

Anatomy and Wood Properties

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| Module name | | Anatomy and Wood Properties | | | | |
| Module level | | 3 rd year of Bachelor program | | | | |
| Abbreviation, if applicable | | - | | | | |
| Sub-heading, if applicable | | - | | | | |
| Courses included in the module, if applicable | | BI3107 Anatomy and Wood Properties | | | | |
| Semester/term | | 5 th Semester | | | | |
| Module coordinator(s) | | Anne Hadiyane S.Hut.,M.Si. | | | | |
| Lecturer(s) | | Anne Hadiyane S.Hut.,M.Si. | | | | |
| Language | | Indonesian | | | | |
| Classification within the Curriculum | | Elective courses for Bachelor Program in Biology | | | | |
| Teaching format/ class hours per week during the semester | | Lecture (face to face teaching): 2 hours x 14 weeks Practical class: 3 hours x 14 weeks | | | | |
| Workload | Total Workload | 144 hours; 3(1) CU | | | | |
| | | Face to face teaching | Structured Activities | Independent study | Exam | Total |
| | Lecture | 28 | 32 | 32 | 4 | 96 |
| | Practical class | 42 | | 4 | 2 | 48 |
| | | 144 | | | | |
| Credit points | | <i>Anatomy and Wood Properties (3(1) Credits)</i> | | | | |
| Requirements | | - | | | | |
| Content | | <ol style="list-style-type: none"> 1. The characteristics of wood macroscopic (cross section, radial and tangential) 2. The structure of softwood and hardwood microscopic including introduction and knowledge about structure, type and characteristics of wood cell both softwood and hardwood, 3. chemistry aspects of wood particularly in the cell wall, 4. physical features of wood (hygroscopics, density and specific gravity, thermal, acoustics and electricity) 5. mechanical features of wood (strength and wood ability on external bearing) properties of wood | | | | |
| Learning goals/competencies | | Students are able to explain anatomy and characteristic of wood in order to use the wood based on its characters | | | | |
| Study/exam achievements | | <i>Midterm exam</i> | <i>Final exam</i> | <i>Quizzes</i> | <i>Assignments and Laboratory reports</i> | <i>Total</i> |
| | | 30% | 30% | 10% | 30% | 100% |
| Forms of media | | <i>Classical teaching tools:</i> | | <i>White board, power point presentation</i> | | |
| | | <i>Digital teaching tools:</i> | | <i>Video/CD, Website</i> | | |
| Literature | | <ol style="list-style-type: none"> 1. Bowyer, J.L. Shmulsky, R., dan J.G. Haygreen J.G. 2007. Forest Product and Wood Science an Introduction (<i>fifth edition</i>). The Iowa State University. (Pustaka utama) 2. Panshin, J and C. de Zeuw. 1980. Textbook of Wood Technology (<i>fourth Edition</i>). Mc. Graw Hill Book Co. New York. (Pustaka utama) 3. Tsoumis, G. 1991. Science and Technology of Wood: Structure, properties and utilization. (Pustaka utama) 4. Fengel, D. and Wegener, G. 1984. Wood: Chemistry, Ultrastructure, Reactions. Walter de Gruyter, Berlin (Pustaka utama) 5. Mandang, Y.I. dan I.K.N. Pandit. 1997. Seri Manual : Pedoman Identifikasi Kayu di Lapangan. Yayasan Prosea Bogor dan Pusat Diklat dan Pegawai & SDM Kehutanan Bogor. (Pustaka pendukung) 6. [FPL] Forest Product Laboratory. 1999. Wood Handbook : Wood as An Engineering Material. Forest Product Societ (Pustaka pendukung) | | | | |

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| | 7. Wangaard, F.F. 1981. Wood : Its Structure and Properties. The Pennysylva State University |
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