Republic of Iraq

The Ministry Of Higher Education

& Scientific Research

بسم الله الرحمن الرحيم

University: Diyala
College: agriculture
Department: Horticulture and Land Scape Gardening
Stage: 4
Lecturer name: Prof. Dr. Ayad Assi Obaid
Qualification:
Place of work:University of Diyala

Course Instructor	**Ayad Assi Obaid**						
E_mail	**Ayadassi73@gmail.com**						
Title	**Plant Biotechnology**						
Course Coordinator	**The first chapter \ Stage 4**						
Course Objective	**Application of plant biotechnology , method of trans genes to plant .**						
Course Description	Genetic enggeenering and its application - Genetic transformation using Agrobacteriumtumfaciens- Polymerase chain reaction and its application						
Textbook	**pant biotechnology T. K. Ramawat. Biotechnology dr. A. E. Aubaida and dr. A. A. Mahmood**						
References	**plant biotechnology RAMAWAT 2004 – Quantitative genetics to Dr. Ahmed plant genetics (practical part) GhassanAyash and others،Abdel-Moneim**						
Course Assessment	**The first monthly test (theoretical)**	**The second monthly test (theoretical)**	**The first monthly test (Lab.)**	**The second monthly (Lab.)**	**Final examination**		**Final grade**
					Theoretical	**Lab.**	
	14	**14**	**6**	**6**	**40**	**60**	**100**

Syllabus		
Week	**Theoretical**	**Lab.**
1	Historic development and practical application of plant biotechnology	Plant cell growth measerment in labs
2	Double haploid production using tissue culture technique	Double haploid production of barly
3	Protoplans fusion and somatic hybrids production	Protoplast fusion for petonia
4	Genetic enggeenering and its application	Protien extraction and purification from plant
5	Genetic enggeenering and its application	DNA extraction and purification from plant
6	Genetic enggeenering and its application	Qualitative and quantitative of plant DNA
7	Cloning vectors (plasmids, cosmids, phages)	gel electro plorasis for DNA and protein
8	Cloning strategies in plant	DNA staing methods
9	Genetic transformation using Agrobacteriumtumfaciens	DNA hybridization methods (southern blotion)
10	Genetic transformation using Agrobacteriumtumfaciens	Application of RAPD and SSR technique
11	Genetic transformation using direct method	Appliction of AFLP technique
12	Genetic transformation using direct method	Genetic transformation in tobbaco by gen gun
13	Genetic transformation using direct method	Genetic transformation using Agrobacteriumtumfaciens
14	Polymerase chain reaction and its application	Detection of genetically modified corn using PCR technique
15	Bases of biosafty and genetically modified detection	Genetic transformation using electro PCR technique

Dean Signature **structor Signature:**