

# **P.R. GOVERNMENT COLLEGE, KAKINADA**

(An Autonomous, NAAC accredited with 'A' Grade (3.17 CGPA) & ISO certified Institution)



**BOARD OF STUDIES  
2023-2024**

**ACTUARIAL SCIENCE**

**DEPARTMENT  
OF  
STATISTICS**

**P.R. Government College (A), Kakinada**  
**BOS – ACTUARIAL SCIENCE (2022-23)**  
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**BLUE PRINT OF C.B.C.S. MODEL CURRICULUM - B.Sc Actuarial Science**

Yr.	Sem & Course Theory / Lab	Title	Workload	Credits	Max. Marks		
			Hrs./week		Internal.	External.	Tot.
III	V Sem (Course-6B)	Principles of insurance	6 Hrs	5	50	50	100
	V Sem (Course-7B)	Practice of insurance	6 Hrs	5	50	50	100
		List of Examiners					



OFFICE OF THE DEAN, ACADEMIC AFFAIRS  
**ADIKAVI NANNAYA UNIVERSITY**  
RAJAMAHENDRAVARAM

No. ANUR/DAA/PR Govt. College (A)/Sub. Experts/2021

Date: 22-10-2021

**PROCEEDINGS OF THE VICE-CHANCELLOR**

**Sub:-** ANUR- DAA – Nominated University Subject Experts for BOS – PR Govt. College (A), Kakinada – Orders - Issued.

**Ref:-** 1. Lr. dated 15.09.2021, from the Principal, PR Govt. College (A), Kakinada  
2.Proc. No: ANUR/PRG College (A), KKD/UG BoS/2019/09, dated 19.03.2019

**Read:-**Note for Orders of the Vice-Chancellor dated 21.10.2021

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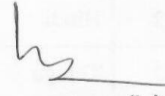
**ORDERS**

Having consider the request cited in the ref. 1, the Vice-Chancellor is pleased to order that the following members be nominated as University Subject Experts for UG Board of Studies of **PR Govt. College (A), Kakinada** for a period of three years from the date of the proceedings issued.

S.No.	UG Courses	Name of the Subject Expert
1	English	Dr. Prasanthi Sree, AKNU MNS Campus, Kkd, Ph No: 9848297555, <a href="mailto:sathupathi.sri@gmail.com">sathupathi.sri@gmail.com</a>
2	Hindi	Dr. N Venkata Ramana, SKBR College, Amalapuram, Ph. No: 9849373773
3	Telugu	Dr. P. Nagaraju, GDC, Palakollu, Ph.No: 9052038569, <a href="mailto:raju00517@gmail.com">raju00517@gmail.com</a>
4	Sanskrit	Dr. TGY Acharyulu, SKR Womens College, Rajahmundry, Ph. No: 9848628812
5	Mathematics	Dr. V. Anantha Lakshmi, Principal, GDC Pithapuram, Ph. No : 9963786386, <a href="mailto:ananthamaths@rediffmail.com">ananthamaths@rediffmail.com</a>
6	Statistics & Actuarial Sciences	Dr. D V Ramana Murthy, HoD of Statistics, SKVT College, Rajamahendravaram, Ph.No: 9949135864, <a href="mailto:drdvrmurthy@gmail.com">drdvrmurthy@gmail.com</a>
7	Chemistry & Analytical Chemistry	Dr. K. Jhansi Lakshmi, Principal, Ideal College of Arts & Sciences, KKD, Ph.No: 9441236409, <a href="mailto:jhansikalisindi@gmail.com">jhansikalisindi@gmail.com</a>
8	Physics & Electronics	Dr. Paul Diwakar, Sri CRR College (A), Eluru, 9985050696
9	Petro Chemicals	Dr. M Trinadh, Lecturer in Chemistry, Govt. College (A), Rajahmundry, Ph. No: 8639551783
10	Bio-Chemistry	Dr. M Suvarchala, Lecturer in home science, ASD women's Degree College, KKD,
11	Food Science	Ph. No: 9346512694, <a href="mailto:suvarchakamallela@gmail.com">suvarchakamallela@gmail.com</a>
12	Botany	Dr. J. Sujatha, Leturer in Botany, GDC Rjy, Ph.No: 9441050910, <a href="mailto:drjsuneetha@grjy.ac.in">drjsuneetha@grjy.ac.in</a>
13	Microbiology	Dr. D Aruna, Lecturer in Micro-biology, ASD Women's College, Kakinada, Ph. No: 9182525872
14	Zoology	Dr. B. Tejo Murthy, Lecturer in Zoology, GDC Yeleswaram, Ph. No: 9703799970, <a href="mailto:drmtm2011@gmail.com">drmtm2011@gmail.com</a>
15	Bio Technology	Dr. B. Nageswari, Lecturer in Biotechnology, GDC Rjy, Ph. No: 986621955

16	Commercial Aquaculture	Dr. P Ramamohana Rao, Aquaculture Consultant, KKD, Ph. No: 9885144557, asreenivasulu@gmail.com
17	Computer Science & Computer Applications	Mr. N. Naga Subrahmanyesweri, Lecturer in Computer Science, ASD Women's College, KKD, Ph. No: 9948438376, yesweri.velugu@asddgcw.ac.in
18	Commerce	Dr. K. Ratna Manikyam, Govt. College (A), RJY, Ph. No: 8919230362, drkrn@gcrjy.ac.in
19	Economics	Dr. D. V. Nageshwara Rao, Lecturer, GDC, RJY, Ph. No: 9490919676
20	History	Dr. B. Anjani Kumari, Lecturer in charge, GDC (W), Ph. No: 891989337
21	Philosophy	Dr. V. Venkatarao, Lecturer in Philosophy, MR College, Vijayanagaram, Ph. No: 9440096609
22	Political Science	Dr. Seetha Mahalaxmi, Lecturer in Political Science, GDC, RJY Ph. No: 9491011844
23	Journalism & Mass Communication	Prof. DVR Murthy, Dept. of Journalism & Mass Communication, Andhra University, Vishakapatnam, Ph. No: 9985051793, 9440974092
24	Horticulture	Dr. J. Sujatha, Lecturer in Botany, GDC, Rjy, Ph. No: 9441050910, drjsuneetha@gcrjy.ac.in
25	Pharmaceutical Chemistry	Dr. K. Deepthi, Asst. Professor, Dept. of Chemistry, AKNU, Rjy, Ph. No: 9985469607, deepthikorabandi@gmail.com

(BY ORDERS)

  
Dean 22/10/21  
ACADEMIC AFFAIRS

To  
The Principal, PR Govt. College (A), Kkd  
PA to R  
PS to VC,  
OOF

**PROCEEDINGS OF THE PRINCIPAL  
P.R. GOVERNMENT COLLEGE(A), Kakinada  
Present: Dr. B. V. Tirupanyam, M.Sc; Ph.D.  
R.C.No.1/A.C./BOS/2023-24, Dated: 29.08.2023**

**SUB: P.R. Government College(A), Kakinada-UG Board of Studies (BOS)-  
Program/Course- Nomination of Members-Orders issued.**

**REF: 1. UGC Guidelines of for Autonomous Colleges-2018.**

**ORDERS: The Principal, P.R. Government College(A), Kakinada is pleased to constitute UG Boards of Studies in Statistics/Actuarial science for framing the syllabi in respective Subject for all Semesters duly following the norms of the UGC Autonomous guidelines.**

<b>S.No</b>	<b>Name of the Person</b>	<b>Designation</b>
<b>1</b>	<b>Smt. P.Jyothi</b>	<b>Chairman &amp; Lecturer Incharge, Department.</b>
<b>2</b>	<b>Dr. D.V. RamanaMurthy Head, Dept.of statistics, SKVT college, Rajahmundry.</b>	<b>University Nominee</b>
<b>3</b>	<b>Dr. N. Madhavi HOD of statistics, Govt. COLLEGE(A), Rajamahendravaram</b>	<b>Subject Expert -I Lecturer in Statistics</b>
<b>4</b>	<b>Smt .P.Raja Rajaeswari lecturer in Statistics Aditya Degree College for Women ,Kakinada</b>	<b>Subject Expert - II Lecturer in Statistics</b>
<b>5</b>	<b>Sri Ch. Tata Rao ,A.O</b>	<b>LIC, Kakinada</b>
<b>6</b>	<b>B. kalyan Kumar</b>	<b>Member</b>
<b>7</b>	<b>Md.Sammer</b>	<b>Student Alumni Member</b>
<b>8</b>	<b>B.Sai Yashwanth</b>	<b>Student Member</b>

<b>9</b>	<b>Ch.lalitha Gayatri</b>	<b>Student Member</b>
<b>10</b>	<b>P.Sharon jyoshna</b>	<b>Student Member</b>
<b>11</b>	<b>N.venkatesh</b>	<b>Student Member</b>

**The above members are requested to attend the BoS meeting on 31-Aug-2023(online)and share their valuable reviews, and suggestions on the following functionaries.**

**Prepare syllabi for the subject keeping in view the objectives of the college, interest of the stake holders and National requirement for consideration and approval of the IQAC and Academic Council.**

**Suggested methodologies for innovative teaching and evaluation techniques.**

**Suggest the panel of Names to the academic council for appointment of Examiners.**

**Coordinate research, teaching, extension and other activities in the Department of the college.**

**PRINCIPAL**



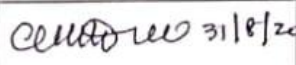

**P. R. Government College(A), Kakinada**



**PITHAPUR RAJAH'S GOVERNMENT COLLEGE (A), KAKINADA**

**Department of Statistics**

The Board of Studies meeting for **Statistics (Actuarial science)** subject during the academic year 2023-2024 is conducted at the Dept. of Statistics on 31.08.2023 (online) at 11:00 AM with Smt P.JYOTHI., Lecturer In-charge in Statistics the chair along with the following members.

Name with Designation and Address		Signature
Smt. P.Jyothi Lecturer in IN CHARGE P. R. Govt College(A),KAKINADA	Chair Person	 31/8/23
Dr. D. V. RAMANA Murthy Head, Dept.of statistics,SKVT college,Rajahmundry	University Nominee	 31.08/23
i)Dr. N. Madhavi HOD of statistics, Govt. COLLEGE(A), Rajamahendravaram	Subject expert	N. Madhavi   31.08.23
ii)Sri. Smt .P.Raja Rajaeswari lecturer in Statistics, Aditya Degree College for Women, Kakinada		P. Raja R   31/8/23
Sri Ch. Tata Rao, A. O  LIC,Kakinada.	Industrialist	 31/8/2022
<b>Members from the College</b>		
B.Kalyan kumar	Faculty of the Department	
<b>Student Members</b>		
Md.Sammer	Student Alumni Member	Md. Sammer
B.Yaswath I MSCS	Student Nominee	B yaswath
P.lalitha gayatri I MSCS	Student Nominee	P. lalitha gayathri
N.Venkatesh II MSCS	Student Nominee	N. Venkatesh
P.Sharon joshna II MSCS	Student Nominee	P. Sharon joshna

## **PROGRAMME OUTCOMES**

For every degree program expectations are listed out by the institution under the Program Outcomes.

### **PO1. Knowledge and Understanding of:**

1. All concepts at under graduate level.
2. Real life applications of these concepts and relationship between them.

### **PO2. Intellectual skills – be able to:**

1. Think logically and arrange real life situations to mathematical form.
2. Assimilate knowledge and ideas based on wide reading and through the internet.
3. Transfer of appropriate knowledge and methods from one topic to another within the subject.
4. Understand the evolving state of knowledge in a rapidly developing field.

### **PO3. Transferable skills:**

1. Use of IT (word-processing, use of internet for doing project).
2. Ability to work as part of a team.
3. Ability to use library resources/Equipment.
4. Time management.

### **PO4. Problem analysis:**

1. Conversion of real life problem to Mathematical model and analyze with suitable Statistical tools.
2. Conduct investigations of complex problems: Use research-based knowledge.

### **PO5. Ethics:**

1. Apply ethical principles, commit environment and responsibilities among students.

### **PO6. Individual and team work:**

1. Function effectively as an individual and as a member in diverse teams, and in multidisciplinary settings.

**PO7. Communication:** Communicate effectively on complex group activities and with society at large. Speak, read, write and listen clearly in person and through electronic media .

**PO8.Critical Thinking:**

1. Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

**PO9. Effective Citizenship:**

1. Demonstrate empathetic social concern and equity centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.


**PO10. Life-long learning:**

1. Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

**Programme Specific Outcomes (PSO)**

S.No.	Programme	PSO
1	B.Sc. (Mathematics, Statistics, Actuarial Science) (Code: BS 14)	PSO1: To understand nature, scope, basic concepts and terminology of the three courses of the programme.
		PSO2: To identify and understand the applications of the three courses in different areas like, physical sciences, life sciences, arts and humanities, Business, Insurance, various industries, etc
		PSO3: To solve various real life problems by developing mathematical model and applying various statistical tools with the help of suitable economic, finance and risk policies.
		PSO4: To develop research thinking to solve critical problems.

Suggest to follow the website: <http://www.actuariesindia.org/>

	<b>P.R.GOVERNMENT COLLEGE(A), KAKINADA</b>	<b>Program &amp; Semester III B.Sc. (V Sem) PAPER-VI</b>			
Course Code	<b>TITLE OF THE COURSE PRINCIPLES OF INSURANCE- 6B</b>				
Teaching	Hours Allocated: 60 ( <b>Theory</b> )	L	T	P	C
Pre-requisites:	To have knowledge in Mathematics and Statistics and Insurances	6	-	-	5

### CourseObjectives:

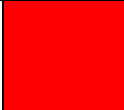
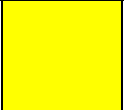

The Objective of this course is to

1. gain knowledge about insurance and its features
- 2 study about life tables and its uses in estimating the survival rate or mortality rate
3. know about various types of insurances and their benefits

### CourseOutcomes:

On Completion of thecourse, the students will be able to-	
CO1	Understand the basics of Risk Management
CO2	Work on Insurance Market
CO3	Work on benefits of insurance on Insurance Customers
CO4	Calculate the Insurance Contract
CO5	Learn about Insurance Terminology

### Course with focus on employability / entrepreneurship / Skill Development modules

Skill Development		Employability		Entrepreneurship	
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**Model blue print for the Question Paper setter**

**Course-V: PRINCIPLES OF INSURANCE**

**Max. Marks: 50M**

**Time : 2 Hrs.**

<b>Module</b>	<b>Short Answer Questions</b>	<b>Essay Questions</b>	<b>Marks allotted to the Unit/Chapter</b>
<b>I</b>	<b>1</b>	<b>1</b>	<b>15</b>
<b>II</b>	<b>2</b>	<b>1</b>	<b>20</b>
<b>III</b>	<b>2</b>	<b>1</b>	<b>20</b>
<b>IV</b>	<b>1</b>	<b>2</b>	<b>25</b>
<b>V</b>	<b>1</b>	<b>1</b>	<b>15</b>
<b>Total including choice</b>	<b>7</b>	<b>6</b>	<b>95</b>

**Pithapur Rajah's Government College (Autonomous), Kakinada**  
**III year B.Sc., Degree Examinations - V Semester (w.e.f 2023-24)**  
**For 2021-22 batch**  
**Statistics Course V: PRINCIPLES OF INSURANCE (6B)**

**Model Paper**

Time: 2 Hrs.

Max. Marks: 50

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Answer any THREE of the following. Choosing at least one from each part.

3x10=30M

**SECTION – A**

**PART- I**

1. Explain about risk analysis and risk management techniques.
2. Explain the importance of ethical behaviour.
3. Explain the role of third party administrators.

**PART- II**


4. Explain the principals of subrogation and contribution.
5. Explain the principals of utmost good faith and proximate cost.
6. Explain about terms specific to life insurance.

**SECTION – B**

Answer any FOUR of the following:

4x5=20M

7. Distinguish between different types of risks.
8. Explain about the role of intermediaries.
9. Explain about the role of specialists: surveyors.
10. Explain about Concept of Insured customer
11. Explain about concept of customer mindset
12. Explain of significances of principal of Insurance interest.
13. Explain about concept of life insurance.

	<b>P.R.GOVERNMENT COLLEGE(A), KAKINADA</b>		<b>Program &amp; Semester III B.Sc. (V Sem) PAPER-VII</b>			
Course Code	<b>TITLE OF THE COURSE PRACTICE OF INSURANCE- 7B</b>					
Teaching	Hours Allocated: 60 (Theory)		L	T	P	C
Pre-requisites:	To have knowledge in Mathematics and Statistics and Insurances		6	-	-	5

### CourseObjectives:

The Objective of this course is to

1. gain knowledge about insurance and its features
2. know about various types of insurances and their benefits

### CourseOutcomes:

On Completion of thecourse, the students will be able to-	
CO1	Understand the basics of Insurance
CO2	Work on Premiums and bonuses
CO3	Work on Plans of Life Insurance
CO4	Calculate the Annuities
CO5	Calculate amount of Annuities and rates applicable

### Course with focus on employability / entrepreneurship / Skill Development modules

Skill Development		Employability		Entrepreneurship	
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**Model blue print for the Question Paper setter**

**Course-V: PRACTICE OF INSURANCE**

**Max. Marks: 50M**

**Time : 2 Hrs.**

<b>Module</b>	<b>Short Answer Questions</b>	<b>Essay Questions</b>	<b>Marks allotted to the Unit/Chapter</b>
<b>I</b>	<b>1</b>	<b>1</b>	<b>15</b>
<b>II</b>	<b>1</b>	<b>1</b>	<b>15</b>
<b>III</b>	<b>2</b>	<b>1</b>	<b>20</b>
<b>IV</b>	<b>2</b>	<b>1</b>	<b>20</b>
<b>V</b>	<b>1</b>	<b>2</b>	<b>25</b>
<b>Total including choice</b>	<b>7</b>	<b>6</b>	<b>95</b>

**Pithapur Rajah's Government College (Autonomous), Kakinada**  
**III year B.Sc., Degree Examinations - V Semester (w.e.f 2023-24)**  
**For 2021-22 batch**  
**Statistics Course V: PRACTICE OF INSURANCE (7B)**

**Model Paper**

**Time: 2 Hrs.**

**Max. Marks: 50**

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**Answer any THREE of the following. Choosing at least one from each part.**

**3x10=30M**

**SECTION – A**

**PART- I**

1. Explain briefly about Indian insurance market.
2. Write about factors involved in the calculation of premiums and the concept of bonus
3. Write about the importance of key-man insurance and health insurance

**PART- II**

4. Describe briefly the analysis of different types of annuity plans.
5. Explain about the importance of group insurance.
6. Explain about the features of group insurance schemes

**SECTION – B**

**Answer any FOUR of the following:**

**4x5=20M**

7. Explain about organizational structure of LIC.
8. Explain about the different types of premiums
9. Write about the various life insurance plans
10. Explain about the benefits of MWP
11. Write about the advantages and disadvantages of annuity
12. Write about a short note on Annuities
13. Explain about social security scheme.

**P.R. Government College (A), Kakinada**  
**Department of Actuarial Science**  
**List of paper Setters in Actuarial Science**

S. No	Name of the paper setter	Address
1	Saladi Srinivas	AAO, LIC, Mandapeta Phno.9491782917
2	Ch.Tata Rao	AO LIC, Div Office Kakinada Phno.9866807397
3	Smt.Uma Radhika	AO LIC, Main Branch Rajahmundry Phno.9848442699
4	MS Reddy	AAO, LIC, Div Office Rajahmundry Phno.9440272919
5	B Srinivas	LIC, Div Office Rajahmundry PhNo.9573091113
6	DB Srinivas	LIC Palasa Ph No.9985612521
7	Dr. K. Padmavathi	Principal, FAC, Government Degree College , Begumpet, Hyderabad.
8	Dr. N. Madhavi	Lecturer in Statistics, Government College (A), Rajahmundry
9	Dr. N. Srinivasa Rao	Head of the Department of Statistics, Loyola College , Vijayawada
10	B.Kodanda Rao	LIC, Div Office Rajahmundry PhNo.9491431973
11	K.Ashok	SRR & CVR Govt.Degree College