

Rencana Program dan Kegiatan Pembelajaran Semester (RPKPS)

Teknologi Pengawetan Kayu Tropis

REG



Oleh:

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Departemen KEHUTANAN
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2021 GENAP**

RENCANA KEGIATAN PEMBELAJARAN SEMESTER

A. Identitas Matakuliah / *Course Detail*

1. Nama Matakuliah / *Course Name* : Teknologi Pengawetan Kayu Tropis
2. Kode/SKS/Sifat / *Code/Credits/Status* : KTT 687/2/Pilihan (*Elective*)
3. Prasyarat / *Prerequisite* :
4. Deskripsi Singkat / *Short Description* :

Kuliah berisi tentang keterawetan kayu tropis, bahan pengawet alami dan cara pengujiannya, perhitungan konsentrasi larutan yang diperlukan, keefektifan teknologi pengawetan moderen, modifikasi suhu tinggi, cara-cara pengendalian pencemaran karena proses pengawetan.

The lecture was about the preservation of tropical wood, natural preservatives and how to test them, calculation of the required solution concentrations, the effectiveness of modern preservation technology, modification of high temperatures, and ways of controlling pollution due to the preservation process.
5. Tujuan Pembelajaran / *Learning Objective* :

Mahasiswa mampu menjelaskan tentang pengawetan kayu tropis, bahan pengawet alami dan cara pengujiannya, perhitungan konsentrasi larutan yang diperlukan, keefektifan teknologi pengawetan moderen, modifikasi suhu tinggi, cara-cara pengendalian pencemaran karena proses pengawetan, dan menganalisa permasalahan pengawetan dan solusinya dalam bentuk dokumen ilmiah.

Students are able to explain the preservation of tropical wood, natural preservatives and how to test them, calculating the concentration of the required solution, the effectiveness of modern preservation technology, High temperature modification, Strategies of controlling pollution due to the preservation process, and analyzing preservation problems and its solutions in the form of scientific documents.
6. Dosen Pengampu Matakuliah / *Lecturers* : YUSTINUS SURANTO, TOMY LISTYANTO
7. Capaian Pembelajaran Matakuliah / *Course Learning Outcome (CPMK/CLO)* :

Kode / Code	Deskripsi / Description	PLO/SO/ELO/CPL/LG
CLO 1	Having responsibility, and awareness of being a lifelong learner and able to develop network in the field of technology of tropical wood preservation	PLO 2
CLO 2	Able to explore and examine natural wood preservation	PLO 5

Kode / Code	Deskripsi / Description	PLO/SO/ELO/CPL/LG
CLO 3	Able to compare and analyze the implementation of latest technology in Tropical wood preservation	PLO 5
CLO 4	Able to apply logical and critical thinking in analyzing current problems in the field of tropical wood preservation and to produce solutions that are manifested in scientific documents	PLO 6

PLO / PI Detail

PLO 2	Value (responsibility, confidence, emotional maturity, ethics, lifelong learner, develop network)	<i>Having responsibility, confidence, emotional maturity, ethics, and awareness of being a lifelong learner and able to develop network.</i>
PLO 5	Knowledge (Analyse Comprehensively in the Specific Fields)	<i>Able to analyze comprehensively updated issues in the specific fields of silviculture, forest management, forest products technology or forest resource conservation, and to recommend possible solutions based on difined problems.</i>
PLO 6	skill (Logic, Critical, Innovative Thinking)	<i>Able to apply logical, critical, systematic and innovative thinking skills by utilizing information technology to produce solutions in form of scientific documents individually as well as in a team.</i>

B. Topik Perkuliahan / Course Materials

Bahasan / Main Discussion	Estimasi Waktu / Estimated Times (Hour)	Kompetensi (Course Learning Outcomes)
Pendahuluan /Introduction	2	CLO 1
Keterawetan kayu/ Natural durability	2	CLO 2
Efektivitas pengawetan kayu: Penilaian/ Effectivity of wood preservation : Assessment:	2	CLO 2
Efektivitas pengawetan kayu: faktor yang mempengaruhi/ Effectivity of wood preservation: Influenced factor	2	CLO 2
Pengawetan alami kayu/ Natural wood preservation: material	2	CLO 2
Pengawetan alami kayu/ Natural wood preservation:processing	2	CLO 2
Tehnik pengawetan kayu/ Wood Preservation Technique	2	CLO 2
MID Examination	2	CLO 2
Thermal modification	2	CLO 3

Bahasan / Main Discussion	Estimasi Waktu / Estimated Times (Hour)	Kompetensi (Course Learning Outcomes)
Modern Preservation Technique: Non Pressure	2	CLO 3
Modern Preservation Technique: Presssure	2	CLO 3
Passive Impregnation	2	CLO 3
Waste management of treated wood: Waste abatemen and waste reduction	2	CLO 4
Waste management of treated wood: Waste reuse and waste recycle	2	CLO 4
Waste management of treated wood: Waste treatment and waste Disposal	2	CLO 4
Final Exam	2	CLO3

C. Rencana Asesmen / Assesment Plan

CO/CPMK	Tipe / Type	Deskripsi / Description	Persentase / Percentage	PLO/SO/ELO/CPL/LG
CLO 1	TUGAS	Tugas	10	PLO 2
CLO 2	UTS	MID Examination	30	PLO 5
CLO 3	UAS	Exam	40	PLO 5
CLO 4	TUGAS	Assignment	20	PLO 6

D. Referensi / References

1. Nicholas, D.D. 1973. Wood Deteroration and Its Prevention by Preservative Treatment. Vol. II. Syrause Universuty Press, Syracuse.
2. Cassens, D., Johnson, B.R., Feist, W.C., DeGroot, R.C. 1995. Selection and Use of Preservative-Treated Wood. Forest Product Society. Madison, USA.
3. Hill, Callum A.S. 2007. Wood Modification: Chemical, Thermal, and Other Processes. John Wiley and Sons. England.

E. Rencana Kegiatan Pembelajaran Mingguan (RKPM) / Weakly Teaching Plan

Pertemuan Ke / Week	Tujuan Ajar / Learning Objective	Topik / Topic	Media Ajar / Teaching Media	Metode Assesment / Assesment Method	Metode Ajar / Teaching Method	Aktivitas Mahasiswa / Student Activity	Aktivitas Dosen / Lecturer Activity	Sumber Ajar / Learning Resources
1	Having responsibility, and awareness of being a lifelong learner and able to develop network in the field of technology of tropical wood preservation	introduction	laptop and viewer	exam	lecture and discussion	Follow the class, discussion	Deliver lectures, contribute to discussion	1, 2, 3
2	Having responsibility, and awareness of being a lifelong learner and able to develop network in the field of technology of tropical wood preservation	wood preservation (review)	laptop and viewer	exam	lecture and discussion	Follow the class, discussion	Deliver lectures, contribute to discussion	1, 2, 3
3	Having responsibility, and awareness of being a lifelong learner and able to develop network in the field of technology of tropical wood preservation	wood durability	Lab apparatus, worksheet	exam	lecture and discussion	Follow the class, discussion	Deliver lectures, contribute to discussion	1, 2, 3
4	Able to explore and examine natural wood preservation	preservatives in wood	Lab apparatus, worksheet	exam	lecture and discussion	Follow the class, discussion	Deliver lectures, contribute to discussion	1, 2, 3
5	Able to explore and examine natural wood preservation	Effectiveness of wood preservation; fixation	GC apparatus, Chromatogram, PC	assignment	lecture and discussion	Follow the class, discussion	Deliver lectures, contribute to discussion	1, 2, 3
6	Able to explore and examine natural wood preservation	Leach wood preservatives	PC, viewer	assignment	lecture and discussion	Follow the class, discussion	Deliver lectures, contribute to discussion	1, 2, 3
7	Able to compare and analyze the implementation of latest technology in Tropical wood preservation	wood preservation in environmental perspective	PC, viewer	presentation	collaborative learning	Follow the class, discussion	Deliver lectures, contribute to discussion	1, 2, 3

Pertemuan Ke / Week	Tujuan Ajar / Learning Objective	Topik / Topic	Media Ajar / Teaching Media	Metode Assesment / Assesment Method	Metode Ajar / Teaching Method	Aktivitas Mahasiswa / Student Activity	Aktivitas Dosen / Lecturer Activity	Sumber Ajar / Learning Resources
8	Able to compare and analyze the implementation of latest technology in Tropical wood preservation	Modern wood preservation technology	PC, viewer	exam	lecture and discussion	Follow the class, discussion	Deliver lectures, contribute to discussion	1, 2, 3
9	Able to compare and analyze the implementation of latest technology in Tropical wood preservation	passive impregnation	PC, viewer	exam	lecture	Follow the class, discussion	Deliver lectures, contribute to discussion	1, 2, 3
10	Able to apply logical and critical thinking in analyzing current problems in the field of tropical wood preservation and to produce solutions that are manifested in scientific documents	Wood durability (Journal review)	PC and Lab. Apparatus	exam	collaborative learning	Follow the class, discussion	Deliver lectures, contribute to discussion	1, 2, 3
11	Able to apply logical and critical thinking in analyzing current problems in the field of tropical wood preservation and to produce solutions that are manifested in scientific documents	Preservation Waste Management	PC, viewer	exam	collaborative learning and lecture	Follow the class, discussion	Deliver lectures, contribute to discussion	1, 2, 3