



**MINISTRY OF EDUCATION AND CULTURE**  
**UNIVERSITAS NEGERI SURABAYA**  
**FACULTY OF MATHEMATICS AND NATURAL SCIENCES**  
**DEPARTMENT OF NATURAL SCIENCES**

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**Undergraduate Programme in Science Education**

**Module Handbook**

Module Name:	<i>Dasar-dasar IPA</i> (Introductory of Natural Science)
Module Level:	Bachelor degree/Undergraduate Programme
Course Code:	8420102028
Abbreviation, if applicable:	-
Courses included in the module, if applicable:	Not applicable
Semester/term	II/first year (freshman)
Module coordinator(s):	Dr. Elok Sudibyو, M.Pd.
Lecturer(s):	Dr. Elok Sudibyو, M.Pd. Dra. Martini, M.Pd. Ahmad Qosyim, S.Si., M.Pd.
Language:	<i>Bahasa Indonesia</i> (Indonesian Language)
Classification within the curriculum:	Compulsory / Elective
Teaching format/class hours per week during the semester:	3 contact hours of lectures (Indonesia credit semester or <i>sks</i> *)
Workload:	3 x 50 minutes lectures, 3 x 60 minutes structured activity, 3 x 60 minutes individual activity, 14 weeks per semester, 119 total hours per semester ~ 4.77 ECTS**
Credit point:	3 <i>sks</i> (4.77 ECTS)
Requirements:	<ul style="list-style-type: none"> <li>- General Chemistry</li> <li>- General Physics</li> <li>- General Biology</li> </ul>
Learning goals/competencies:	<p><b>Course Learning Outcomes (CLOs):</b></p> <p>After taking this course, students will be able to:</p> <ol style="list-style-type: none"> <li>1. Utilizing science and technology as a tool for science development;</li> <li>2. Mastering the nature and scope of science, science as inquiry, KPS, analysis of aspects of science content, thinking skills and literacy;</li> <li>3. Skilled in conducting scientific inquiry activities with the content and context of the SMP / MTs curriculum; and</li> <li>4. Developing a student attitude that is responsible, open to criticism, cooperation and cares about time.</li> </ol>
Content:	Nature and scope IPA; inquiry; science process skills; physical fisis; world life; particle theory, change matter, reaction; thinkingskill; literacy of science; history of science.
Attribute Soft skill:	Discipline, collaboration, responsibility, and argumentation in the natural classroom setting
Study/exam achievements:	Students are considered to be competent and pass if at least get 40% of the maximum final grade. The final grade (NA) is calculated based on the following weight:

	Assessment Components	Percentage Contribution
	Participation	20%
	Assignment	30%
	Mid-semester test	20%
	Final semester test	30%
	<b>Total</b>	<b>100%</b>
Learning Methods	Problem-based learning, lecturing, discussion, and presentation (structured activities).	
Form of Media:	LCD, PowerPoint slides, worksheets, and e-learning Vinesa ( <a href="https://vilearning.unesa.ac.id/course/view.php?id=10011568">https://vilearning.unesa.ac.id/course/view.php?id=10011568</a> )	
Literature (primary references):	<ol style="list-style-type: none"> <li>1. Kemdikbud. 2008. <i>BSE IPA SMP CTL</i>. Jakarta: Kemdikbud.</li> <li>2. Kemdikbud. 2016. <i>BS IPA SMP K13</i>. Jakarta: Kemdikbud.</li> <li>3. NRC. 2012. <i>National Science Education Standards</i>. Washington: NAP.</li> <li>4. Rutherford, F.J. &amp; Ahlgreb, A. 1990. <i>Science for All American</i>. New York: Oxford University Press.</li> <li>5. Suryanti, Mintohari, Widodo, W. 2004. <i>Pengembangan Pembelajaran IPA</i>. Surabaya: Unesa University Press.</li> <li>6. Tim MIPA Unesa. 2007. <i>Sains Dasar</i>. Surabaya: Unesa University Press.</li> </ol>	
Notes:	<p><b>*1 sks in learning process = three contact hours that consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes) according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018.</b></p> <p><b>**1 sks = 1,59 ECTS</b></p>	