

# Course Description

## 7055 - Antennas and Propagation

<b>Course Code:</b>	7055
<b>Course Title</b>	Antennas and Propagation
<b>Academic Year:</b>	2007
<b>Semester:</b>	1
<b>Lecturer:</b>	Dr. C.J. Coleman
<b>E-mail Address:</b>	<a href="mailto:ccoleman@eleceng.adelaide.edu.au">ccoleman@eleceng.adelaide.edu.au</a>

### Aims

- a) To provide the student with an introduction to the important elements of antenna and propagation theory.
- b) To familiarize the student with some important classes of antenna and their properties.
- c) To give the student experience in antenna design.
- d) To familiarize the student with techniques for estimating the propagation performance of a communication channel.

### Mode of delivery

Short course mode during first week of mid-semester break.

### Assumed Knowledge

Some basic communication and electromagnetic theory

### Assessment

A quiz on fundamentals, two major assignments and an antenna design exercise.

### Textbooks

Coleman, C.J. An introduction to radio frequency engineering (Cambridge, 2004)

## **Graduate Attributes**

- GA1 An advanced level of knowledge and understanding of the theory and practice of Electrical and Electronic, Computer Systems or IT&T Engineering and the fundamentals of science and mathematics that underpin these disciplines.
- GA2 A commitment to maintain an advanced level of knowledge throughout a lifetime of engineering practice and the skills to do so.
- GA3 The ability to apply knowledge in a systematic and creative fashion to the solution of practical problems.
- GA7 An ability to identify, formalise, model and analyse problems.
- GA8 The capacity to design, optimise, implement, test and evaluate solutions.
- GA9 An ability to plan, manage and implement solutions that balance considerations of economy, quality, timeliness and reliability as well as social, legal and environmental issues.
- GA10 Personal attributes including: perseverance in the face of difficulties; initiative in identifying problems or opportunities; resourcefulness in seeking solutions; and a capacity for critical thought.
- GA11 Skills in the use of advanced technology, including an ability to build software to study and solve a range of problems.

These programs also foster the graduate attributes of the University of Adelaide and the Institution of Engineers Australia. These should be read in conjunction with the list above.