

## 28. Evaluative Report of the Department

1. Name of the Department **S.O.S. in Computer Science & Applications**
2. Year of establishment **1995**
3. Is the Department part of a School/Faculty of the university? Yes,  
University  
Department
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters;  
Integrated Ph.D., D.Sc., D.Litt., etc.)  
  
PG  
1. M.C.A. 3 years programme  
2. M.B.A. eCommerce 2 years programme  
  
UG  
3. B.C.A. 3 years programme  
  
M.phil.  
4. Computer Science & Applications  
  
Diploma  
5. P.G. Diploma in Computer Applications(PGDCA)  
1 year programme
5. Interdisciplinary programmes and departments involved N/A
6. Courses in collaboration with other universities, industries, foreign institutions, etc.  
N/A
7. Details of programmes discontinued, if any, with reasons N/A
8. Examination System: Annual/Semester/Trimester/Choice Based Credit  
System  
  
**Semester**
9. Participation of the department in the courses offered by other departments

10. Number of teaching posts sanctioned, filled and actual (Professors/ Associate Professors/ Asst. Professors/others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	-	-	1
Associate Professors	1	1	1
Asst. Professors	2	1	-
Others	-	-	-

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr. D.N.Goswami	Ph.D.	Professor	Software Reliability	24 Yrs	Ph.D. – 9 M.Phil- 4
Dr. Sanjay K. Gupta	Ph.D.	Associate Professor	Software Engineering	18	Ph.D.01/M.Phil 04

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors
13. Percentage of classes taken by temporary faculty – programme-wise information
14. Programme-wise Student Teacher Ratio
15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual
16. Research thrust areas as recognized by major funding agencies
17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

18. Inter-institutional collaborative projects and associated grants received
- a) National collaboration                      b) International collaboration
19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.
20. Research facility / centre with
- state recognition
  - national recognition
  - international recognition
21. Special research laboratories sponsored by / created by industry or corporate bodies
22. Publications:
- \* Number of papers published in peer reviewed journals (national / international)
    - D.N.Goswami**
    - International Journal - 10**
    - National Journal -6**
    - International Conference Proceeding - 12**
    - National Conference Proceeding - 5**
    - Chapters in Books-5**
  - SanJay K. Gupta**
  - International Journal -07**
  - National Journal -04**
- \* Monographs
  - \* Chapters in Books
  - \* Edited Books
  - \* Books with ISBN with details of publishers
  - \* Number listed in International Database (For *e.g.* Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
  - \* Citation Index - range / average
  - \* SNIP

- \* SJR
  - \* Impact Factor – range / average
  - \* h-index
23. Details of patents and income generated
  24. Areas of consultancy and income generated
  25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad
  26. Faculty serving in
    - a) National committees b) International committees c) Editorial Boards d) any other (please specify)

**D.N. Goswami - Editor in International Journal of System Assurance Engineering and Management, Springer**

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).
28. Student projects
  - percentage of students who have done in-house projects including inter-departmental projects
  - percentage of students doing projects in collaboration with other universities / industry / institute

**MCA students carry out their project work in collaboration with other universities industry / institute as part of their course**

29. Awards / recognitions received at the national and international level by
  - Faculty
  - Doctoral / post doctoral fellows
  - Students

**Anshu Chaturvedi, Ph.D. student, won the young Scientist award of MAPCOST, Bhopal in computer Science in 2009**

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.
31. Code of ethics for research followed by the departments
32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
M.C.A		13	14	69%	92%
M.B.A. eCommerce		15	12	60%	66%
M.Phil.		08	02	100%	100%
B.C.A.		15	14	86%	95%
P.G.D.C.A.		19	18	72%	77%

33. Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.C.A	85	15	Nil	Nil
M.B.A. e-commerce	61	39	Nil	Nil
M.Phil.	33	33	33	Nil
B.C.A.	95	3	2	Nil
P.G.D.C.A.	95	5	Nil	Nil
Ph.D.	20	60	20	Nil

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.
- N/A

35. Student progression

Student progression	Percentage against enrolled
UG to PG	50%
PG to M.Phil.	75%
PG to Ph.D.	90%
Ph.D. to Post-Doctoral	-
Employed <input type="checkbox"/> Campus selection <input type="checkbox"/> Other than campus recruitment	Data not available
Entrepreneurs	

36. Diversity of staff

**Percentage of faculty who are graduates**

of the same university	33%
of the same university	60%
from universities outside the country	03%

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period

**Two**

38. Present details of departmental infrastructural facilities with regard to

- a) Library 9073
- b) Internet facilities for staff and students Yes
- c) Total number of class rooms - 06
- d) Class rooms with ICT facility - 02
- e) Students' laboratories - 04
- f) Research laboratories - 01

39. List of doctoral, post-doctoral students and Research Associates

a) from the host institution/university

S.No.	Name	Research Topic	Supervisor	Co- Supervisor
1.	Rishi Soni	Privacy Preservation in Data Mining	Dr. D. N. Goswami	
6	Mausam Pachauri	NA	Dr. D. N. Goswami	Dr. Anshu Chaturvedi

b) from other institutions/universities

S.No.	Name	Research Topic	Supervisor	Co- Supervisor
2.	Mohammad Altaf Dar	Comparative Study and Analysis of Software Reliability Growth Models and their Applications	Dr. D. N. Goswami	Dr. Anshu Chaturvedi
3	Atiesh Mishra	A Algorithmic Approach for mode Authentication in wireless Sensor Network	Dr. Anshu Chaturvedi	Dr. D. N. Goswami
4	Rakesh Prasad Sarang	Privacy andf Cloud Computing Chellenges: Analysis and Evalution	Dr. Anshu Chaturvedi	Dr. D. N. Goswami
5	Shivjay Singh Tomar	Analysis and optimization of performance of cross layer design through Ad-hoc Network	Dr. Anshu Chaturvedi	Dr. D. N. Goswami
7	Ramveer Gurjar	NA	Dr. Sanjay Kr. Gupta	
8	Arti Chaturvedi	NA	Dr. Sanjay Kr. Gupta	

9	Avineesh Kumar	Improving Software Reliability Using design pattern dectation	Dr. D. N. Goswami	-
10	Shalja Sharma	An analysis and classification of collaborative attack on Mobile Ad-hoc network	Dr. U. K. Singh	Dr. D N Goswami

40. Number of post graduate students getting financial assistance from the university.  
N/A

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

42. Does the department obtain feedback from

a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

**Based on the suggestion of faculties, changes are made in curriculum.**

b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

c. alumni and employers on the programmes offered and how does the department utilize the feedback?

43. List the distinguished alumni of the department (maximum 10)

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

45. List the teaching methods adopted by the faculty for different programmes.  
Smart class teaching procedure is adopted

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

47. Highlight the participation of students and faculty in extension activities.

48. Give details of "beyond syllabus scholarly activities" of the department.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. NO

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

#### List of publications in past 5 years

#### PUBLICATIONS OF PROF. D.N. GOSWAMI

1. Goswami D.N., Chaturvedi Anshu, Raghuvanshi C.S. , “Frequent Pattern Mining using Record Filter Approach” Published in ***IJCSI International Journal of Computer Science Issues***,Vol.7,Issue 4,No.7,July 2010.
2. Goswami D.N., Chaturvedi Anshu, Raghuvanshi C.S. , “An Algorithm for frequent pattern Mining based on apriori” published in ***International Journal on Computer Science and Engineering (IJCSE)***,Vol.02.,No.04, 2010,942-947.
3. Chaturvedi Anshu, Goswami D.N., “Performance Comparison of AODV, DSR, DSDV AND ZRP”, to be published in ***Journal of Computer Society of India*** Volume 38, number 4,2010.
4. Goswami D.N., Chaturvedi Anshu, Raghuvanshi C.S. , “ Modified Approach in Classical Apriori and Partition Algorithm for Frequent Pattern Mining ”, to be published in proceedings of ***4<sup>th</sup> International Conference on Quality,Reliability & Infocom Technology*** held during December 18-20, 2009 at Conference Centre, University of Delhi ,New Delhi.
5. Chaturvedi Anshu, Goswami D.N., Sharma Nitesh, “ Performance optimizations in adhoc Networks Using Cross Layer Processing and Designs”, to be published in proceedings of ***4<sup>th</sup> International Conference on Quality,Reliability & Infocom Technology*** held during December 18-20, 2009 at Conference Centre, University of Delhi ,New Delhi.
6. Goswami D.N., Yadav Ramji , “ Multiple E-node in Backtracking Technique for all Optimal Solutions of General M-Machine Flow-Shop Scheduling Problem” to be published in proceedings of ***4<sup>th</sup> International Conference on Quality,Reliability & Infocom Technology*** held during December 18-20, 2009 at Conference Centre, University of Delhi ,New Delhi.
7. Chaturvedi Anshu, Goswami D.N., “Cross Layer Integrated Approach for Secured Broker Selection in Public/Subscribe for Ad Hoc Networks”, published in ***2009 IEEE International Advance Computing Conference (IACC2009), Patiyala, India,952-957*** (2009).
8. Kapur P.K., Goswami D.N., Bardhan A.K., “A flexible software reliability growth model with testing effort dependent learning process”, published in ***ELSEVIER Journal of Applied Mathematical Modelling*** ,volume 32,issue 7, 2008.
9. Chaturvedi Anshu, Goswami D.N., “Service based Model for wireless security”, published in ***2008 “Varahmihir journal of Computer & Information Sciences, Vol 3(1-2), 39-52, 2008.***
10. Kapur P.K., Goswami D.N., Bardhan A.K., “A General software reliability growth model with testing effort dependent learning process”, published in ***International Journal of modeling & Simulation***, Vol. 27, Issue 4, 2007.

11. Goswami D.N., Khatri Sunil K., Kapur Reecha, "Discrete Software Reliability Growth Modeling for Errors of Different Severity incorporating Change-Point Concept", published in ***International Journal of Automation and Computing***, U.K., volume 4, number 4, 2007.
12. Goswami D.N., Khatri Sunil K. and Kapur Reecha " On the development of Discrete S-shaped Software Reliability Growth Models ", ***Quality, Reliability & Infocom Technology***, Eds.: P.K.Kapur and A.K Verma, Macmillan India Ltd. ,pp.412-426 (2007).
13. Kapur P.K., Goswami D.N., Gupta Amit, "A Software Reliability Growth Model for Distributed Development Environment with learning function and errors of different severity", published in ***Varahmihir Journal of Computer & Information Sciences***, Vol. 2, pp .117-128 (2007).
14. Goswami D.N., Yadav R.J. "Lower bound heuristic pruning function of the branch and bound algorithm of flow-shop scheduling problem, ***Varahmihir Journal of Computer & Information Sciences***, Vol. 2, pp .63-72 (2006).
15. Yadav Kalpana, Goswami D.N., Kapur P.K. " Testing-Domain based Software Reliability Growth Models for Distributed Environment" in proceedings of the 3<sup>rd</sup> ***International Conference on Reliability and Safety Engineering***, IIT Karagpur, pp.614-628.
16. Goswami D.N., Jha P.C., Johri Prashant, Kapur Reecha, "Software Reliability Growth Model for Distributed Environment incorporating two types of Imperfect Debugging" in proceedings of the 3<sup>rd</sup> ***International Conference on Reliability and Safety Engineering***, IIT Karagpur, pp.308-319.
17. Kapur P.K., Goswami D.N., Khatri S.K., Johri P., "A Flexible Discrete Software Reliability Growth Model With Change-Point", in proceedings of the **national conference, INDIACOM-2007 computing for nation development**, pp.285-290.
18. Kapur P.K., Goswami D.N., Archana K. " Flexible Testing effort dependent Software Reliability Growth Modeling with Testing Coverage for Distributed Systems", ***Reliability, Safety and Hazard (Advances in Risk-Informed Technology)***, Eds.: PV Varde, A Srividya, VVS Sanyasi Rao, Ashok Chauhan, Narosa Publications Pvt. Ltd., New Delhi, pp.175-182 (2006).
19. Kapur P.K., Goswami D.N., Omar Shatnawi, Ompal Singh "A General software Reliability Growth Model with logistic learning function", published in ***Varahmihir Journal of Computer & Information Sciences***, Vol. 1, pp .91-104 (2006).
20. Kapur P.K., Goswami D.N., Bardhan A.K., "A Flexible Delayed S-Shaped Software Reliability Growth Model", published in ***Journal of Computer Society of India***, Vol 35 No 4, pp.10-16(2005).
21. Kapur P.K., Khatri K. Sunil, Goswami D.N., "A Generalized Dynamic Integrated Software Reliability Growth model based on Artificial Neural-network Approach", ***Reliability, Safety and Quality Engineering***, Eds.: A K Verma, P K Kapur, S C Chadge, Macmillan Publications, pp.831-838 (2005).
22. Kapur P.K., Goswami D.N., Gupta Amit and Shigeru Yamada " A Software Reliability Growth Model for distributed environment with logistic learning function ",

**Quality, Reliability and IT (Trends & future Directions)**, Eds.: P.K.Kapur and A.K Verma, Narosa Publications Pvt. Ltd., New Delhi, pp.74-84 (2005).

#### **PUBLICATIONS OF DR SANJAY KUMAR GUPTA**

1. **Sanjay Kumar Gupta**, Deepak Tyagi, Prof. Deepak Kalia, *Outline of a Three Dimensional Process Framework: Mobile Enterprise Transitions*, JIM Quest: Journal of Management & Technology, Vol..5, 2009, pp.95-100
2. **Sanjay Kumar Gupta**, *Contemporary Insights to Improve Software Maintainability of Object-Oriented Systems*, International Journal of Academicians "GESD" Vol.2 (No.1), April-June 2010, pp.64-74
3. **Sanjay Kumar Gupta**, Vilendra Kumar, *Flexible Virtual Communication in space attract Wi-Fi or Wireless hackers*, H.R. Journal of Management, Vol. 3, No. 1, April-September 2010, pp.72-77.
4. Susheel Chabra, **Sanjay Kumar Gupta**, Vilender Kumar, *Secure Wireless Computer Network: Global Success of ERP*, NSB Management Review, Vol.3, No.1, August 2010, Pp. 78-85.
5. **Sanjay Kumar Gupta**, *Usability of Software's and Application Packages (SAP) in development of rural India*, Varahmihir Journal of Computer and Information Sciences, Vol. 6, No.1-2, 2011, PP.1-10.
6. डा. संजय कुमार गुप्ता, *कम्प्यूटर पर ज्यादा वर्क करने वाले लोगों की दिनचर्या एवं फास्ट-फूड के सेवन का स्वास्थ्य पर प्रभाव*, Research Link, Issue 93, Vol. X(10), Dec.2011, pp. 41-43.
7. **Sanjay K. Gupta**, Anil Kumar Tripathi and Manjari Gupta, *Some Observations on Improving the Testability of Object-Oriented Software*, International Journal of information and Computing science (IJICS), Volume 13, Number 2, Dec. 2011, pp.1-11.
8. Dr. **Sanjay Kumar Gupta**, Vilender Kumar, Dr. Susheel Chabra, *A Window View on Prospects of ERP Implementation In Municipal Corporation of Delhi*, International Journal of Engineering Technology and advanced Engineering (IJETA), Vol 2, Issue 9, September 2012, pp.252-260.
9. डा. संजय कुमार गुप्ता, *कम्प्यूटर प्रोफेशनल्स के स्वास्थ्य पर आधुनिक दिनचर्या का प्रभाव*, Indian Streams Research Journal, Vol. II, Issue IV may 2012, pp.119-124
10. Dr. **Sanjay Kumar Gupta**, *कम्प्यूटर प्रयोगकर्ताओं में फास्ट-फूड के बढते प्रयोग का अवलोकन*, International Journal of All Research. ANVIKSHIKI, Year-7, Issue-1, January-2013, PP.101-105.
11. **Sanjay Kumar Gupta**, *On Usability Relationships of Computer Technology Input Artifacts and Rural Development in India*, International journal of Electronics

Communication and Computer technology (IJECCCT), Volume 2, Issue 6 (November 2012), pp.297-299.

**12. Sanjay Kumar Gupta, On CTA Usability and Rural Development in India, Journal of Global Research in Computer Science (JGRCS), Vol.4 issue 3, 2013, page 60-64**

**13. डा. संजय कुमार गुप्ता, ज्यदा टेबल वर्क करने वाले लोगों के स्वास्थ्य पर फास्ट-फूड/जंक-फूड के सेवन का प्रभाव, Golden Research Thoughts, Vol.2, Issue 11, May 2013 pp. 93-99.**

**14. Sanjay Kumar Gupta, Usability Models Based on Network Artifacts for Rural Development, International Journal of Computer Technology and Application (IJCTA), Volume 4 Issue 3, may-june2013, pp.508-513.**

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

**Strength**

**Good infrastructure**

**Weakness**

**Lack of faculty**

52. Future plans of the department.

**Promotion of research activates**