

GRADUATE DIPLOMA IN STATISTICS

MODULE 2: STATISTICAL INFERENCE

READING LIST

NOTE: While the RSS has made every effort to ensure that the material and information in this document is accurate and up-to-date when published, it is only general information and may be out-of-date when accessed.

The syllabus for GD2 has eight headings, and no single book provides comprehensive coverage of all of them. A table indicates which topics are covered by each book listed below, though it is not always completely consistent in what is deemed as 'Yes' and 'No' – some book/topic combinations will lie in between.

The books below are divided into two categories, those with coverage of a majority of the eight topics and those that concentrate on topics that are neglected by many of the books in the first category. Most books listed are reasonably recent but there are a few such as Cox and Hinkley and Silvey that have withstood the test of time, and Stuart et al. and O'Hagan and Forster are descendants of the 'classic' three-volume *The Advanced Theory of Statistics*, by M G Kendall and A Stuart.

Books with reasonably good general coverage

Abramovich F and Ritov Y (2013) *Statistical Theory: A Concise Introduction* Chapman & Hall/CRC

Barnett V (2000) *Comparative Statistical Inference*, 3rd edition Wiley

Casella G and Berger R L (2002) *Statistical inference*, 2nd edition Duxbury

Cox D R (2006) *Principles of Statistical Inference* Cambridge University Press

Cox D R and Hinkley D V (1979) *Theoretical Statistics* Chapman & Hall/CRC

Garthwaite P, Jolliffe I and Jones B (2002) *Statistical Inference*, 2nd edition Oxford University Press

Geisser S and Johnson WO (2006) *Modes of Parametric Statistical Inference* Wiley

Migon H S, Gamerman D and Louzada F (2014) *Statistical Inference: An Integrated Approach*, 2nd edition CRC Press

Olive D (2014) *Statistical Theory and Inference* Springer

Silvey S D (1975) *Statistical Inference* Chapman and Hall/CRC

Stuart A, Ord K and Arnold S (2008) Kendall's Advanced Theory of Statistics, Volume 2A, Classical Inference and the Linear Model, 6th edition Wiley

Wackerly D D, Mendenhall W and Schaeffer R L (2007) Mathematical Statistics with Applications, 7th edition Duxbury

Welsh A H (1996) Aspects of Statistical Inference Wiley

Young G A and Smith R L (2010) Essentials of Statistical Inference Cambridge University Press

More specialised books

Bernardo J M and Smith A F M (2000; 2nd edition due late 2015) Bayesian Theory Wiley

Efron B and Tibshirani R J (1994) An Introduction to the Bootstrap Chapman and Hall/CRC

French S and Rios Insua D (2000) Statistical Decision Theory: Kendall's Library of Statistics 9 Wiley

Gibbons J D and Chakraborti S (2010) Nonparametric Statistical Inference, 5th edition CRC Press

O'Hagan A and Forster J (2003) Advanced Theory of Statistics, Volume 2B, Bayesian Inference, 2nd edition Wiley

Pratt J, Raiffa H and Schlaifer R (2008) Introduction to Statistical Decision Theory MIT Press

Sprent P and Smeeton NC (2007) Applied Nonparametric Statistical Methods, 4th edition Chapman & Hall/CRC

Book coverage

	EST	HT	CONF	RESAM	NP	BAYES	DEC	COMP
Abramovich and Ritov	Yes	Yes	Yes	No	No	Yes	Yes	No
Barnett	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Bernado and Smith	No	No	No	No	No	Yes	Yes	Some
Casella and Berger	Yes	Yes	Yes	No	No	Yes	No	No
Cox	Some	Some	Some	No	No	Yes	Yes	Yes
Cox an Hinkley	Yes	Yes	Yes	No	Some	Yes	Yes	No
Efron and Tibshirani	No	No	No	Yes	No	No	No	No
French and Rios Insua	No	No	No	No	No	No	Yes	No
Garthwaite et al.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Geisser	Yes	Yes	Yes	No	No	Yes	No	No
Gibbons and Chakraborti	No	No	No	No	Yes	No	No	No
Migon et al.	Yes	Yes	Yes	No	No	Yes	Some	Some
O'Hagan and Forster	No	No	No	No	No	Yes	No	No
Olive	Yes	Yes	Yes	No	No	Yes	No	No
Pratt et al.	No	No	No	No	No	Yes	Yes	No
Silvey	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Sprent and Smeeton	No	No	No	Bootstrap	Yes	No	No	No
Stuart et al.	Yes	Yes	Yes	No	No	No	No	Yes
Wackerly et al.	Yes	Yes	Yes	No	Yes	Some	No	No
Welsh	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Young	Yes	Yes	Yes	Bootstrap	No	Yes	Yes	No

Rows of this table list the recommended books; columns correspond to topics grouped

as in published syllabus, as follows:

EST = Estimation; HT = Hypothesis testing; CONF = Confidence intervals and sets;

RESAM = Data resampling; NP = Non-parametric inference; BAYES = Bayesian inference;

DEC = Decision theory; COMP = Comparative inference.

