



**DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS**

**MAHARSHIDAYANAND UNIVERSITY ROHTAK**

*(NAAC Accredited 'A' Grade)*

## **Strategic Plan (2018-2023)**



## About the Department

Department of Computer Science & Applications was established in 1990 under the Faculty of Physical Science with only one course i.e. Post Graduate Diploma in Computer Applications. From that day, Department has shown a commendable progress and now offering MCA, MSC (Computer Science) & Ph.D(Computer Science) courses to the students. Department is one of the pioneer Department of the University and has touched almost every aspect of academics & extra-curricular activities. Department has proven its potential in research domain also with premium publications in SCI, SCOPUS, Web of Sciences indexed & many other reputed journals. Department also has handsome number of books edited & written by worthy faculty members referred country wide in almost every University. There are 10 regular Teaching Faculty members including two Professors & eight Assistant Professors.

## Vision







Department of Computer Science & Applications is one of the most leading Departments of the University with an aim of 'Learning with Innovations'. The Department is always focused and targeted towards achieving excellence in **quality education, research & placements**. Our vision as a team is to groom our students technically, morally & socially.

## Mission

The Department is committed to serve the society by imparting quality teaching and focusing on cultural awareness and nationalism among students.

## Strategic Goals

To achieve the **Vision & Mission**, the Department will target:

-  *To provide the motivating and intellectually congenial environment for the positive learning.*
-  *To achieve the excellence in teaching as per the apex global standards for education.*
-  *To inspire, motivate and support the researchers for high quality research to serve the society.*
-  *To produce quality post graduates committed to their academic as well as social responsibilities.*
-  *To provide safe, healthy and comfortable working place to employees as well as to students.*
-  *To make Department known Nationwide through different gateways and platforms.*

## **SWOC Analysis**

### **STRENGTH**

- Department is having fully equipped Computer Labs for the students as well as for the faculty.
- Excellence in imparting knowledge to the students by providing latest teaching aids to the faculty.
- Department has framed the learning objectives and learning outputs for each and every paper code for the benefit of the students.
- All the classrooms are equipped with LED & LCD projectors.
- Department has already implemented CBCS scheme in all the courses running by the Department.
- Separate seminar room is available for conducting seminars & expert talks.
- Curriculum of different courses has been updated according to the latest industry requirements.
- Modern teaching aids are used in almost all the classes.
- Department actively participates in all the events organized at State or National level.
- A very competitive placement cell is maintained by the Department to liaison with alumnis.
- Different committees & cells are framed by the department for safe & comfortable stay of the students in the Department.
- Department organizes National Workshops/Seminars/Conferences from time to time to enhance the quality of research.

### **WEAKNESS**

- Department is trying hard to have a separate building for future perspectives.
- No special research labs are available till date.
- M.Tech course running by the department is not AICTE approved.
- Department needs an exclusive Conference hall.
- Department shares its library with the UIET, MDU.
- Very few students get enrolled in the department from other countries.
- Till date, department has no project from any of the funding organizations.

### **OPPORTUNITIES**

- Students can experience a motivating environment to identify, generate & nourish the technical as well as overall talents.
- Students can inculcate National values, global vision all together at one place.
- Students can place them in the industry after completing their degrees.

- An exposure to different Universities & industries can be experienced by the students.
- Students can improve their communication skills by doing different communication drills.

## CHALLENGES

- The biggest challenge for the Department is to get the AICTE approval for the courses already running in the department.
- Another important challenge is get a separate block to support the further extension of the department.
- To start new value added courses to make students more technically expert.
- To start five year integrated course in the Department.
- To establish an exclusive research lab well equipped with latest tools for the research scholars.
- To get projects from different funding organizations like UGC, SAP etc.

## Action Plan

### Session: 2018-19

- ✓ *To enrich the infrastructure of Department to make the teaching process more effective & efficient.*
- ✓ *To achieve the excellence in teaching & learning process as per the changing requirements of the industry.*
- ✓ *To improve the placement standards of the Department by inviting eminent speakers from the industry.*
- ✓ *To make the students aware of their culture & country by celebrating different occasions in the Department.*
- ✓ *To establish an effective network for the Departmental students with different companies.*
- ✓ *To start new courses in the Department to provide education to more students.*
- ✓ *Different training workshops will be arranged to train teachers as well as students on new technologies.*
- ✓ *Invited Talks, Extension Lectures will be arranged every semester to give exposure to the students.*
- ✓ *Department will make use of Digital Learning facility, provided by the University, as much as possible to improve the quality of education.*
- ✓ *Value Added Courses are proposed and will be implemented by the Department to excel the students in latest technologies and to give them better job opportunities.*
- ✓ *The Department will actively participate in different appropriate social events like online Job Fair, Intellectual Forums etc*
- ✓ *To conduct different language drill activities every month, to improve Communication skills of the students.*

- ✓ *A construct a special research oriented Computer Lab for the research scholars equipped with latest hardware conditioned to the space & budget provided by the University.*
- ✓ *Different extracurricular activities will also be organized by the Department like Induction program, Sports Day, Blood Donation camps & different fests will be organized to promote national & cultural values among students.*

**Session: 2019-2020**

- ✓ *To apply for the separate space for the Department for smooth functioning of the Departmental activities.*
- ✓ *To update the syllabi of UG programmes and PG programme as per changing requirements of industry.*
- ✓ *To organize an International / National Conference in the Department.*
- ✓ *To organize one/two day Seminar/Workshop to develop skills and to promote placement activities of the students.*
- ✓ *To enhance infrastructural and research standards through UGC-SAP (DRS-II).*
- ✓ *To apply for research projects funded by UGC, CSIR or other agencies.*
- ✓ *To arrange extension lectures to enhance academic/ research standards. Alumni will be invited for delivering some of these lectures.*
- ✓ *To do new/extended research work in the varied areas of Computer Science and to get quality publications in the Scopus/WoS/ICI indexed UGC approved Journals.*
- ✓ *To make efforts at the departmental level to establish linkages with various institutions/industries for research and extension.*
- ✓ *To arrange educational tours to various places in India for wider exposure of the students in various domains and understand the emerging areas in the society, in general, and Mathematics, in particular.*
- ✓ *To arrange trips to IT/Software industries and/or to arrange interactive lectures of the IT personnel for the students.*
- ✓ *To organize “blood donation” and/or “pledge to eye donation” camp.*
- ✓ *To organize cultural programmes including Diwali fest, Teej celebrations etc.*
- ✓ *To organize other extracurricular/co-curricular activities to improve the confidence level of the students.*
- ✓ *To celebrate Children’s day by visiting Orphanages to serve the society.*
- ✓ *To make the Alumni & Placement cells more effective & updated by inculcating data from all the courses*
- ✓ *To strengthen the Departmental Library.*

**Session: 2020-2021**

- ✓ *To improve the quality of the education departed to the students, the curricula of different courses will be revised as per the requirements of the Industry, as and when required.*
- ✓ *Department will buy latest software to train the students in latest technologies as per availability of the budget.*
- ✓ *Department will actively participate in different placement drives conducted by different Universities.*
- ✓ *Department will also conduct the placement drive in the Department by inviting different companies for placement purpose.*
- ✓ *To arrange a technical workshop for learning research tools like SPSS, MATLAB and any other.*
- ✓ *Department will organize events or field trips for the students to visit the Industries.*
- ✓ *Liaison with Alumni: Connect with the alumni who are in the industry and ask them to arrange on-campus placements.*
- ✓ *To perform the SWOT analysis of the Department and will make strategic plans to improve it.*
- ✓ *To motivate and guide the students to perform SWOT analysis on their individual level.*
- ✓ *One day excursion will be conducted to give the industrial exposure to the students.*
- ✓ *One National/International Conference will be conducted in the Department to provide the researchers a common platform to share their views.*
- ✓ *To arrange the latest research tools for the scholars as per their requirements.*
- ✓ *To apply for different grants from UGC and other funding agencies.*
- ✓ *To apply for projects funded by different funding organizations.*
- ✓ *To organize different events in the Department like sports day, induction programme, nature day etc.*
- ✓ *To celebrate Republic day, Independence day in the Department.*

**Session: 2021-2022**

- ✓ *To organize one/two day Seminar/Workshop to develop skills and to promote placement activities of the students.*
- ✓ *To arrange expert talks to enhance academic/ research standards.*
- ✓ *To apply for research projects funded by UGC, CSIR or other agencies.*
- ✓ *To improve the research publication quality by motivating the scholars for publications in the Scopus/WoS/ICI indexed UGC approved Journals.*
- ✓ *To extend the links of the Department with various institutions/industries for extended research and extension.*

- ✓ *To arrange educational tours to different places so that students can explore different teaching environments & methodology.*
- ✓ *To arrange trips to IT/Software industries and/or to arrange interactive lectures of the IT personnel for the students.*
- ✓ *To motivate and guide the students to perform SWOT analysis on their individual level.*
- ✓ *One day excursion will be conducted to give the industrial exposure to the students.*
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- ✓ *To arrange the latest research tools for the scholars as per their requirements.*
- ✓ *To apply for different grants from UGC and other funding agencies.*
- ✓ *To apply for projects funded by different funding organizations.*
- ✓ *To organize different events in the Department like sports day, induction programme, nature day etc.*
- ✓ *To celebrate Republic day, Independence day in the Department*
- ✓ *To organize “blood donation” and/or “pledge to eye donation” camp.*
- ✓ *To strengthen the Alumni section of the department and inviting the alumnis for recruitment purposes.*
- ✓ *To strengthen the Departmental Library.*
- ✓ *To organize University/State level Quiz Contest in Computer Science & Applications.*

**Session: 2022-2023**

- ✓ *To enrich the infrastructure of Department to make the teaching process more effective & efficient.*
- ✓ *To achieve the excellence in teaching & learning process as per the changing requirements of the industry.*
- ✓ *To improve the placement standards of the Department by inviting eminent speakers from the industry.*
- ✓ *To make the students aware of their culture & country by celebrating different occasions in the Department.*
- ✓ *To establish an effective network for the Departmental students with different companies.*
- ✓ *To start new courses in the Department to provide education to more students.*
- ✓ *Different training workshops will be arranged to train teachers as well as students on new technologies.*
- ✓ *Invited Talks, Extension Lectures will be arranged every semester to give exposure to the students.*
- ✓ *Department will make use of Digital Learning facility, provided by the University, as much as possible to improve the quality of education.*

- ✓ *Value Added Courses are proposed and will be implemented by the Department to excel the students in latest technologies and to give them better job opportunities.*
- ✓ *Department will actively participate in different appropriate social events like online Job Fair, Intellectual Forums etc*
- ✓ *Toconduct different language drill activities every month, to improve Communication skills of the students.*
- ✓ *A construct a special research oriented Computer Lab for the research scholars equipped with latest hardware conditioned to the space & budget provided by the University.*
- ✓ *Different extracurricular activities will also be organized by the Department for overall development of the students like Induction program, Sports Day, Blood Donation camps & different fests will be organized to promote national & cultural values among students.*
- ✓ *To start Women cell at Departmental level for addressing different issues related Women's problems.*



## ***YEAR WISE PLAN AT A GLANCE***

<i>Year</i>	2018-19	2019-20	2020-21	2021-22	2022-23
<i>Plan of Action</i>					
<i>Separate building for the Department</i>					
<i>Updating Syllabi as per CBCS for UG and 5-Year Integrated Programmes</i>					
<i>Implementation of Syllabi as per CBCS for UG and 5-Year Integrated PG Programmes</i>					
<i>Value Added Courses</i>					
<i>To Launch/Start Five year integrated Course</i>					
<i>Extension Lectures</i>					
<i>National/International Conferences</i>					
<i>Workshops/Seminars to develop skills and to promote placement activities</i>					
<i>Efforts for SAP (DRS-II)</i>					
<i>Research projects</i>					
<i>Educational Tours/One day Excursions</i>					
<i>Extra Curricular/Co-Curricular Activities</i>					
<i>Visits for social cause</i>					
<i>National Festivals(Republic &amp; Independence)</i>					
<i>Amplification of Departmental Library</i>					
<i>Alumni Databases</i>					
<i>Strengthening Pool of Software</i>					
<i>Language &amp; Communicative Drills</i>					
<i>SWOT Analysis</i>					
<i>Establishment of Women Cell</i>					
<i>Sports Day</i>					

### **Achievements of the Department in last Five years:**

<b>S.No.</b>	<b>Category</b>	<b>Number</b>
<b>1.</b>	<b>Publications</b>	<b>180</b>
<b>2.</b>	<b>Conferences/Workshops organized</b>	<b>30</b>
<b>3.</b>	<b>Books/Chapters</b>	<b>05</b>
<b>4.</b>	<b>Ph.D Completed</b>	<b>09</b>
<b>5.</b>	<b>Placement</b>	<b>110</b>

### **Committees constituted by the Department**

- **Student Grievances Committee**
- **Anti - Ragging Committee**
- **Sexual Harassment Committee**
- **Library Committee**

### **Major Thrust Areas for Research Activities**

Software Engineering
Component-based Software Engineering
Aspect Oriented Metrics
Software Complexity Metrics
Component-based Testing and Reusability
Data Mining and Data Warehousing
Natural Language Processing
Software Testing

## **ACTIVITY CALENDAR (2018-19)**

### **ODD SEMESTER (July-December 2018)**

<b>S.No.</b>	<b>Activity</b>	<b>Proposed Month</b>
1.	Induction cum Orientation Program for First Year Students	August 2018
2.	Shaan-e-Hind 2.1 Declamation Contest 2.2 Slogan Writing 2.3 Tech Talent	August 2018
3.	Expert Session	August 2018
4.	Tribute to the Legendary Radha Krishnan: Teacher's Day Celebration	September 2018
5.	URJA: Sports Day	September 2018
6.	Pride Ride for Nature	September 2018
7.	DCSA Techno Fusion Fest "UDAAN"-18	September 2018
8.	An Invited Talk: Industrial Personnel	September 2018
9.	Sessional Week	October 2018
10.	One Day Industrial Excursion	October 2018
11.	JagMag Fest	October 2018
12.	Extension Lecture	October 2018
13.	Mhaara Haryana	November 2018
14.	International/National Conference *	November 2018

### **EVEN SEMESTER (January-June 2019)**

<b>S.No.</b>	<b>Activity</b>	<b>Proposed Month</b>
1.	Republic Day Celebration: Hindustan-e-Jashan	January 2019
2.	Expert Session	January 2019
3.	Literary Week	February 2019
4.	One Day Industry Excursion	February 2019
5.	Blood Donation Camp	February 2019
6.	Women's Day Celebration	March 2019
7.	URJA: Sports Day	March 2019
8.	Holi Splash	March 2019
9.	Sessional Week	March 2019
10.	Expert Talk	April 2019
11.	Hara Bhara Haryana: Tree Plantation day	April 2019
12.	Techno Quiz Contest	April 2019
13.	International/National Conference/Workshop	April 2019

The cultural, technical, adventure and other activities of the various societies shall be spread across the semesters, with the various societies/clubs/chapters of different Departments of the University, taking lead in organizing events related to their respective areas.