Example form for Module Handbook

A **Module Handbook or collection of module descriptions that is also available for students to consult** should contain the following information about the individual modules:

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| Module designation | *Characteristics and Properties of Soil* |
| Module level, if applicable | Bachelor |
| Code, if applicable | PNT 1101 |
| Subtitle, if applicable | - |
| Courses, if applicable | 1. Introduction To Lectures And Discussion 2. Introduction 3. Components Of Soil Material 4. Soil Organic Components 5. Groundwater Components 6. Soil Profile 7. Development Of Land 8. Soil Type 9. Ecological Prices Of Soil 10. Land In The Environment Of Living Creatures 11. Discussion Of Case Studies 12. Presentation Of Case Studies |
| Semester(s) in which the module is taught | even |
| Person responsible for the module | Ir. Suci Handayani, M.P. |
| Lecturer | Dr. Ir. Benito Heru Purwanto, M.P., M.Sc.  Dr. Ir. Sri Nuryani H.U., M.P.,M.Sc.  Ir. Suci Handayani, M.P.  Dr. Makruf Nurudin, SP. , M.P.  Nasih Widya Yuwono, SP., M.P.  Patria Novita Kusumawardani, S.P., M.Sc.  Dr. Ir. Eko Hanudin, M.P.  Imas Masithoh Devangsari, S.P., M.Sc.  Dr. Cahyo Wulandari, S.P., M.P.  Nur Ainun H.J. Pulungan, S.Si., M.Si., PhD. |
| Language | Bahasa/Indonesian language |
| Relation to curriculum | Compulsory |
| Type of teaching, contact hours | Lecture, practical, presentation |
| Workload | 2/1 SKS or 2,32/1,51 ECTS |
| Credit points | - |
| Requirements according to the examination regulations | Presence must be 70% of all meetings  Has to accomplished all the assignments |
| Recommended prerequisites | - |
| Module objectives/intended learning outcomes | Students are able to understand the scope of pedology, the main concepts of soil, and the composition of soil constituents  Students are able to describe the body of the soil (soil profile)  Students are able to explain soil properties both physical, chemical, and biological properties  Students are able to explain the importance of soil function in relation to soil health, soil fertility, soil preservation, and soil position in the environment.  Students are able to explain the taxonomic system and soil classification  Students are able to make a land mapping system |



1. When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.
2. Cf. European Commission: Proposal for a Recommendation of the European Parliament and the European Council on the establishment of the European Qualifications Framework for lifelong learning, COM(2006) 479 final, 2006/0163 (COD), Brussels 05/09(2006.

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| Content | 1. Introduction and Scope of Pedology 2. Main Concepts of Soil 3. Soil Composition of Materials 4. Soil Profile 5. Soil Properties 6. Taxonomy and Soil Classification 7. Land Mapping |
| Study and examination  requirements and forms of examination | Assesment Presentasi/UTS/UAS |
| Media employed | Text, Presentation, Visual & Audio Web. |
| Reading list | 1. Baver, L.D,W.H.Gardner and W.R.Gadner.1972.Soil Physics.John Wiley & Sons, Inc. NY.  2. Brady, N.C, 1990. The Nature and Properties of Soils.  3. Darmawijaya, M.I, 1990. Klasifikasi Tanah. Dasar Teori bagi Peneliti Pertanian dan Kehutanan. Gadjah Mada University Press. Yogyakarta.  4. Forth, H.D. and L.M. Turk.1972.Fundamental of Soil Science.John Wiley&Sons. Inc.Toronto.  5. Hudson, N. 1971. Soil Conservation. B.T. Batsford. Ltd. London.  6. McRae, S.G. and E.P. Burnhaur. 1981. Land evaluation. Clarendon Press.Oxford.  7. Rao, N.S.S. 1977. Soil Microorganism and Plant Growth. Oxford&IBH Publ.Co.NewDelhi.  8. Sanchez, P.A. 1976. Properties and Managenent of Soil in the Tropics. John Wiley&Sons.  9. Soil Survey Staff 1993. Soil Survey Manual. US Departement of Agriculture Handbook No.18.  10. Soil Survey Staff. 1998. Soil Taxonomy By USDA/NRCS No.436.  11. Tisdale, S.L., W.L. Nelson&J.D. Beaton. 1986. Soil Fertility and Fertilizers. MacMillan Pub. New York.xiv + 754h.  12. Sumber Informasi/Referensi yang lain:  13. Journal: Jurnal Ilmu Tanah dan Lingkungan, Jurnal Tanah Tropika, Soil Society of American Journal, Journal of Sciense, Soil Science.  14. Internet |