Course Module

Research Methods and Scientific Publication

Faculty of Forestry

Mulawarman University

Module name	Research Methods and Scientific Publication
Module level, if applicable	Graduates Programme
Code, if applicable	220401803W006
Subtitle, if applicable	
Courses, if applicable	Regular
Semester(s) in which the module is taught	I (one)
Person responsible for the module	Prof. Dr. Irawan Wijaya Kusuma, S.Hut., M.P.
Lecturer	Prof. Dr. Irawan Wijaya Kusuma, S.Hut., M.P. Dr. Ir. Setiawati, M.P. Dr. Erwin, S.Hut., M.P. Ali Suhardiman, S.Hut., M.P., Ph.D. Dr. Rachmat Budiwijaya Suba, S.Hut., M.Sc. Kiswanto, S.Hut., M.P., Ph.D.
Language	Indonesia
Relation to curriculum	Programme, mandatory
Type of teaching, contact hours	Lecture, discussion, question and answer method, simulation 2.5 lecture contact hours
Workload	Number of meetings per semester: 16 meetings (14 meetings for learning activity, 1 meeting for mid-semester test dedicated for finalizing thesis introduction part, 1 meeting for finalize final project) 3 x 50 minutes lectures and discussion, 3 x 60 minutes structured activity, 3 x 60 minutes individual activity, with a total of 7,140 minutes or equivalent to a total of 119 hours in 14 weeks per semester
Credit points	3 SKS (4.8 ECTS) Details: 1 Credit = 170 min/week 1 Credit = 170 min x 14 week = 2,380 min/semester 1 ECTS = 25 h / semester 1 Credit = 2,380 / 60 / 25 = 1.59 = 1.6 ECTS 3 Credit = 1.6 x 3 = 4.8 ECTS
Requirements according to the examination regulations	Have attended not less than 80% class meetings Have completed 100% all required structured and independent assignments
Recommended prerequisites	

Module objectives/course learning outcomes	**Intended Learning Outcomes** **Knowledge and Understanding** **ILO-1:** Applying scientific ethics, norms, and values of professionalism **Engineering Analysis** **ILO-2 :** Mastering specialized knowledge, skills and techniques in the field of forestry and tropical environment and being able to develop innovative theories, models and methods in their field. **Investigation** **ILO-3:** Able to analyze current problems and issues, and assess the ecological, social, and economic impacts of implementing programs in the forestry and tropical environmental sectors. **Engineering Design and Practice** **ILO-4:** Develop research schemes based on inter or multidisciplinary approaches to tropical forestry and the environment, and communicate the results to the public. **Course Learning Outcomes** **Knowledge and Understanding** **CLO-1:** Students are able to understand the importance of internalizing scientific ethics, norms, and values of professionalism in conducting research and scientific publications. **Engineering Analysis** **CLO-2:** Students are able to apply knowledge, skills, and specialized techniques in forestry and tropical environmental fields to develop research frameworks in their respective area **Investigation** **CLO-3:** Students are able to conduct research and publish their results with themes related to the analysis of current problems and issues, as well as assess the ecological, social, and economic impacts of implementing programs in the forestry and tropical forest environment sectors. **Social Competences** **CLO-4:** Students are able to compile research schemes based on inter- or multi-disciplinary approaches to forestry and tropical forest environments, and communicate the results to the public
Content	This course discusses basic concepts of research; literature sources and currency of research topics; ethics in research, scientific writing and publication, systematic preparation of proposals and theses; research design; preparation of introduction and literature review; research variables; statistical rules in data collection techniques; important points of research results and publication materials; preparation of research proposals. After attending this course, students have the ability to: 1. Students are able to understand the basic concepts of research **(CLO-1)** 2. Students are able to conceptualize a research design **(CLO-1)** 3. Students are able to explore library sources and assess the topic's up-to-dateness **(CLO-1)**

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<tr><td></td><td>4. Students are able to apply ethics in research, scientific writing and publication (CLO-1)
5. Students are able to clarify and perfect the introduction section (CLO-2)
6. Students are able to adapt the systematics of compiling proposals and theses (CLO-2)
7. Students are able to clarify the literature review section (CLO-3)
8. Students are able to clarify the variables used in their research methods (CLO-3)
9. Students are able to choose statistical rules in data collection techniques (CLO-3)
10. Students are able to detail important points that must be presented as research results and publications (CLO-4)
11. Students are able to compile a complete research proposal (CLO-4)</td></tr>
<tr><td>Study and examination requirements and forms of examination</td><td><table>
<tr><th>No.</th><th>Objects of Assessment</th><th>Forms of Assessment</th><th>Quantity (%)</th></tr>
<tr><td>1</td><td>Affective</td><td>Participation</td><td>10</td></tr>
<tr><td>2</td><td>Case study</td><td>Making research flow/scheme</td><td>25</td></tr>
<tr><td>3</td><td>Project</td><td>Formulation hypothesis and variables</td><td>30</td></tr>
<tr><td>4</td><td>Mid-semester test</td><td>Introduction part writing</td><td>10</td></tr>
<tr><td>5</td><td>Final semester test</td><td>Proposal writing</td><td>25</td></tr>
<tr><td></td><td></td><td>TOTAL</td><td>100</td></tr>
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<tr><td>Media employed</td><td>Class, MS. Powerpoint, Ms.Word, Laptop, LCD</td></tr>
<tr><td>Reading list</td><td>1. Bryman A. 2012. Social Research Methods. Oxford University Press. 766 pp.
2. Fahutan Unmul. 2019. Panduan Penulisan Tesis untuk Fakultas Kehutanan.
3. Kothari CR. 2004. Research methodology: methods and techniques. New Age International (P) Ltd., Publishers.
4. Kumar R. 2011. Research methodology: a step-by-step guide for beginners. SAGE Publications India Pvt Ltd.
5. Macfarlane. 2009. Researching with Integrity: The Ethics of Academic Enquiry. Taylor and Francis. 190 pp.
6. Noor KBM. 2008. Case study: a strategic research methodology. American Journal of Applied Sciences 5(11): 1602-1604.
7. Pandey P, Pandey MM. 2015. Research methodology: tools and techniques. Bridge Center.
8. Singh YK. 2006. Fundamental of Research Methodology and Statistics. New Age International (P) Limited. 313 pp.
9. Turabian KL. 2013. A Manual for Writers of Research Papers, Theses, and Dissertations. The University of Chicago Press. 288 pp.</td></tr>
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10. Chen, C. 2017. Science mapping: a systematic review of the literature. Journal of Data and Information Science 2(2): 1-40. DOI: https://doi.org/10.1515/jdis-2017-0006
11. Denney AS, Tewksbury R. 2013. How to write a literature review. Journal of Criminal Justice Education 24(2): 218-234. DOI: http://dx.doi.org/10.1080/10511253.2012.730617
12. Leshem S, Trafford V. 2007. Overlooking the conceptual framework. Innovations in Education and Teaching International 44(1): 93-105. DOI: 10.1080/14703290601081407
13. Mattick K, Johnston J, de la Croix A. 2018. How to…write a good research question. The Clinical Teacher 15: 104-108. DOI: 10.1111/tct.12776.
14. Mengist W, Soromessa T, Legese G. 2020. Method for conducting systematic literature review and meta-analysis for environmental science research. MethodsX 7: 1-11. DOI: http://dx.doi.org/10.1016/j.mex.2019.100777
15. Mengist W, Soromessa T, Legese G. 2019. Ecosystem services research in mountainous regions: a systematic literature review on current knowledge and research gaps. Science of the Total Environment, DOI: https://doi.org/10.1016/j.scitotenv.2019.134581
16. Pickering CM, Byrne J. 2014. The benefits of publishing systematic quantitative literature reviews for PhD candidates and other early career researchers. Higher Education Research and Development. 33: 534-548. DOI: http://dx.doi.org/10.1080/07294360.2013.841651
17. Randolph J. 2009. A guide to writing the dissertation literature review. Practical Assessment, Research, and Evaluation 14: 1-13. DOI: https://doi.org/10.7275/b0az-8t74
18. Shelby LB, Vaske JJ. 2008. Understanding meta-analysis: a review of the methodological literature. Leisure Sciences: An Interdisciplinary Journal 30(2): 96-110. DOI: 10.1080/01490400701881366