Università degli Studi della Basilicata
Scuola di Ingegneria

COURSE: Advanced Antennas				
TEACHER: Vincenzo Fiumara				
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Language				
ECTS: 9	n. of hours:78	Academic year: 2015-16	Campus: Potenza	Semester: I

TOPICS
Transmitting and receiving antennas.

TEACHING METHODS (please tick one or more options)
⊟ Theoretical lessons
⊟ Tutorials in classroom
□ Tutorials in laboratory
□ Project works
□ Technical visits
Other activities (please specify) _____

TEXTBOOKS
C.Gennarelli, F.D'Agostino, Elementi di teoria delle antenne, Florio Edizioni Scientifiche.

R.E.Collin, Antennas and Radiowave Propagation, Mc Graw Hill.

ON-LINE EDUCATIONAL MATERIAL
web address:

LEARNING OUTCOMES
Ability to analyze and design antenna systems.

REQUIREMENTS
Fundamentals of mathematics and electromagnetic field.

EVALUATION METHODS (please tick one or more options)
□ Intermediate verifications
□ Written examination
□ Discussion of a project work
□ Practical test
⊟ Oral examination
Other methods (please specify) _____

DETAILED CONTENT
Radiation from electric and magnetic sources. Linear wire antennas. Hallen's integral equation. Method of moments. Transmitting and receiving antennas. Friis transmission formula. Reciprocity theorem. Duality theorem. Equivalence theorem. Image theorem. Antenna arrays. Linear arrays. Binomial array. Fourier synthesis. Phased arrays. Planar arrays. Yagi-Uda antennas. Reflector antennas. Aperture antennas. Environmental impact of electromagnetic radiation.

EXAMINATION SESSIONS (FORECAST)
03/02/2016, 24/02/2016, 18/05/2016, 13/07/2016, 14/09/2016, 21/12/2016.

SEMINARS BY EXTERNAL EXPERTS YES □ NO ⊟

FURTHER INFORMATION