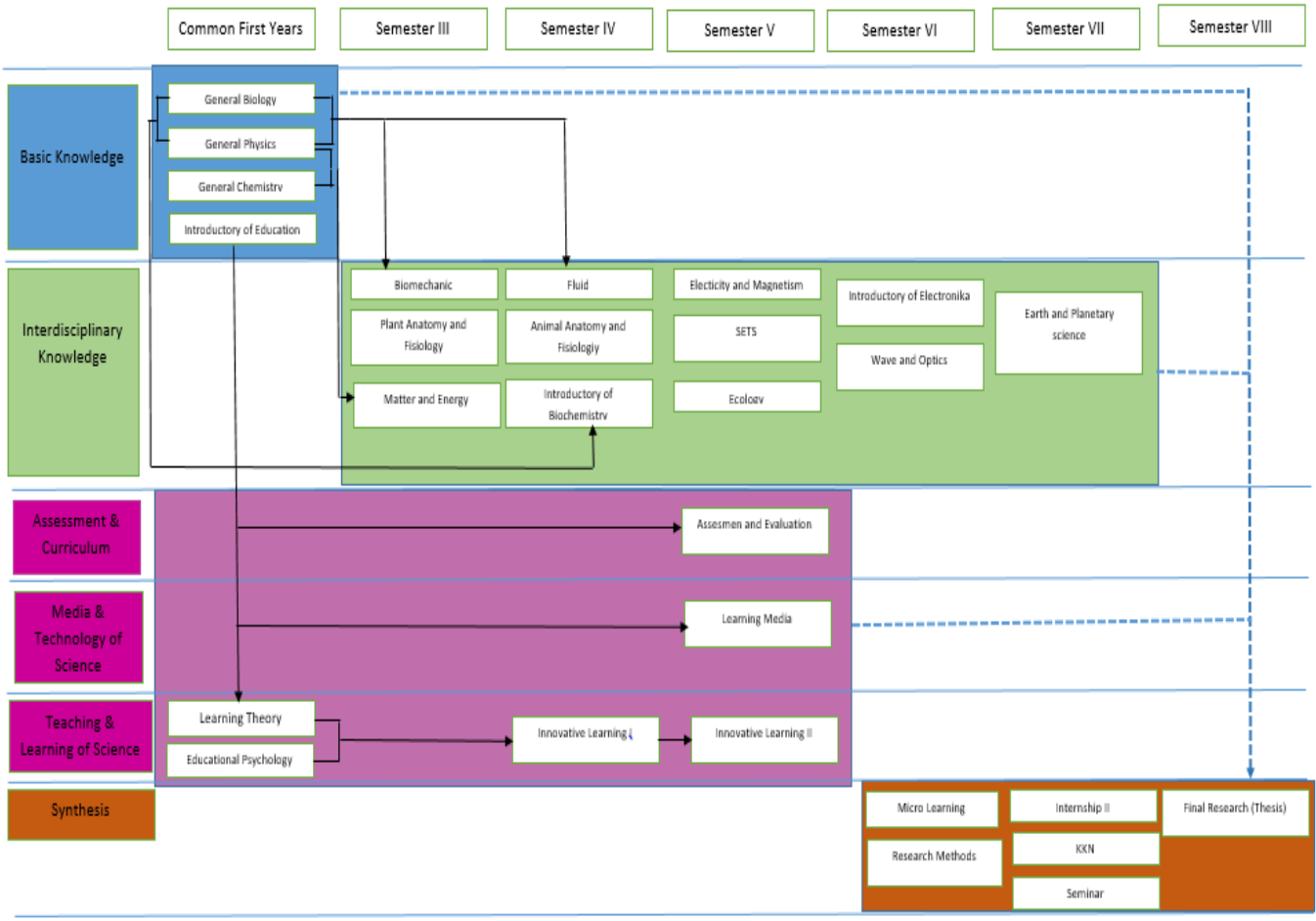

Figure 3. Curriculum Roadmap of UPSE

1.4. AdmissionRequirement

Admission of new students in Undergraduate Program of Science Education is carried out through three selection channels: SNMPTN(https://www.unesa.ac.id/pengumuman/350/snmptn-2019), SBMPTN (https://www.unesa.ac.id/category/sbmptn-snmptn) and SPMB (https://siakad.unesa.ac.id/pendaftaran/index_re.php).The first and second admission are carried out centrally. For SNMPTN, the Study Program gets the task of verifying the suitability and suitability of files uploaded by prospective students through the online system, and giving a check mark on the scope of activities (competitions) that prospective students participate in. The results of this assessment are combined with

other assessments with certain weightings, carried out by computer, announcements made nationally. The SBMPTN track is a written test track that is conducted centrally. For the SPMB pathway, selection is conducted by Unesa by involving study programs during interviews and skills tests.

STANDARD II

PROGRAM DEGREE: STRUCTURE, METHOD AND IMPLEMENTATION

2.1. Structure and Modules

Science Education Faculty of Mathematics and Natural Sciences Surabaya State University based on its vision of excellence in service, science education innovation, quality of graduates (character, environmentally friendly and entrepreneurial spirit), as well as excellence in research and service in the field of science education contained in the link http://pendukasi-sains.fmipa.unesa.ac.id/page/visi-dan-misi . Science education has two educational developments, namely the ability as a science teacher and as a science education researcher. The ability as a science teacher implemented in learning from semester 5 to semester 7 in innovative learning subjects and school observation program (PLP). For the ability as a science education researcher implemented in the learning process semester 1 to 5 as a scientific foundation of thinking. In the 5th to 7th semester, students take innovative learning subjects related to making complete learning tools and simulating good teaching methods, then implemented in PLP 1 courses, namely microteaching and PLP 2, which must go to school for teaching practice with the supervision and guidance of science teachers in school. Regarding skills as a science education researcher in the 5th semester, students take research methodology courses so that later they will be able to propose research proposals in the 6th semester. The research proposal prepared by the results of the research methods courses and seminar courses that tested to the lecturer accompanying the courses. In the 7th semester, Most students do research and prepare to write a thesis. Science education not only aims to generate infinite students with the ability to master the knowledge and expertise in academic skills but also showed nil ai-common values are applied in the learning process.

The learning process that combines science materials (Physics, Biology and Chemistry) is always socialized through academic manuals published by universities and faculties, university level quality assurance center meetings , and faculty level quality assurance groups , lecturer gathering and student orientation which can be seen at link http://pendukasi-sains.fmipa.unesa.ac.id/page/university-academic guideline. Socialization also made through the website, brochures, and banners, to meet the requirements

from the external stakeholders. Conducting socialization also plays a significant role in ensuring that all stakeholders are informed and updated on the curriculum structure.

Structuring this curriculum structure by paying attention to alignment with the PLO as presented in the following link http://pendukasi-sains.fmipa.unesa.ac.id/page/program-learning-outcomes . For example in PLO 9, students must be able to work effectively both individually and in groups and have an entrepreneurial spirit and environmental awareness, so that they all need the knowledge that is in PLO 1, 2, 3, 4, special skills that exist in PL O 5, 6 and the attitudes that exist in PLO 10 and 11. The harmony between the PLO must be implemented. It can be seen in various student textbooks, for example, in the textbook packaging, and here students are required to be able to work together in solving problems that exist in real life around the place stay. With the help of literature studies both from books and articles, then they must be able to make solutions by making research proposals and making prototypes and can present them in public.

Another example can also be seen in PLO 5 regarding students having to be able to design, implement, and evaluate science learning using ICT. In the subject of learning media and entrepreneurship science education it is always done by students until the final result is making learning media both online, printed, 3-dimensional and even 2-dimensional so that it can be said to be feasible when linked to the concepts of science, quality and market share they have done with the results of the profits they get. It is also interrelated between PLO 5 and PLO 1, 2, 3, 4 related to science, special skills in PLO 7, 8, 9, and attitudes that exist in PLO 10 and 11.

This connection must be demonstrated in every student textbook. An appropriate course team coordinator can coordinate each of these books. This coordinator has the responsibility to monitor and evaluate the compliance of each subject given by adjusting it to the identity of the course, RPS, lecture contracts, SIAKADU and monev of learning that can be seen on the link http://pendidikan-sains.fmipa.ac.id/page/academic-file. The coordinator then conveyed it to the Quality Assurance Unit (UPM) in the department. UPM carries out a second check, ensuring that each course complies according to the flow of the description mentioned above. Unit this task and then report to the Force Desc Guarantees are secured Mutu (GPM) at the Faculty Level. The study program coordinator will take necessary actions if there is a report from the course coordinator that indicates a discrepancy that is not following the flow above.

The Faculty of Mathematics and Natural Sciences Surabaya State University has conducted a student exchange program, a staff exchange program, and a visiting professor program regularly every year. These programs improve lifelong learning for all- students and academic staff. Field studies in the form of PLP and lab organization are also a form of knowledge that is active for the almighty students to do a service to the community. The maha students also did practical work in the field to work with maha other students from various disciplines who called PLP. When conducting fieldwork, they must be able to solve problems such as how to teach, make learning innovations, adapt to students and teachers, and the schools they occupy while teaching.

2.2. Workload and Credit

The Science Education program of the Faculty of Mathematics and Natural Sciences, Surabaya State University, students must follow the rules of the lecture with the SKS (Semester Credit System) package each semester. If the package is deemed possible, then new students can add elective courses. SKS is a measure of the learning experience gained during one semester through scheduled activities. SKS scores are determined by the total workload, including three types of activities per week for 1 semester, as follows: 50 minutes of face-to-face meetings with lecturers such as lectures, 60 minutes of structured academic activities such as assignments from lecturers and 60 minutes of independent academic activities. In one semester, students experience a maximum of 24 credits (~ 36.24 ECT). Realistic workload to complete the degree without exceeding the regular programmed program.

Indicators used to measure student progress, and performance are GPA during the semester, cumulative GPA is on the link http://pendukasi-sains.fmipa.unesa.ac.id/page/university-academic-guideline , graduate competencies are on the link http: //penducation-sains.fmipa.unesa.ac.id/page/graduate-profile and waiting periods for employment.

2.3. Teaching Methodology

Learning strategy refers to the way the lecturer delivering materials to assist learning students in achieving the learning outcomes of the program. The learning method among them is a discussion, demonstration, assessment, learning-centered on student learning (SCL), learning-based Problem (PBL), tutorials, project-based

learning (PBjL), write a lab report, write a thesis. After learning, the lecturer provides input toward the concept of matter that has not been understood by students. The effectiveness of teaching regularly evaluated every semester by the Chairman of the Program and Quality Assurance Faculty Force that existed at the link .... this evaluation will be a recommendation to plan a follow-up to the next cycle to increase k Quality of teaching.

This School of Mathematics and Natural Sciences Study Program provides facilities such as lecture halls to support the learning process for academic activities. This simulation center includes support tools for conducting lab work and lab skills and for teaching practice. By providing all these facilities, it expected to increase the motivation of all- students in learning to achieve the learning objectives. Other facilities provided by the Faculty of Mathematics and Natural Sciences, Surabaya State University are research centers, libraries with open access journals, small group discussion rooms, shared workspaces, food courts, and sports facilities.

Students also follows Competition Creativity Students from the Ministry of Research, Technology, and Higher Education of Indonesia. Surabaya State University facilitates grants to fund research, especially for students and monitor research activities. Output such research is in the form of participation is most students in various activities of scientific papers and won several awards. Also, they publish their research in international and national journals and seminars.

Surabaya State University provides facilities for academic activities such as Integrated Science laboratories, Language Center, Research and Community Service Center, and libraries. Facilities for non-academic activities such as sports centers, places of worship, the building arts and culture, dormitory maha students, food court, mosque, multipurpose buildings, banks, buses campus, unit service psychological, the center of the career development and entrepreneurship, center service students, the center of health care and student cooperatives and dhamawanita organization.

2.4. Support and assistance

Each maha student paired with an academic advisor who can serve as an advisor and consultant since completed the study plan card, performance evaluation is most students and provide suggestions for problem lectures. Complete a study planning

card, conducted at the beginning of each semester. Besides, the Faculty of Mathematics and Natural Sciences, University of Surabaya, also provide counseling facilities that can be used by maha students to consult.

Surabaya State University has a Unesa Single Sign On (SSO) system. Using SSO, students can re-register at the beginning of the semester as evidence to charge a card plan of study. Students registers using an account in SSO using the user id and password, respectively. All the academic process is an academic advisor supervises most students. Academic advisors are responsible for providing lecture input and advice. Advisers can also monitor study results cards in the current semester to offer suggestions to lectures in the following semester for relevant students.

This academic advice can be done online at the link https://siakadu.unesa.ac.id/2cf4dae0-63c3-3334-8925 475779c4ec02.aspx in SIAKADU and offline in the form of student learning contract sheets and student targets. Advisers can also communicate with their parents using Whatsapp with the number that was registered when registering first. Students can consult with the sub-student affairs in the faculty office, and student affairs are in the rector at the university level. They can discuss student affairs, scholarships, and various other co-curricular activities related to the students.

Many activities on campus are members of the(Student Activity Unit (UKM). The students can join such the students' regiment, active role in scientific activities, sports, arts and culture, and social services. They have won several awards in national scientific competitions, sporting events, arts, and culture, to increase the presence of students at the local, regional, national and international are in support of all these activities.

The students actively take part in continuous improvement by participating in the mobility of all- students. The Study Program pays excellent attention to this aspect. In 2018, there was a student award at the national level regarding PMW. In 2019 there was a student national level award related to student scientific work and zero international achievements. The study program immediately analyzes the root cause because of the low number of accomplishments. The study program does not provide special assistance and organized for infinite potential students, and the spirit of competition is less among maha students. Therefore, since 2020 intensive assistance has offered to students. Although there is an improvement, the study program does not stop to evaluate and create solving the problem. This shows that the study program in

cooperation with Most students continues to consider to develop continuous improvement in student mobility.

STANDARD III

EXAMS: SYSTEM, CONCEPT AND ORGANIZATION

3.1. Exams, System, Concept and Organization

In general, the standard procedures for assessment of teaching-learning process and learning outcomes used inPM/15/GPM/FMIPA-UNESA (Appendix 3.1) (http://gpm.fmipa.unesa.ac.id/wp-content/uploads/2018/01/GPM_PM-15_Pelaksanaan-UTS-UAS.pdf) about the examination of undergraduate programme and PM/11/GPM/FMIPA Unesa (Appendix 3.2) (http://gpm.fmipa.unesa.ac.id/wp-content/uploads/2020/04/PM-GPM-11_Skripsi.pdf) that regulates thesis.

During their study, all students will be assessed covering both academic and nonacademic assessments as stated clearly in the Academic Guidelines for Students (Appendix 3.3) (http://sains.fmipa.unesa.ac.id/buku-pedoman-akademik-20192020/) Academic assessment is conducted using formative, and summative methods.All exams, including formative and summative, must be validated. The validation checks the coherence between the learning objective stated in syllabus/lesson plans and the questions/activities on the examinations. Assessment criteria are represented in alphabetical grades as stated clearly in the Academic Guidelines, namely A, A-, B+, B, B-, C+, C, D and E.The grade point is based on the criteria designated by university, ($85 \leq A < 100$, $80 \leq A- < 85$, $75 \leq B+ < 80$, $70 \leq B < 75$, $65 \leq B- < 70$, $60 \leq C+ < 65$). In order to pass, students have to gain a D as their minimum result. Students who get an E in compulsory courses must retake them; however, students may choose retake or drop electives they fail.

Students' academic achievement is evaluated periodically at the end of the fourth semester and seventh year. At the end of the fourth semester, students have to complete at least students are declared graduated if they have taken at least 144 credits with the composition of the number of compulsory subjects as many as 134 credits and the number of elective courses as many as 10 creditswith a minimum GPA of 2.50. Then, at the end of the seventh year, students who cannot complete 144 credits and maintain a minimum GPA of 2.50 must choose whether they will continue their studies or drop

out (DO) based on the Chancellor's decision as stipulated in the student manual.

Students must arrange an undergraduate thesis to complete their studies. Research proposals are arranged according to the advisors' research framework in semester 7. In the 7th and 8th semesters, students conduct research and prepare to write their undergraduate theses. From the initial preparation of the proposal, students are accompanied by one lecturer as an advisor. Students must consult about research and thesis writing to the supervisor. Students must successfully pass the defense of the thesis proposal and the defense of the thesis as a final project to get a bachelor's degree. This thesis guide can be accessed (Appendix 3.4) (http://fmipa.unesa.ac.id/2014/09/pedoman-skripsi-unesa-2014/)

On the other hand, the non-academic achievement focuses on student's nonacademic performance.Assessment in the non-academic field measures the ability of students to handle non-academic problems, consisting of the fields of organizational and leadership activities; the field of reasoning and scientific activities, the field of activities of interests, talents, hobbies, and welfare; the field of community service activities; other fields of activity. The assessment is clearly stated in the Rector Decree year 2016. (Appendix 3.5) (http://sains.fmipa.unesa.ac.id/penilaian/). As stated in the vision and mission of Universitas Negeri Surabaya striving to produce quality graduates, each graduate must achieve academic and non-academic excellence.

STANDARD IV
RESOURCES

4.1 Staff

Study Program of Natural Science Education, Universitas Negeri Surabaya

employs three kind of staffs, namely academic, laboratory, and administration staff. The number of each staffs is provided in Table 4.1.1.

Table 4.1.1 The number of staffs in Study Program of Natural Science Education, Universitas Negeri Surabaya

No.	Kind of Staff	Number of Staff
1	Academic	19
2	Laboratory	1
3	Administration	1
Total		21

The study program performs the academic staff planning by referring to the short-term and long-term requirements, namely by considering the recruitment, promotion, and development of the academic staffs. The goal of academic staff planning is to assure the fulfillment of educational, research, and service requirements as regulated by the vision and missions of the study program (http://pendidikan-sains.fmipa.unesa.ac.id/page/visi-dan-misi). In order to meet these requirements, the study program, Universitas Negeri Surabaya indicates an academic qualification of teaching staff. The staff must follow pedagogue certification. These requirements also refers to the ratio of staff to students, total course credits of each semester, and quality of human resources as presented in Table 4.1.2.

Table 4.1.2 The ratio of academic staff to student of the study program

Number of Academic Staff	Number of Students	Academic Staff to Student Ratio
19	379	1:20

The Table 4.1.2 above describes the ratio of academic staff to student in the study program. The table demonstrates that the ratio of academic staff to student in the study program, is considered ideal and it already conforms the Regulation of the Ministry of Research, Technology, and Higher Education, concerning that the ideal ratio of academic staff to student in natural science faculties at the state universities is This condition enables the academic staff to perform the more effective teaching and learningprocess in order to achieve the PLOs.

The staff development aims at providing the opportunities for the staff to improve their competences and updating their knowledge on their field of studies to understand the recent issues. Also, it can be implemented through the formal education (such as magister, and doctoral program) or the non-formal education (such as

workshops based on their field of studies). The Study Program of Natural Science Education, Universitas Negeri Surabaya has mapped the needs of academic staff competence development, mainlyconcerning the formal education, as presented in Table 4.1.3 below.

Table 4.1.3 The projection of academic staff development through formal education in 2016-2020(data studi lanjut)

Academic Staff Assigned to Study	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
Magister	0	0	0	0	0	0
Doctoral Degree (national)	……	……	……	……	……	……
Doctoral Degree (International)	……	……	……	……	……	……

From the table of projection above, it is expected that in 5 (five) years, Science Department can meet the targets set by Universitas Negeri Surabaya, as presented in Table4.1.4 below.

Table 4.1.4 The target of academic staff with doctoral degree and professor qualification(jumlah tambahan tambahan-pensiun doctor dan tambahan-pensiun professor)

	2017	2018	2019	2020	Total
Additional Number of Doctors	……	……	……	……	……
Additional Number of Professors	……	……	……	……	……

The quantity improvement of the academic staff with functional position as professor or non-professor (such as Junior Lecturer, Senior Lecturer, and Associate Professor) still becomes one of the priorities to be achieved. The head of department or

professors becomes the supervisor of academic staffs with functional position is still below the university's expected target. This condition is depicted in Figure 4.1.5 below.

Figure 4.1.5 Academic staff distribution based on rank

No.	Position/Rank	Number of staff
1	Professor	1
2	Associate Professor	3
3	Senior Lecturer	9
4	Junior Lecturer	4
5	Without Functional Position	2

Figure 4.1.5 above demonstrates that the number of academic staffs with certain qualification is still inadequate. Therefore, Science Department, Universitas Negeri Surabaya has increased the needs of functional promotion for academic staff. The projection of academic staff promotion is presented in Table 4.1.6 below.

Table 4.1.6 Projection of academic staff promotion Science Department 2016-2020

Position/Rank	2016	2017	2018	2019	2020	Total
Professor (Accelerated)						
Associate Professor						
Senior Lecturer						
Junior Lecturer						

The table above depicts that the highest promotion group is Associate Professor position with doctoral degree qualification. This condition is quite possible considering that the academic staffs within this group are expected to add the number of professors in the study program, Universitas Negeri Surabaya. In fact, the Associate Professor group consists of the academic staffs with the highest productive age composition ranged between 51-60 years old. Therefore, the university and faculty are suggested to facilitate the promotion.

Other attempts to accelerate career promotion are improving the education of

theacademic staff and participating in workshops, seminars, and scientific meetings internallyheld by the faculty or university or by external institutions nationally and internationally inorder to accelerate the academic staffs to implement the Tri Dharma. This data isrepresented in Appendix 4.2(http://pendidikan-sains.fmipa.unesa.ac.id/page/staff-handbooks).

In addition to the rewards and appreciation given by the faculty, academic staffs alsohave a great opportunity to propose for research funding to the faculty. The funding can beused to conduct research to develop the academic competence, to present at the national andinternational forums, or to continue study. The funding is a priority, allocated in the annualbudgeting of the faculty. Apart from that, funding also comes from the Ministry ofResearch, Technology, and Higher Education, and the lecturers themselves. Universitas Negeri Surabaya also implements a policy which provide appreciation for theacademic staffs publish their researches in the reputable international journals (Scopusindexed), patent, and dictatebooks. This data is represented in Appendix 4.4 (http://pendidikan-sains.fmipa.unesa.ac.id/page/staff-handbooks).

4.2 Staff Development

Competency enhancement and evaluation of academic staff is preferred. This program was facilitated by Study Program of Natural Science Education, Universitas Negeri Surabaya with study assignments, national and international scientific seminars, and workshops. Skills are also enhanced through language training, research training and training in improving instructional techniques. Everything is intended for the achievement of PLO study program.

The need to increase the competence and skills of academic staff is reflected in the cost of study programs. This activity is an annual target and annual plan. The annual training facilitated by the study program includes research training and instructional engineering training. In 2019 the number of academic staff that had been certified as many as educators was 12 people(http://pendidikan-sains.fmipa.unesa.ac.id/page/sertifikat-pendidik), for 2020 there were 4 people applying for certification (http://sister.unesa.ac.id/sertifikasi_dosen)and the rest were still as CPNS as well as in the process of increasing competence through “Penguatan Kompetensi Teknis Bidang Tugas” (PKTBT).

To support the development of academic staff competencies, study programs through the MIPA faculty work with partner schools and MGMP (MOU links).

4.3 Funds and Equipment

The Science Education Study Program plans an annual budget, to operate institutional activities around June in the previous year. At this stage the evaluation is carried out from January to December in the previous year and performance predictions are determined until the end of the year in December of the same year. In addition, at this stage income is also planned in line with performance targets for the following year. The final prediction plan was decided in November at the evaluation meeting for the use of the same year's budget. Approved budgeting proposals can be used from January of the following year.

Study programs have adequate teaching and learning facilities for students and lecturers. Some of the facilities are three lecturer rooms, one administration-study program room, six main lecture halls and one special proposal / thesis examination room. Each lecture hall has a capacity of around 40 students. The proposal / thesis examination room is only used for student final project presentations. These three lecturers' rooms are divided based on the scientific knowledge of each lecturer, including Learning, Assessment and Curriculum, and Learning Media. The administration-study room consists of the department chair room, department secretary, laboratory chair, and administrative staff,

The study program also has two laboratory rooms, namely a science laboratory, a learning laboratory / workshop, a microteaching laboratory, and a computer laboratory. The Science Laboratory is used for student practicum related to science concepts, which has a capacity of around 80 students. Learning laboratories / workshops are used for students conducting workshops or independent work to complete pedagogic-related assignments, which have a capacity of 40 students. This laboratory is also used to show the work of students related to learning media and pedagogy. For the microteaching laboratory, the study program uses this laboratory to train students' teaching skills. They are required to practice in this laboratory before they practice at school. This laboratory consists of classrooms, studio rooms, and workshop rooms.

The study program also has a library room equipped with a collection of textbooks, journals, theses, final paper, and magazines. This room is open for lecturers and students from Monday to Friday from 8 am to 4 pm. Collections in the library can be accessed by all students, lecturers, and support staff. In addition, there is also a university library where every academic community of Surabaya State University automatically becomes a member of the university library. Students can borrow several

university library collections using only their cards, while lecturers can use their ID cards. Further information can be accessed via https://library.unesa.ac.id/.

STANDARD V

TRANSPARENCY AND DOCUMENTATION

5.1. Module Description

The academic module in the Undergraduate Study Program of Science Education in the Faculty of Mathematics and Science of Surabaya State University consists of compulsory and elective courses. Compulsory courses that must be taken by students are 134 SKS, while the elective courses that must be taken by students are 10 SKS. Students are declared to pass if they have taken at least 144 SKS. Detailed information about the academic modules in the Science Education Undergraduate Study Program Faculty of Mathematics and Science, Surabaya State University can be accessed at http://pendidikan-sains.fmipa.unesa.ac.id/page/curriculum. All academic modules are explained fully in the University's academic guidelines for undergraduate programs (can be accessed at http://pendidikan-sains.fmipa.unesa.ac.id/page/university-academic-guideline) and given to students at Registration. The student can also access the module handbook that describe the following:

1. Module name and identification code
2. Module level
3. Semester/term
4. Module coordinator and Lecturers
5. Teaching format and workload
6. Learning goal
7. Content
8. Attribute soft skill
9. Assessment method
10. Learning method
11. Forms of instructional media
12. Recommended literature

All the module handbook are available online in http://pendidikan-sains.fmipa.unesa.ac.id/page/module-handbook.

5.2. Diploma and Transcript of Science Education Undergraduate Study Program

Student academic achievement is regularly evaluated at the end of each semester to determine the number of SKS that will be taken in the following semester to obtain

an optimal GPA. At the end of the fourth semester, student performance is evaluated to determine whether students will be allowed to continue their studies. Students are allowed to have a minimum prerequisite D grade in only 1 subject. At the end of the seventh semester, students must complete at least 138 credits with a minimum GPA of 2.00. In the eighth semester, students can graduate from the S1 Science Education program and receive a Bachelor of Education degree.

The Science Education Undergraduate Study Program has 6 groups of subjects, including the Core Personality Development course, Institutional Personality Development courses, Scientific and Skills courses, Basic Skills courses, Work Skills course, and Community Life course. Core Personality Development courses and Institutional Personality Development courses are mandatory for all students of Surabaya State University. Scientific and Skills courses can only be programmed by students of Science Education study programs. Whereas the Basic Skills Course and the Work Skills Course are as supporting research methods and student pedagogical skills. In the Community Life course, real work lectures are conducted to help students develop holistic thinking in handling cases based on specific competencies or skills. Evaluation of comprehensive learning is done through seminars and theses. After all the learning processes have been exceeded, students receive an S.Pd.

By the end of this programme, students will receive a diploma and transcript. The diploma contains the name of the student, ID number, place and date of birth, academic degree, date of graduation and signed by the chancellor and dean. The transcript contains the name of the student, ID number, place and date of birth, registered date, date of graduate, number of graduate certificates, credit passed, GPA, thesis title, detailed score of each course and signed by the dean. Examples of diploma certificates and academic transcripts are available at http://sso.unesa.ac.id.

5.3. Relevant Rules

Students who have problems or any difficulites during learning implementation have the right to be given counseling. Each student is paired with an academic advisor who can function as an advisor and consultant during the learning process. In addition, the Faculty of Mathematics and Natural Sciences, Surabaya State University provides counseling facilities that can be used by students to consult. At the university level, Help Desk is provided for students to consult about problems encountered during the learning process.

Surabaya State University has the function of the law as a fundamental rule for regulating operational procedures at the university. All applicable laws at Surabaya

State University can be seen at http://buk.unesa.ac.id/page/Product%20Hukum. The law includes all regulations and policies at Surabaya State University including the rights and obligations of students, lecturers and universities. In the law, students are defined as people from within the country and abroad who are eligible to develop their potential to become professionals, scientists, practitioners by following the educational process and being registered at Surabaya State University.Surabaya State University students must fulfill their responsibilities to develop their potential and have academic abilities based on national education standards, to get financial support in the education process, to comply with all regulations at Surabaya State University, to participate and care to improve the reputation of the university. In addition, students also have the right to participate in all academic activities and academic support, to use all academic facilities and academic support, and to participate in student organizations at Surabaya State University. Management at Surabaya State University such as Chancellors and university staff, faculties, departments, and academic programs are all responsible for managing and maintaining student rights and obligations. Details and techniques relating to student rights and obligations are also listed in the statute of the Surabaya State University.

The rights and obligations for local and foreign students are the same. However, admission procedures for local and foreign students are regulated separately. Faculty rules contain information relating to student rights and obligations in study activities, access and use of academic and student facilities, academic administration, access to educational attainment, student advice, and others. Information about student rights and obligations is published and presented by the university team in new student orientation programs where student participation is mandatory. In another way, the university facilitates students who want to ask officials of academic and student affairs in departments, faculties and universities directly at Surabaya State University. Academic and student affairs at the faculty and university level is responsible for managing and maintaining student rights and obligations. The people responsible for managing student rights and obligations are the vice chancellor I, the student affairs director, the academic director, the deputy dean I, and all staff in the academic and student fields of Surabaya State University.

The rights and obligations for both local and foreign students are equal. However, the procedure for admission for local and foreign students is regulated separately. The faculty prospectus contains information related to student's rights and obligations in study activities, student and academic facility access and usage,

academic administration, educational achievement access, student advices, and etc. The information about student's rights and obligations is published and presented by university team in the new student's orientation programme in which students' participation is compulsary. In other way, university facilitates students who want to ask to academic and student affairs officers in department, faculty and university in Surabaya State University directly for help and guide about their rights and obligations or for. The academic and student affair in faculty and university levels are responsible to manage and maintain student's rights and obligations. The people who are responsible for managing student rights and obligations are the vice rector in the academic field, the vice rector in the student affairs sector, the vice dean in the academic field, and all staff in academic and student's affair of Surabaya State University.

Students' rights and obligations are reviewed annually by a team of Academic Director of Surabaya State University together with the Vice Dean for Academic Affairs, Deans, and all Study Program Coordinators, then the results of the review are submitted to the Academic Senator and Chancellor for approval and legal process. The Chancellor is responsible for the obligations and rights of students registered in the Surabaya State University statute by an Academic Senate agreement. At the faculty level, students get more detailed information about their rights and obligations in the Academic Guidebook.

STANDARD VI
QUALITY MANAGEMENT: ASSESSMENT OF QUALITY AND DEVELOPMENT

This standard informs about the quality management to make sure that the input, process, and output is highly controlled based on the institution standards. The student admission process determines the quality of input in the Undergraduate Program of Science Education (UPSE) Study Program. The university has managed the student admission process on the website: https://pmbsipenmaru.unesa.ac.id/index_re.php

6. 1. Quality Assurance System

According to the regulation issued by Republic Indonesia number 12, year 2012, the university is mandated to have quality control over the programmes being operationalized. Universitas Negeri Surabaya takes part to determine its internal quality assurance by involving the task forces of university, faculty and department level. The system was then analysed by the National Accreditation Agency for Higher Education(BAN-PT).

To determine internal quality assurance, Universitas Negeri Surabaya employs two process, including internal and external quality assurance audits. Each of which is conducted through the coordination of university, faculties and departments. These audits result in the producing improvements of the programme management written in the self-evaluation report. The self-evaluation report is arranged annually and covers the analysis and evaluation of studyprogramme's performance. This analysis is based on data, identification of problems and root causes, corrective and preventive action plans, and performance target.

Each study programme is monitored and evaluated by the internal auditor from the Board of Quality Assurance from faculties every year which is supervised by the Board of Quality Assurance of university. Points for evaluation are regulated in the handbook of quality assurance in http://gpm.fmipa.unesa.ac.id/index.php/dokumen-prosedur-mutu/ which includes the quality assurance manual of teaching practices, laboratory activities, test and remedial, student research, management staffs, management facilities, and administration. Every study programme will be visited by the internal auditor from the Board of Quality Assurance to ensure that the learning and management processes of the study programme have been conducted in accordance with the quality manual. The results of

internal audit will be discussed in the management reviewmeeting to contrive the follow-up to the identified problems.

To make sure that the Faculty of Mathematics and Natural Sciences has increased its standard, it successfully accomplished ISO 9001:2008 in 2015. This certification states that the faculty provides high education services in terms of planning and developing curriculum, and student academic services in undergraduate level. After getting ISO 9001:2008, the faculty then applied for ISO 9001:2015 and is certified until 2021 from TUV Rheinland. This indicates that the accountability and transparency have been applied in the faculty. Also, the ISO 9001:2015 ensures that the provision of the education process including research, community service, and curriculum development in the Departments of Mathematics, Physics, Chemistry, Biology and Natural Sciences (UPSE), Administrative and Academic Services and Other Supporting Processes are well conducted. The certificate can be seen in http://gpm.fmipa.unesa.ac.id/wp-content/uploads/2018/11/Sertifikat-ISO-9001-2015.pdf

Following the regulation of the Republic of Indonesia No. 20/2003 (article 61) which states that every higher education institution is having a mandatory task to be accredited at least by the NationalAccreditation Agency for Higher Education (BAN-PT). Different to ISO, the accreditation by BAN-PT is conducted in every study programme and also university level every five years. It results in the trust of how each study programme is operationalized within the aspect of education, research, and community services. Since 2017, the UPSE has been accredited in A category as seen in http://fmipa.unesa.ac.id/wp-content/uploads/2018/09/Akreditasi-Sains.png

The formof learning activities in the Undergraduate Study Programme is in the form of interactivelectures, laboratory activities, small class discussion, teaching practices, research proposal writing, thesis writing and article publication in national journals.Programmed time is 8 semesters with a minimum value of GPA = 2.50 (http://gpm.fmipa.unesa.ac.id/wp-content/uploads/2020/04/PM-GPM-11_Skripsi.pdf) and this is a minimum requirement for conducting research proposal. Also, students are given the opportunity to assess the performance of lecturers, students andleaders and are given the opportunity to give feedback and ask about the education services (http://gpm.fmipa.unesa.ac.id/wp-content/uploads/2018/01/MR_PM-04_PengukuranKepuasanPelanggan.pdf and http://gpm.fmipa.unesa.ac.id/wp-content/uploads/2018/01/MR_PM-08_Penanganan-Keluhan-Pelanggan.pdf).

6. 2. Measurement, Analysis, and Improvement

The measurement, analysis, and improvement are designed to ensure that the qualityobjectives can be achieved and monitored by the University every year. The measurementsystem is designed to assure that the results are valid, reliable, and can be utilized as one ofthe references for the decision-making. The performance indicator is designed andimplemented through evaluation, monitoring, and internal audit conducted annually. In theimplementation of the academic process, the evaluation conducted comprises:

1. The evaluation of the course learning outcomesis executed by the team teaching, while the Programme learning outcomes aremonitored by the Quality Assurance Unit.
2. The learning experience evaluation. This instrument is developed to observe thesatisfaction of graduate stakeholders. The evaluated aspects include the competenceof graduate.
3. The learning process evaluation. This evaluation is conducted every semester in all programmes. This instrument measures the lecturer performance in the learning process.This evaluation covers the lecturer performance in the course.
4. The administrative staff performance evaluation. This survey measures theadministrative service performance in the level of department and faculty. This survey involves lecturers and students as the respondents.
5. Dean and Vice Dean performance and head of department performance evaluation.This questionnaire should be filled by the faculty members. The measurementcriteria include the strategy to implement the faculty vision, leadership in thelearning process, research, community service, fair and efficient management, andinterpersonal skills.