

Course Subject Title(授業題目)

Advanced wood biomass chemistry and tree biochemistry

Credits (Units)(単位数)

1

Class Work Type(授業種別)

Lecture

Year of commencement(履修開始年次)

1st year

Semester(履修期間)

Fall term

Day/Period(時間割)

(Contact the lecturer to confirm the availability of the course)

Professor (Lecturer or Instructor)(担当教員名)

SUZUKI Toshisada

Professor (Affiliation/Research Field)(担当教員所属)

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Keyword for the subject(キーワード)

Chemical structure and biosynthesis, Lignin, Lignan, Suberin, Woody biomass utilization

Content and Objectives(授業テーマと目的)

Effective utilization of biomass is important for human beings to control global warming and to achieve sustainable development. Major biomass is woody biomass. Lecture items are as follows: Characteristics of biomass; chemistry (structure, properties, reaction, and utilization) and biochemistry (biosynthesis and biodegradation) of wood biomass components (cellulose, hemicellulose, lignin, and extractives); Utilization of woody biomass (pulp and paper, bioenergy, and biological activity of extractives). These are also important to keep environment by forest.

Teaching Materials(教科書・参考書)

Computer projector/OHP/Printed synopsis

Evaluation of Results(成績評価の方法)

Submitted paper (report) at the completion of the course