

MANGALORE UNIVERSITY
Department of Commerce
M.Com.

Optional Stream-3: Banking and Insurance Management (BAIM) CMS560:
Optional (BAIM): Actuarial Management

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Learning Objectives:

- Objective of this course is to equip students with theoretical and practical knowledge of actuarial science in order to work in life and non-life insurance companies, designing innovative insurance products, research and consultancy and valuing financial contracts.

Course Outcomes:

1. Job opportunities in insurance, consulting, business advising, financial services banking and risk mgt.

Unit-1:

Actuarial Risk Management: Nature, importance and scope of actuarial Risk Management, Functions of Actuarial Risk Management in Life and Non-life insurance business.

Unit-2:

Role of Actuaries in Social Security Sectors : Social security versus Actuaries Management, Valuation of a new scheme, legal versus actual coverage, benefit provisions, financial provisions, interrelationships between social security schemes and their demographic, economic and fiscal environment.

Unit-3:

Actuarial assumptions and Models : Actuarial assumptions and models for social security projections: features of actuarial assumptions, population projections – social security area population projections by marital status and dependency ratio's.

Unit-4:

Models in Risk Theory : Introduction, Compound Poisson, Negative binomial and binomial distributions credibility theory and survey of graduation theory. Actuarial present values of benefits in life insurance business.

Unit-5:

Insurance Business and Risk Models : Introduction, expected value principle, notion of utility and risk models for short term. Mortality tables, its functions, conversion tables and other tables.

References:

1. Shailaja R. Deshmukh: Actuarial Statistics, Aintroduction using, R": University press: Private ltd.: 2009.
2. Hasey H. Panjer : Acturial Mathematics: Volume 35, American mathematical Society Providence, Rhode Island 2000.
3. Bowers N.L. : Gerber, Hickman, Jones and Nesbitt: Acturial mathematics, Society of Actuarial Itasca Llinois, 1988.
4. Benjamin and Pollard : The Analysis of Mortality and other actuarial statistics, Heinemann, London 1980.
5. Pierre Plamondon, Annedrouin et-al: Actuarial Practice in Social Security : International Labour Office: Geneva.
6. Mark S. Dorfman : Introduction to Risk Management and Insurance: Eight Edition, Prentice Hall of India, New Delhi – 2005, ISBN No.81-203-2768-03.
7. Donald D.W.A. “ Compound Interest and Annuities – Certain”, 2 Ed., Cambridge(Eng.) Published for the Institute of Actuaries and the Faculty of Actuaries at the University Press, 1970.
8. R.E. Underwood, “ The Elements of Actuarial Science”, 4th Edition, Pitman.
9. Harry Freeman, “ Mathematics for Actuarial Students”, Cambridge at the University Press, 1949.

