Georg-August-Universität Göttingen **Module M.FES.314: Forest utilization and wood processing**	6 C 4 WLH

Learning outcome, core skills: Students gain knowledge of technological relevant wood properties of important commercial timbers and technology of major forest products in tropics (lumber, veneer, plywood, woodbased panels, pulp and paper). Students are able to plan, evaluate and select forest operations with respect to technical implementation, human impacts and environmental consequences. In addition, forest operations are put into the broader context of society and forest ecosystems and stresses of the human factor involved. Emphasis is directed to systems analysis and long-term perspectives.	**Workload:** Attendance time: 56 h Self-study time: 124 h

Course: M.FES.314.Lec-2 **Forest utilization** (Lecture) *Contents*: The module covers forest areas of the world and their characteristics with regard to forest operations, forest products, sorting of timber, fuelwood, technical systems and work methods for harvesting and other forest operations, ergonomics, occupational safety and health, appropriate technology, economic analysis of forest operations. In addition, basic elements of road planning, construction and maintenance are presented and information about recent developments (information and communication technology, GIS, logistics) are given.	2 WLH
Course: M.FES.314.Lec-1 **Wood processing** (Lecture) *Contents*: We will impart consolidated knowledge about wood properties considering wood anatomy, wood physics, and wood chemistry including the role of water related to wood. Wood energy. Sawmill technology and wood products. Special regard on wood-based composites like particleboard, fiberboard, plywood, OSB and WPC. Wood destroying insects and fungi. Wood preservation and modification.	2 WLH
Examination: Written examination (120 minutes) M.FES.314.Mp: Forest utilization and wood processing	6 C

Examination requirements: Wood processing: The students should know the basics of wood properties in context with chemistry and micro-structure. They must know how to optimize the use of wood by producing convenient wood-based products and how to protect them. Forest utilization: The students should be able to describe and analyse the complex setting of forest operations and to find optimal solutions integrating economic, ecological, ergonomical and social aspects.	

Admission requirements: none	**Recommended previous knowledge:** none
Language:	**Person responsible for module:**

English	Prof. Dr. Dirk Jaeger
Course frequency: each winter semester	**Duration:** 1 semester[s]
Number of repeat examinations permitted: cf. examination regulations	**Recommended semester:**
Maximum number of students: not limited	