Number of the module	Name of the module	Responsible university lecturer
FOMT 1.4B	**Assessment and Evaluation of Forest Resources**	**Prof. Dr. H. Röhle**
Contents and goals of qualification	<u>Contents</u>: Instruments and methods for tree mensuration, establishment and analysis of experimental plots in forests and short rotation plantations. Modelling and simulation of forest growth, timber yield and biomass. Biometrical methods with exemplary data sets. Methods of remote sensing and geographic information systems (GIS); data survey, using aeroplane and satellite aided sensor systems, as well as analysis methods based on the interpretation of aerial photographs and on digital satellite image classification, including their integration in geographic information systems. Computer-related exercises. <u>Goals of qualification</u>: The students know the functioning, handling and use of important tree measuring instruments, as well as the methodology for assessing and analyzing forest growth and are familiar with respective modelling. They are capable of operationally utilizing analogous and digital remote sensing data, based on modern methods of analyses of aerial photographs and satellite images, as well as to apply image data and multi-thematic geo-data to the monitoring of land use and land use change.	
Forms of teaching and learning	The module comprises: 2.5 hrs/wk Lecture 3.0 hr/wk Exercise Independent studies	
Preconditions for participation	Mathematical-statistical fundamentals (Bachelor level). Literature: Loetsch, F.; Zöhrer, F.; Haller, K.E. (1973) Forest inventory – vol. 2. BLV Verlagsgesellschaft. München, Bern, Wien. Bettinger, P.; Wing, M.G. (2003) Geographic information systems – applications in forestry and natural resources management. McGraw-Hill, New York. Lillesand, T.M.; Kiefer, R.W.; Chipman, J.W. (2004) Remote sensing and image interpretation. 5th ed. Wiley, New York.	
Applicability	The module is optional compulsory (1.4 A or 1.4B) in the Master Course *Tropical Forestry.*	
Preconditions for allocation of credits	The credits are obtained, when the module examination has been passed. The module examination consists of a written report (30 hours) and a written test (90 minutes).	
Credits and grades	7 credits can be obtained by the module. The module grade results from the average of the examination performances, weighted as follows: Report (67%), and written test (33%).	
Frequency of the module	The module is offered each winter semester.	
Effort	The effort comprises 210 working hours.	
Length of the module	The module extends over one semester.	
Literature accompanying the study	Cochran, W. G. (1977) Sampling techniques. 3rd ed. John Wiley & Sons. New York. Vanclay, J. (1999) Modelling forest growth and yield. CABI Publishing, New York.	

	West, P. W. (2004) Tree and forest measurement. Springer, Berlin Heidelberg New York.
	Wulder, M. A.; Franklin, S. E. (eds.) (2003) Remote sensing for forest environments – concepts and case studies. Kluwer. Dordrecht, Boston, London.
	Zar, J. H. (1996) Biostatistical analysis. 3rd ed. Prentice Hall, New Jersey.