

## Module Handbook

Modul Name	Advanced Research Method
Modul Level	6 (Bachelor)
Abbreviation, if applicable	PNH497
Sub-heading, if applicable	-
Courses included in the module, if applicable	-
Semester/term	5/3
Module coordinator(s)	Dr. Suharsono, drh., M.Si
Lecturer(s)	1. Dr. Suharsono, drh., M.Si (PJKM) 2. Prof . Dr. H. Sarmanu, drh., MS. 3. Dr. Anam Al Arif, drh., MP.S. 4. Dr. Kusnoto, drh., M.Si.
Language	Bahasa Indonesia and English
Classification within the curriculum	Compulsory/ <del>elective</del> course
Teaching format/class hours per week during the semester	2 class hour lecture (2 x 170 minutes lecture) x 14 weeks
Workload per semester	340 minutes lecture is divided into 100 minutes face to face interaction, 100 minutes structured activities and 140 minutes independent study
Credit points	2 (~3.02 ECTS)
Requirements	Basic Research Methods
Learning goals/competencies	Students are able to design research proposals and apply statistics as a measurement tool for decision making in research properly and correctly
Content	This course discusses introduction, basic understanding, basic elements of experimental design, diversity of design models, completely randomized design, multiple comparison with the smallest real difference test, honestly significant difference, duncan's multiple range test, orthogonal polynomial contrast and, group randomized design, missing data, latin square design, factorial experiment with complete randomized design. Factorial experiments with grouping designs, factorial experiments with divided plot designs. Then about the basic concepts of statistics, t test, proportion test, sign test, Wilcoxon test, mann whitney test, kruskal wallis test, fredman test, X2 test, regression test and Pearson correlation, and Spearman correlation

Softskills attribute	Communication, collaboration and analytical thinking
Study/exam achievements	Final exams (33.3%), midterm exam (22.2%), assignment (16.7%) and quizzes (16.7%), soft skill (11.1%).
Forms of media	Computer, computer projector, white board, AULA (Airlangga University e-Learning Application)
Literatures	<ol style="list-style-type: none"> <li>1. Kusningrum RS. 2008. Buku Ajar Perancangan Percobaan. Fakultas Kedokteran Hewan Universitas Airlangga Surabaya, Airlangga University Press.</li> <li>2. Sudrajat, SWM. 1985. Statistika Nonparametrik suatu tafsiran dari Siegel. S. Non Parametric Statistics for Behavioural Science. Armco. Bandung.</li> <li>3. Steel, RGD dan JH.1980. Prinsip dan Prosedur Statistika suatu pendekatan biometrik (alih bahasa Bambang Sumantri IPB). Edisi 2. Penerbit PT Gramedia Jakarta.</li> </ol>
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