



UNIVERSIDAD JUÁREZ DEL ESTADO DE DURANGO
FACULTY OF FORESTRY SCIENCES
Forestry Sciences Engineering



Learning Unit Modules
Focused in Integral Professional Competences

I. GENERAL LEARNING UNIT

1. Identification	2. Code	3. Semester	4. Training area
Non Timber Forest Products	DPF30	Fifth	Discipline

5. Mode					
Compulsory	X	Elective		Classroom	X
Classroom	X	Non-Attendance		Mixed	
Laboratory	X	Field practices		Guided tours	

6. Class shedule (hours per week)				
Theory	Practice	Independent study	Total hours	Credits
2	2	2	6	6

7. Person responsible for the subject.
José Rodolfo Goche Télles

II. DATA SPECIFIC LEARNING UNIT

8. Objectives
Define concepts and review history, importance and the legal aspect of non-timber forest products of economic importance in our country.
Describe the characteristics of the resin, botanical and ecological aspects of the resin pines and use systems. Revise aspects of industrialization, commercialization and policy on the resin.
Describe the characteristics of tannins, botanical and ecological aspects of the most important species taníferas Mexico. Review the technical aspects of development and production, as well as regulation and control over natural tannins.
Describe the characteristics and uses of waxes, botanical and ecological aspects of candelilla wax. Review the technical aspects of using and obtaining primary wax and refining as well as marketing and regulations.
Describe the characteristics and uses of other non-timber forest products and their botanical and ecological aspects. Review the technical aspects of harvesting, processing, marketing and other regulations Non Timber Forest Products.



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9. Presentation.

The learning unit introduces the student Career Engineer Forestry, in technology utilization and management of non-timber products, providing them knowledge about the use of biological biodiversity of Resources Non-Timber Forest of Mexico. Students will identify the main products non-timber and its potential, to propose other uses to help the people of airlines where these species occur.

10. Professional competences to develop in students.

Knowledge	Skills	Attitudes	Values
Models for optimizing the transformation of raw material into forest products with a higher added value.	Managing models for optimizing the transformation of raw materials into finished forest products.	Interest in preserving nature. Collaboration and participation in team works Interest in self learning and continuous learning. Open to criticism and with availability to accept them Proactive in decision making strengthening the forest sector. Availability for learning from errors. Availability for collaborating in the profession tasks. Being objective in the handling of information Participating in multidisciplinary scientific and technical teams aimed to the solution of problems that the forest sector has.	Respect. Honesty. Responsibility.



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11. Course topics

Unit 1: Introduction
Unit 2: Resins.
Unit 3: Tannins
Unit 4: Waxes
Unit 5: Review and analysis of other non-timber forest products.

12. Evaluation criteria

Formative evaluation
Summative evaluation
Self assessment
Co-evaluation

13. Information sources

Basic

1. Ciesia, M. W. 1998 Non- Wood Forest Products from Conifer. Food and Agriculture Organization of the United Nations. Roma. 124 pp.
2. Pennington, T. D. y J. Sarukhan. 1968. Manual para la identificación de Campo de los Principales Árboles Tropicales de México. Organización de la Naciones Unidas para la Agricultura y la Alimentación y Secretaría de Agricultura y Ganadería, México, D.F.
3. Petre, C.M..M 1996. The ecology and Management of Non- timber forest resources- world Bank. Technical paper 322, Washington, D.C.
4. Primack B.R., D. Bray., H.A. Gallette y I. Ponciano. 1999. La Selva Maya Conservación y Desarrollo. Siglo veintiuno. 461p
5. ROMAÑ DE LA VEGA, CARLOS FCO. 1992. Principales Productos Forestales No Maderables de México. Universidad Autónoma Chapingo. Chapingo, México.
6. Rushton, J; P.L & Viscarra, R.C: 2004 Marketing chains for a range of Non –Timber Forest Products in Bolivia and Mexico Report for the research project “Comercialisation of Non – Timber Forest Products: Factor influencing success” Overseas Development Institute, London, UK. 107 p.
7. SARH. 1994. Conservación y Fomento de los Productos Forestales No Maderables. Dirección General de Política Forestal, Subsecretaría Forestal y de Fauna Silvestre. Secretaría de Agricultura y Recursos Hidráulicos. México, D. F.



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8. Velde, W.D. Te, Rsuhton, J. Schreckenber, K.; Marshall, E; Eduard, F; Newton, A, & Arancibia, E. 2006. (in press Entrepreneur Ship in value Chains of Non-Timber forest Products. J. of Forest Policy and Economics 8. pp. 725 – 741.

Complementary

1. Montañez E., P.; J. Jiménez O.; R. Ruenes, M.; L. M. Calvo I.S/F. Aprovechamientos forestales maderables y no maderables. Disponible en:
<http://www.cicy.mx/Documentos/CICY/Sitios/Biodiversidad/pdfs/Cap7/11%20Aprovechamientos%20forestales.pdf> (Fecha de consulta: Agosto 2014)
2. SEMARNAT. S/F. Catálogo de recursos forestales maderables y no maderables. Disponible en:
http://www.conafor.gob.mx/biblioteca/Catalogo_de_recursos_forestales_M_y_N.pdf.
(Fecha de consulta: Agosto 2014)