

# Information Brochure

## Master of Computer Applications (MCA-2019)

Session 2019-2022

### Vision

*To keep pace with the emerging trends in  
Computer Science and Technology*

### OUR AIMS

- Producing a class of computer professionals
- Achieving academic excellence
- Nurturing the students of today into resolute builders of the future
- Discover the ultimate in the field of Computer Science and Technology
- To strengthen the computer literacy missions of the Government
- To enlighten the forthcoming generations with the best of computer education
- To impart technical and interpersonal skills to the students
- To produce computer professionals who can face not only the present but also future challenges of I.T. Industry
- Endeavour to provide I.T. based solutions to the society

### Motto

*To produce skilled professionals in computer applications*

## हिमाचल प्रदेश विश्वविद्यालय – कुलगीत

पवित्रित वेदमंत्रो से मनोरम देवभूमि-निलय  
विराजे नवल नालन्दा उन्हीं की छाँव में मधुमय  
हिमाचल विश्वविद्यालय  
विविध विद्यालय, जय जय !!

धरा जो शक्तिपीठों की, धरा शत कोटि तीर्थों की  
धरा जो शैलसंस्कृति की, धरा जो नृत्य-गीतों की  
जहाँ रावी-विपाशा –चन्द्रभागा पुण्य सलिलायें  
कुसुम गलहार बनती हैं शतद्रू संग, सरितायें

धरा माण्डव्य ऋषि की परम पावन, ज्ञानमय-चिन्मय  
हिमाचल विश्वविद्यालय  
विविध विद्यालय, जय जय !!

जहाँ तक रम्य धौलाधार पर्वत- श्रृंखला दिखतीं  
वहाँ तक ज्ञान मधु रश्मियाँ नितफैलती रहतीं  
थिरकते पाँव नाटी पर, लरजते गीत चम्बा के  
स्वयं श्री शारदा साकार हो उठतीं उन्हें गाके

लिये 'शस्त्रे च शास्त्रे कौशलम्' का मंत्र जो निर्भय  
हिमाचल विश्वविद्यालय  
विविध विद्यालय, जय जय !!

तपोरत देवदारु खड़े तथागत-सदृश हैं लगते  
सुभग सन्देश मैत्री का निरन्तर बाँटते रहते  
हिमाचल का परम गौरव, सदन विद्या-कलाओं का  
सदन विज्ञान का, तकनीकियों का, योग्यताओं का

निरन्तर बढ़ रहा आगे उदित रवि सा, सतत समुदय  
हिमाचल विश्वविद्यालय  
विविध विद्यालय, जय जय !!

From the Desk of Vice-Chancellor



### संदेश

मुझे यह जानकर प्रसन्नता ही नहीं है कि हिमाचल प्रदेश विश्वविद्यालय के कम्प्यूटर विज्ञान केंद्र ने शैक्षणिक सत्र 2019-20 के लिए छंटनी परीक्षा के माध्यम से प्रदेश प्रवेश अर्जित करने के लिए विद्यार्थियों को तैयार कर ली है।

इस विश्वविद्यालय ने अपने अस्तित्व के लगभग 49 वर्षों में शिक्षा के अत्यंत प्रसार में कई कीर्तियां स्थापित किए हैं तथा यह विश्वविद्यालय पूरे राज्य के केवल एक मात्र सम्बद्धता प्रदान करने के अतिरिक्त अकेला सह आवासीय उच्च शिक्षा का प्रगतिशील केंद्र है।

मुझे पूर्ण विश्वास है कि इस विश्वविद्यालय में उच्चतर शिक्षा ग्रहण करने के लिए उपयुक्त वातावरण है तथा साथ-साथ वहां का मौलान भी अति अनुकूल है।

मैं यहां शिक्षा ग्रहण करने के लिए आने वाले सभी छात्र-छात्राओं को अपना शुभकामनाएं व्यक्त हूँ।

  
(विक्रम कुमार)

From the Desk of Pro Vice-Chancellor



सदेश

मुझे यह जानकारी प्रदानता हो रही है कि हिमाचल प्रदेश विश्वविद्यालय के कंप्यूटर विज्ञान विभाग ने अपने शैक्षणिक सत्र 2019-20 के लिए छठवीं परीक्षा के माध्यम से प्रवेश प्रक्रिया आरम्भ करने के लिए विद्यार्थियों को तैयार कर ली है।

वर्तमान समय में कंप्यूटर शिक्षा में उच्चतर शिक्षा ने एक विशेष स्थान ग्रहण कर लिया है तथा कंप्यूटर शिक्षा और कंप्यूटर विज्ञान की जानकारी अत्यन्त आवश्यक इसलिए हो रही है कि ऐनिक छोटे-छोटे छात्रों में भी इसकी उपयोगिता बहुत बढ़ गई है।

मुझे पूर्ण विश्वास है कि हिमाचल प्रदेश विश्वविद्यालय में कंप्यूटर विज्ञान शिक्षा में उच्चतर शिक्षा ग्रहण करने के लिए प्वाण्त संसाधन एवं सुविधाएं उपलब्ध है।

में इस विश्वविद्यालय में शिक्षा ग्रहण करने के लिए आने वाले सभी छात्र छात्राओं को अपनी शुभकामनाएं देता हूँ।

रमेश सिंह चौहान  
प्रति कुलपति

From the Desk of Chairman



Dear Candidates,

I take pride in inviting you to be the member of the 30<sup>th</sup> batch of MCA in the Department. The Department has its own brand name in the academics as well as in the industry across the Globe. The extremely skillful, determined and value-educated set of Computer Science professional being produced by the Department is second to none in the world today. The students as well as the Department is being nurtured by a highly qualified faculty members; who are in the habit of taking any latest technological challenge head-on and delivering the best possible end results. All through, we have been striving hard to continuously provide our students the latest technological exposures by making them work on almost all the latest technological environments, giving them the complete understanding of the best theoretical concepts along with adequate practical exposure.

The field of Computer Science is growing exponentially and has started touching almost all the aspects of daily life. With the growing Indian economy, you as professionals-to-be definitely have a prominent constructive role to play in shaping the day-to-day life of tomorrow by the use of computing technology and concepts.

I am confident that your higher education journey through the Department of Computer Science will give you the richest experiences of your life. I am looking forward to welcome you in the Department.

**(Prof. Kishori Lal Bansal)**

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## 1. ENTRANCE TEST FOR MASTER OF COMPUTER APPLICATION (MCA) 2019 BATCH

for the admission to Department of Computer Science, H P University Shimla, Regional Centre Dharmshala, K.L.B.D.A.V Girls College, Palampur affiliated to H. P. University, Shimla-171005.

## 2. ADMISSION SCHEDULE:

### (A) Last Date:

Last date for the submission of application forms in the office of *The Chairman, Department of Computer Science, H P University, Summer Hill Shimla-5* is:

Date	Day	Time
15-05-2019	Wednesday	5:00 pm

### (B) Date of downloading Admit Card begins on:

Date	Day	Time
22-05-2019	Wednesday	5:00 pm

### (C) Date of Entrance Test:

Date	Day	Time
31-05-2019	Friday	2:00 PM to 4:00 PM

### (D) Date of Declaration of Result:

Date	Day
18-06-2019	Tuesday

### (E) The schedule for counselling to Subsidized Seats for Department of Computer Science, H.P.University, Shimla Campus:

Date of Interview/ Admission	Day	Time for reporting for interview in the office of the Department of Computer Science
02.07.2019	Tuesday	10:00 A.M.

### Note

- i) The candidates will be called for **counselling** in order of merit in the ratio 1:3 times of vacant seats.

ii) The applicants called for interview shall be clearly mentioned in the merit list displayed on the website <http://hpucs.ac.in> or <http://hpuniv.nic.in> and notice board of the Department. No separate intimation in this regard shall be sent to the candidates.

iii) Last date for Admission against the vacant/vacated Seats (if any)

Date	Day
31-07-2019	Wednesday

iv) Admission with the permission of the Vice-chancellor, the dead line for closing admission even, if seat remain vacant for MCA course (for both subsidized and nonsubsidized)

Date	Day
10-08-2019	Saturday

**(F) The schedule for counselling to Non-Subsidized Seats for Department of Computer Science, H.P.University, Shimla Campus:**

Date of Interview/ Admission	Day	Time for reporting for interview in the office of the Dept.
		10:00 A.M. to 2:00 PM
10-07-2019	Wednesday	

**(G) The schedule for counselling to Regional Centre Dharmshala, K.L.B.D.A.V Girls College For Technology, Palampur Affiliated to H.P. University will be held in the department of Computer Science, H.P. University, Shimla-5 on the following dates:**

Date of Interview/ Admission	Day	Time for reporting	
		From	To
22-07-2019	Monday	10:00 A.M.	2:00 P.M.
25-07-2019	Thursday	10:00 A.M.	2:00 P.M.
29-07-2019	Monday	10:00 A.M.	2:00 P.M.
31-07-2019	Wednesday	10:00 A.M.	2:00 P.M.
05-08-2019	Monday	10:00 A.M.	2:00 P.M.
10-08-2019	Saturday	10:00 A.M.	2:00 P.M.

## **Instructions for Filling the online Application Form**

**(Read the instructions/ Pre-requisite carefully before filling the application form)**

(A) Before proceeding to apply, please ensure that you have:

**1- Scanned copy of applicant's recent photograph with following specification.**

- Photograph must be a passport size color picture.
- Photograph must be a taken in full face view directly facing the camera.
- Photograph should have no shadows and red eyes.
- Maximum size 100KB.
- Photo format should be jpg/jpeg only.

**2- Scanned copy of applicant's signature with following specifications.**

- Applicant should sign with black ink on a white paper and get the signature scanned.
- The signature must be signed only by the applicant and not by any other person.
- Maximum size 100 KB.
- Scanned signature format should be jpg/jpeg only.

**3- Scanned copy of applicant's Father/Mother signature with following specifications.**

- Applicant's Father/Mother should sign with black ink on a white paper and get the signature scanned.
- The signature must be signed only by the applicant's Father/Mother and not by any other person.
- Maximum size 100 KB.
- Scanned signature format should be jpg/jpeg only.

**4- Upload documents with following specifications.**

- Applicant should upload only one document (mark sheet/certificate) black ink on a white paper and get the signature scanned.
- The signature must be signed only by the applicant and not by any other person.
- Maximum size 2 MB pdf.
- Scanned signature format should be jpg/jpeg only.

**5- Create an email account if you already don't have one.**

**6- You must give a mobile number in basic details. If you don't have mobile number, Please enter your guardian's mobile number for any further correspondence in this regard.**

**7- All mandatory fields are marked with red star.**

(B) Instructions for filling the ONLINE APPLICATION FORM

1. Click on "PG/UG/Ph.D./Certificate Diploma" to access the list of programs.
2. Choose the program and click on the program name.
3. online Entrance Application form has following subsequent information
  - a) Personal Information
  - b) Education and Document Details
  - c) Application Summary
  - d) Payment
  - e) Submit Reference number and application form
4. Please fill the personal information first.
5. After filling the personal information click on save button at the last of the page.
6. System will generate the unique Registration number along with password. Applicants are advised to note the same.
7. The unique Registration number along with password will be sent on the email and the entered mobile number. Note down the Registration number for all future references.
8. After that you can continue and fill other required information or logout and login again with unique Registration number along with password.
9. After that Click on "PG/UG/Ph.D./Certificate Diploma" and click on "Click here for Student Login"
10. Login with unique Registration number along with password and you will get all the earlier submitted information in personal information page.
11. Applicants are required to fill all information required in different sections like Education and Documents details.
12. Fill Education and document detail and upload related documents. Photo and signature uploaded should be as per specifications, kindly refer to section (A) at the starting of the document.
13. To save the data please click on 'Continue and Save' button at the bottom of each screen.
14. Step for making Application Fees Payment, you can pay the fees through online mode or by choosing Challan mode.

### Payment through Challan

- a) If you select payment through **challan option**, you have to select bank and click on generate challan. After that you have to download the Challan and submit the same to the selected bank. Bank will give a reference number against the challan.
- b) Login again and submit your reference number under submit **reference number and application form** tab.

### Online Payment

- a) if you select online payment mode, click on make payment
- b) on the next page select your payment gateway
- c) Click on continue for payment
- d) Choose among the given options (debit card, credit card, net banking etc.)
- e) If the payment is successfully done, you will receive a success message with all the details
- f) Click on the Submit button to get the form finally submitted.

**Note: Before proceeding further please make sure that all the fields are filled in correctly in the confirmation screen before clicking the submit button.**

[Click here to apply online](#)

All the applicants are advised to read the Prospectus/information brochure of Computer Science Department, H.P. University, Shimla-171 005 in pdf format available on <http://hpucs.ac.in> or <http://hpuniv.ac.in>, carefully and also ensure their eligibility in terms of the conditions/provisions mentioned in the information brochure.

Please read these instructions carefully before proceeding with the ONLINE filling of MCA Entrance Application Form 2019.

### ELIGIBILITY

Bachelor's degree in any discipline with at least 50% marks (45% in case of SC/ST) from a University established by law in India, with Mathematics at +2 level

**OR**

BCA/B. Sc. (IT)/ B. Sc. (Computer Science)/B.Sc. Physical Science(Computer Science)/ B.A. with Computer Science/B.Sc. Honours with Computer Science or any graduate with computers as one of the subject in all the three years of graduation with at least 50% marks (45% in case of SC/ST) from a University established by law in India.

**Age Limit:**

Maximum age limit for admission to MCA course is **26 years for general category, 29 years for SC/ST category and 28 years for girl candidates**, as on the 1<sup>st</sup> July of the year concerned. The Vice-Chancellor may permit age relaxation up to a maximum of six months.

**MCA Entrance Exam Fee**

Rs.1000/- for general category and Rs.500/- for SC/ST/IRDP/ANTODAYA

**STUDENT INTAKE**

**Total seats**

Subsidized seats:	30 + 02 +02(02 seats Reserved for single Child who is a girl+ 02 seats J&K migrants)
Non-Subsidized seats:	90
Wards of H.P. University Employee	03
Total seats in MCA Course:	120+02+02+03
Few Supernumerary seats for foreign National who apply through ICCR are also available as per H.P. University Rules.	

**Duration of the course: 3 Years (6 Semesters)**

**RESERVATION FOR MCA**

**I). Subsidized Seats**

- (a) (i) 15% and 7.5% of the seats shall be reserved for bonafide Himachali Scheduled Castes and Scheduled Tribes candidates respectively who have passed the qualifying examination from any University established by law in India which is equivalent to the qualifying examination of H.P. University.
- (ii) 5% of the seats shall be reserved for Physically Handicaped candidates who are Himachal Pradesh Domicile
- (b) The remaining seats shall be filled as under
- (i) 25% seats shall be open to all the candidates irrespective of the institution from where they have passed their qualifying examination, in which the graduates of this University shall also be eligible to compete through competitive test.
- (ii) 75% of the seats shall be filled out of the candidates who have passed their qualifying examination from Himachal Pradesh University or H.P. Krishi Vishvavidyalaya or Dr. Y.S. Parmar University of Horticulture and Forestry, Himachal Pradesh Technical University and Central University of Himachal Pradesh or the candidates who are Himachal Pradesh Domicile irrespective of passing qualifying examination from any other Universities established by law in India which is equivalent to the qualifying examinations of Himachal Pradesh University.

- (iii). 5% of the seats shall be reserved for Physically Handicaped candidates who are Himachal Pradesh Domicile. The Registrar, H.P. University, Shimla vide letter/notification No. 416/2012HPU(Acad.) dated 2.1.2013 has conveyed the decision of Executive Council of its meeting held on 17.9.2012 taken vide Any Other Item adopted the H.P. State Govt.'s Instructions/Rules that no tuition fee be charged from the students with 40% and above disability. The student with special needs with more than 40% disability, admitted in any course of study running in the Himachal Pradesh University, Shimla will not be charged any fees with effect from the current academic session 2015-16 vide notification No. 451/2015 HPU(Acad) dated 25 July 2015
- (c) Two supernumerary seat shall be reserved for Himachali bonafide only/single child who is a girl. In this respect, an affidavit issued by a competent authority shall have to be submitted by the candidate at the time of counseling.
- (d) Three supernumerary seats shall be reserved for wards of H.P. University Employees.
- (e) Two supernumerary seats shall be reserved for the students of the state of Jammu and Kashmir Migrants.

**Breakup of Subsidized seats as per roster for Academic Session (2019-2022) on 120 points basis.**

1	Open to all	05
2	HPU General	15
3	SC	05
4	ST	03
5	PH	02
6	SGC	02
7	For the J&K migrant	02
8	Few Supernumerary seats for foreign National who apply through ICCR are also available as per H.P. University Rules.	
<b>Total Seats</b>		<b>30+02 +02</b>

**II) Non-Subsidized seats:**

- (i) The eligibility for admission to the Courses against these seats will be the same as provided for other candidates.
- (ii) The admission to these seats will be made on the merit of marks obtained in the Entrance Test.
- (a) 15% and 7.5% of the seats shall be reserved for bonafide Himachali Scheduled Castes and Scheduled Tribes candidates respectively who have passed the qualifying examination from any University established by law in India which is equivalent to the qualifying examination of H.P. University.
- (b) The remaining seats shall be filled as under

- (i) 25% seats shall be open to all the candidates irrespective of the institution from where they have passed their qualifying examination, in which the graduates of this University shall also be eligible to compete through competitive test.
- (ii) 75% of the seats shall be filled out of the candidates who have passed their qualifying examination from Himachal Pradesh University or H.P.Krishi Vishvavidyalaya or Dr. Y.S. Parmar University of Horticulture and Forestry, Himachal Pradesh Technical University and Central University of Himachal Pradesh or the candidates who are Himachal Pradesh Domicile irrespective of passing qualifying examination from any other Universities established by law in India which is equivalent to the qualifying examinations of Himachal Pradesh University.
- (iii) No of seats 90.

**Breakup of Non-Subsidized seats as per roster for Academic Session (2019-2022) on 120 points basis.**

1	Open to all	17
2	HPU General	52
3	SC	14
4	ST	07
5	Wards of H.P. University Employee	03
<b>Total Seats</b>		<b>90+3</b>

#### 6.5 FEES TO BE PAID

##### **Subsidized and Non-Subsidized (Both) Seats:**

As per University rules, the tentative detail of **Annual fees** to be charged from the MCA students every **July** of the year concerned.

Subsidized Fee			Non Subsidized Fee	Mode of Payment
Year	Boys	Girls	Boys/Girls	
1 <sup>st</sup> year	9130.00	6730.00	9130.00	online
2 <sup>nd</sup> Year	8380.00	5980.00	8380.00	
3 <sup>rd</sup> Year	8380.00	5980.00	8380.00	

In additions to above following dues also be deposited by the students as under:

Under Subsidized Seat		Under Non Subsidized seat	Mode of payment
Year	Boys/Girls	Boys/Girls	
1 <sup>st</sup> year	3000.00	53000.00	online
2 <sup>nd</sup> Year	3000.00	53000.00	
3 <sup>rd</sup> Year	3000.00	53000.00	

**FEE ONCE DEPOSITED SHALL NOT BE REFUNDED IN ANY CASE.**

**HIMACHAL PRADESH UNIVERSITY REGIONAL CENTRE DHARMSHALA**

**30 Seats+02 (single girl child) seat** are proposed to be filled at Himachal Pradesh University Regional Centre Dharmshala under self-financing scheme i.e. non-subsidized seats. The fee will be as charged from non-subsidized seats from MCA students as per University rules as given above at 6.5. The reservation roster of 120 points will be followed.

**Basis of Admission**

The admission to MCA course will be made on the basis of merit of the Entrance Examination (written test) conducted by H.P. University.

The written test will consist of one paper of 130 marks and of 2 hours duration and shall include the following four sections:

Section	Contents	Marks
A	General logical ability & aptitude	40
B	Mathematics of +2 level	50
C	Basics of Computers and its Awareness	25
D	General English	15
	<b>Total</b>	<b>130</b>

**The minimum qualifying marks in the Entrance Examination (written test) for subsidized as well as non-subsidized seats will be 35% i.e. 46 marks out of total of 130 marks & no minimum qualifying marks limit in case of SC/ST**

**CENTRES FOR THE ENTRANCE TEST**

The Entrance Test for admission to the MCA course shall be held at the following centres:

- H.P. University Campus, Summer Hill, Shimla
- Government College, Mandi
- Government College, Hamirpur
- H.P. University Regional Centre, Dharamshala, Kangra

The University reserves the right to allot any examination centre to the candidate irrespective of the choice given by the candidate.

**Important Dates:**

- Online filling up of MCA Entrance Application form commences from: **02.04.2019**
- Last date for filling up the ONLINE MCA Entrance Application Form: **15.05.2019**
- Print out of the hard copy of MCA Entrance Application Form kept with her/his self for future use.

4. Admit Cards download begins on <http://hpucs.ac.in> or <http://hpuniv.nic.in> with effect from :  
**22.05.2019**
5. Date of Entrance Examination: **31.05.2019.**

**[CLICK HERE TO APPLY ON LINE FOR MCA ENTRANCE TEST-2019](#)**

**Note:**

Merely appearing in the entrance exam does not entitle the candidate for the right to admission unless the candidate fulfills the eligibility criteria for admission to the MCA course. The candidate has to submit duly attested copies of the following certificates at the time of attending the counselling/interview:

- a) Proof of Age (Matriculation/ 10<sup>th</sup> class certificate)
- b) 10+2 certificate
- c) Graduation certificate having certificates of all semesters/ years.
- d) Category certificate i.e. SC/ST/IPDP/Antodaya, if applicable
- e) Single girl child affidavit in original, if applicable
- f) H.P. Bonafide certificate in case of SC/ST candidates
- g) Certificate of Physical handicapped, if applicable.

It will be the entire responsibility of the candidate(s) to download the prospectus well in time and submit the application form complete in all respects within the stipulated date and time. The University will not be responsible for any postal delay for non-receipt or in case of misplacement or loss of application form in transit. All disputes are subject to legal jurisdiction of courts in Shimla only.

#### **4 HIMACHAL PRADESH UNIVERSITY**

The Himachal Pradesh University, named after the state of Himachal Pradesh, was founded on 22<sup>nd</sup> July, 1970. The University is located at Summer Hill, a suburb of Shimla at its western end, at a distance of about 4 km from the main town. The Railway Station, Summer Hill is around 5 minutes walk from the campus. Summer Hill as a place is well connected through rail, road and air. The airport located at a place called Jubbarhatti is about 20 km from this place. This University is catering to the academics and research needs of students in the areas covering Computer Science, Physical Sciences, Bio-Sciences, Social Sciences, Commerce, Management Studies, Education, Law, Languages, and Performing Arts & Physical Education etc. All the colleges in the territorial jurisdiction of Himachal Pradesh are affiliated to this University.

Besides, this University runs an evening college, especially for the employees of recognized establishments and University College of Business Studies, for running bachelor degree courses in Computer Applications and Business Administration. The Himachal Pradesh University occupies an area of about 200 acres and has a distinctive style of architecture. The artistically designed buildings house various teaching departments, well-equipped laboratories and a huge library. Besides the residential accommodation for the teaching and non teaching

staff, the University has a Faculty House for lodging & boarding distinguished guests and visitors, six numbers of hostels for girls and seven numbers of hostels for boys. The University is also managing a Health Center within its campus. The University has a large auditorium with 750 seats for holding important university functions and ceremonies, a good cafeteria, recreational facilities, banking facilities with 24X7 ATM facilities and a cyber café.

## **5 DEPARTMENT OF COMPUTER SCIENCE**

In order to impart knowledge and training to students in the state-of-the-art and state-of-the-practice computer applications, the Department of Computer Science was established in the year 1987. The vision was to produce professional leaders, in the field of software development and research who shall enhance the technological strength of the region and the country. It is being achieved through the development of the technical as well as theoretical skills of the students through regular conventional and non-conventional teaching modes and through rigorous hands on practical training sessions. The Department provides the facilities suited for the development of skills and the team spirit among the students, inculcated in the given environment through seminars, group discussions, assignments, class tests, quizzes and design & development of dummy as well as real-time projects in the class rooms and laboratories. Keeping with the pace of the industry and R&D requirements so as to cater to the needs of the society, the department has been regularly updating its curricula from time to time. The latest thorough overhauling of all the curricula by the Department was affected as recently as in 2009 and 2010.

At its inception, the department started a **Certificate Course in the Programming (CCP)** along with **Diploma in Computer Applications (DCA)** in the year 1987. Later on, in the year 1992, the DCA was replaced by **Post Graduate Diploma in Computer Applications (PGDCA)**. The year 1990 brought in a new era for computer professionals in the history of the state with the launch of **Master of Computer Applications (MCA)**, a highly professional, Master's Degree programme. This academic/ professional program aims at imparting theoretical and practical training in the area of Computer Science and its applications. MCA is a full time three-year professional course spread over six semesters and also includes a one full semester industrial training. The curricula of MCA program has been designed with the objective of identifying, developing and sharpening of analytical and computational skills of the students. Providing different working platforms as per the ever changing requirements of the industry further enriches the knowledge of the students.

Since 2006, the Department has also started running a full time 2 year **Master of Technology (Computer Science)** i.e. **M. Tech. (CS)** programme spread over 4 semesters. The course is aimed at, in addition to other objectives, bridging the gap between the academic and professional requirements of the society at large. The curricula for this programmes matches the best in the country and has also been thoroughly updated recently in 2010. The whole of the fourth semester of this programme is dedicated to a dissertation work where each student is required to work on some contemporary research problem related to different areas of computer science, technology or their applications. The emphasis is on surveying the related literature, envisioning the problem domains and suggestions on the solution domains for one more problem domains. The latest and the ultimate feather added to the academic history of the Department was the starting of the **Doctor of Philosophy (Ph.D.)** program in 2007. This

programme lays specific emphasis on fulfilling the academic needs of researchers of the region in general and the teaching community in particular. In this programme, the students work on different problems related to the fields of computer science, technology or their applications under the able and expert guidance of the teachers of the Department.

Dress code for students of Computer Science Department is being followed.

**Location:**

The Department of Computer Science is housed in the ground floor of Netaji Subhash Chander Bose Bhawan in the main campus of Himachal Pradesh University, Shimla. The area occupied by the Department is approximately 470 square meters.

**6 ACADEMIC PROGRAMS**

The major academic programs currently being run successfully by the department are:

- MCA program since 1990
- M. Tech. (Computer Science) since 2006
- Ph.D. program since 2007.

**6.1 FACULTY & OTHER STAFF**

The Department has one of the highest qualified faculty members in the region. The following faculty members are involved in various academic and professional activities in the Department, within the campus and outside the campus.

**Faculty**

S. No.	Name	Qualification	With us since	Total Experience
1	Dr. K.L. Bansal, Professor & Chairman	MCA, Ph.D.	1995	24 Years
2	Dr. Arvind Kalia, Professor	MCA, Ph.D.	1989	30 Years
3	Dr. A.J. Singh, Professor	B. Tech., M. Sc., Ph.D.	1992	27 Years
4	Dr. Manu Sood, Professor,	B.E., M. Tech. , Ph.D.	1993	26 Years in academic & 5 years in industry
5	Dr. Aman Kumar Sharma, Professor	MCA.,Ph.D.	1997	22 Years
6	Dr. Jawahar Thakur, Professor	B. Tech., M. Tech.,Ph.D.	1997	22Years
7	Dr. Anita Ganpati, Professor	MCA, M. Tech.,Ph.D.	2001	18 Years

### **Technical staff**

<b>S. No.</b>	<b>Name</b>	<b>Qualification</b>	<b>Designation</b>
1	Mr. Syed Waji Hassan	B.Sc.	Lab. Technician
2	Mr. Vijay Kumar	B.Sc., B.Ed. (Non-Medical), PGDCA, M.Com. M.Sc. (Computer Science)	Lab. Attendant
3	Mr. Manjit Anand	B.A.,MCA	Lab. Attendant

### **Supporting Staff**

<b>S. No.</b>	<b>Name</b>	<b>Designation</b>
1	Mr M. C. Negi	Sr. Asstt.
2	Mr. Govind Ram	Clerk
3	Mr. Dina Nath	Peon
4	Mr. Sunny Kumar	Peon cum Frash

## **6.2 LIBRARY**

The Computer Science Section of the Central Library is well equipped with approximately 4500 text and reference books on different topics pertaining to courses curricula and related subjects. The library also subscribes to 07 numbers of national & International Journals of repute in the field of computer science and applications. In addition to this central library, a library has also been established in the department that caters to the specific needs of the students of the department. This library contains approximately 500 books on various subjects of interest.

## **COMPUTER LABORATORY**

To provide a rich hands-on experience to the students, three numbers of state-of-the-art computer laboratories housing around 100 computers have been established. All the latest softwares and different platforms are being provided to the students for hands-on practice in order to ensure good openings for them in the industry as well as in other sectors. The Labs have high speed LAN connected nodes & servers, internet connection through the Campus-wide Optical Fiber Wide Area Network & latest softwares as per the need of the syllabi of various courses being run. The facilities (hardware, software etc) in all the labs are upgraded regularly in order to match the needs of the industry.

## **LECTURE HALLS**

The lecture halls are well equipped with latest communication and multi media equipment such as overhead LCD Projectors, Internet access points and provision for power backups.

### **6.3 COUNSELLING**

The counselling shall be held in the H.P. University campus for admission to the MCA course 2019. The candidates are required to check the website of the Department ([www.hpucs.ac.in](http://www.hpucs.ac.in)) or <http://hpuniv.nic.in> for the results, merit list and counselling schedules. No separate result cards and intimation regarding counselling shall be sent to the candidates. The counselling shall be held strictly as per the duly published counselling schedule posted on the website. The candidate has to attend the counselling in person along with all the original testimonials such as Date of Birth (DOB) proof, 10+2, graduation, bonafide resident, proof of only child who is a girl, proof of category etc.

**In case the candidate does not attend the counselling as per the schedule, his/her candidature for MCA seat automatically stands cancelled.**

#### **Resolving a Tie**

The following Formulae shall be adopted to resolve a tie for Admission:

- (i) In case of a tie in marks scored in the entrance test, the candidate securing higher %age of marks in the qualifying exam shall be admitted first.
- (ii) Even if the tie is not resolved, the candidate having higher aggregate marks in any two of the following (in which his marks are higher) shall be admitted first: Matriculation/ Hr. Sec. Part-I /Hr. Sec. Part-II/ Prep/ Pre-Med/ Pre-Engineering/Intermediate/any other equivalent examination.
- (iii) Further, if the tie is still not resolved, the candidate younger in age shall be admitted first.

#### **Refusal for Admission:**

A candidate will be refused admission to the course if he/she does not fulfill minimum eligibility conditions, provided that the Vice-Chancellor shall have the power to permit age relaxation for reasons to be recorded in writing up to a maximum of 6 months. Provided further that age bar shall not apply in the case of in-service students and the State Govt. / Govt. of India nominees. Notwithstanding anything contained in the foregoing rules, a student shall be refused admission if his conduct during any previous stay in University has been unsatisfactory. Such student shall, however, have the right to appeal to the Vice-Chancellor whose decision shall be final. A student who has been expelled or rusticated shall not be admitted to any course of study in the University without the prior approval of the Vice-Chancellor.

### **6.4 SCHEME OF EXAMINATION IN MCA**

English shall be the medium of instruction and examination. The pass marks shall be 40% in each written paper and in the internal assessment separately, and 40% in viva-voce, project work and semester course and 50% in the aggregate subject to the conditions that aggregate shall be determined at the end of the examination. Other rules shall be as per the rules of the university.

**a) Theory Papers**

Each paper will be of 100 marks (75 marks for theory exam and 25 marks for internal assessment) and duration of each paper will be 3 hours. In each theory paper, nine questions are to be set. Two questions are to set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

**b) Practical Examination**

**Max. Marks:** 100 (50 marks for practical and 50 marks for internal assessment).

**Duration:** 3 hours.

**Conduct:** Practical exam will be conducted by the external examiner from the panel proposed by the Chairman, Department of Computer Science, Himachal Pradesh University, Shimla and duly approved by the concerned authorities of the Himachal Pradesh University, Shimla.

**c) Project Work:**

In 3<sup>rd</sup> year (sixth semester) the student has to develop one project, which will be evaluated by the external examiner from the panel submitted by Chairman, Department of Computer Science, Himachal Pradesh University, and duly approved by the university authority/evaluation branch, Himachal Pradesh University, Shimla on the following basis:

**System Development Project**

System Design	100 Marks
Log Book and Interim Report	100 Marks
Seminars (2)	100 Marks
Project Report (2 Copies)	200 Marks
Viva-Voce	100 marks
<b>Total</b>	<b>600 Marks</b>

A fee of Rs 500/- shall be charged at the final of submission of Project Report(Project Report submission fee)

In respect of theory papers 25 marks in each paper shall be reserved for award of internal assessment based on such work as assignments/practical/periodical tests/quiz etc.

In respect of practical papers, 50 marks shall be reserved for internal assessment in similar manner. The marks awarded by the teacher on account of internal assessment in relation to theory/practical paper as mentioned above shall be submitted to the office of Chairman.

In sixth semester, the Chairman/Head of the Department will assign a guide/supervisor, to each candidate for his/her project work. The candidate shall be required to maintain his/her project diary (logbook) of work in the organization. Each student will be required to give at least two seminars on his/her project work. Each student is required to submit two copies of his/her project reports in the Department after completion of the project work which will be evaluated by external examiner.

**d) Curriculum Schema:**

S. No	Course No.	Paper	Lecture Hrs/ week	Tutorial Hrs/ week	Univ. Exam Marks	Internal Assessment
<b>First Year</b>						
<b>Semester 1</b>						
1	MCA-101	Programming Methodologies Using C	3	1	75	25
2	MCA-102	Digital Organization	3	1	75	25
3	MCA-103	Introduction to Organizational Structure & Personnel Management	3		75	25
4	MCA-104	PC Packages	3	1	75	25
5	MCA-105	Effective Communication Skills	3	1	75	25
6	MCA-106	Practical-1(C-Language)	6	-	50	50
7	MCA-107	Practical-2(PC Packages)	6	-	50	50
<b>Semester 2</b>						
1	MCA-201	Data Structures	3	1	75	25
2	MCA-202	Computer Architecture	3	1	75	25
3	MCA-203	Programming in Visual Basic	3	1	75	25
4	MCA-204	Discrete Mathematics	3	1	75	25
5	MCA-205	Accounting & Financial Management	3	1	75	25
6	MCA-206	Practical-3(Data Structure)	6	-	50	50
7	MCA-207	Practical-4(Visual Basic)	6	-	50	50

*Department of Computer Science, H.P. University, Shimla  
Himachal Pradesh University  
(NAAC Accredited 'A' Grade University)*

S. No	Course No.	Paper	Lecture Hrs/ week	Tutorial Hrs/ week	Univ. Exam Marks	Internal Assessment
<b>Second Year</b>						
<b>Semester 3</b>						
1	MCA-301	Operating System	3	1	75	25
2	MCA-302	Data Communication & Computer Networks	3	1	75	25
3	MCA-303	Data Base Management System	3	1	75	25
4	MCA-304	Software Engineering	3	1	75	25
5	MCA-305	Object Oriented Programming Using JAVA	3	1	75	25
6	MCA-306	Practical-5(DBMS)	6	-	50	50
7	MCA-307	Practical-6(JAVA)	6	-	50	50
<b>Semester 4</b>						
1	MCA-401	Programming Using C#	3	1	75	25
2	MCA-402	.NET Technology	3	1	75	25
3	MCA-403	Computer Oriented Optimization Methods	3	1	75	25
4	MCA-404	Internet Technologies & Web Page Designing	3	1	75	25
5	MCA-E05	Elective – I	3	1	75	25
6	MCA-405	Practical – 7 (C#)	6	-	50	50
7	MCA-406	Practical – 8 (Internet Technologies & Web page design)	6	-	50	50

S. No	Course No.	Paper	Lecture Hrs/ week	Tutorial Hrs/ week	Univ. Exam Marks	Internal Assessment
<b>Third Year</b>						
<b>Semester 5</b>						
1	MCA-501	Data Warehouse & Mining	3	1	75	25
2	MCA-502	Computer Graphics	3	1	75	25
3	MCA-503	Fundamentals of Computer Algorithms	3	1	75	25
4	MCA-E04	Elective – II	3	1	75	25
5	MCA-E01	Elective – III	3	1	75	25
	MCA-504	Practical-9 (Computer Graphics)	6	-	50	50
	MCA-505	Practical-10 (FOCA)	6	-	50	50

Course No.	Paper	Univ. Exam Marks
<b>Semester – 6</b>		
MCA-601	<b>System Development Project</b>	
(a)	System Design	100
(b)	Log Book and Interim Report	100
(c)	Seminars (2)	100
(d)	Project Report (2 Copies)	200
(e)	Viva-Voce	100

<b>ELECTIVES</b>		
S. No	Course	Paper
1	MCA-E01	Artificial Intelligence & Expert Systems
2	MCA-E02	Software Quality and Testing
3	MCA-E03	Automata Theory & Compiler Design
4	MCA-E04	Cyber Law
5	MCA-E05	Distributed Data Base Management System
6	MCA-E06	Management of Software Projects
7	MCA-E07	Open Source Software
8	MCA-E08	Image Processing
9	MCA-E09	Distributed Systems
10	MCA-E10	Object-Oriented Software Engineering
11	MCA-E11	Simulation and Modeling

### **6.5 PLACEMENT CELL**

The placement efforts under a faculty member is being done to liaison among the students and perspective employers and to keep a watchful eye on the emerging trends and future needs of the industry. The Multinational/ National Companies have been visiting the department for placements and to impart training to the students since the inception of the course. The on campus interviews are conducted by the companies based on the requirements of their respective firms. Nearly all the students of the department get placed each year.

### 7 OFFICERS OF THE UNIVERSITY

S. No.	Name	Designation	Telephone No.
1.	His Excellency Acharya Devvrat	Chancellor	0177-2624152, 53, 54
2.	Prof. Sikander Kumar	Vice Chancellor	0177-2831363
3.	Prof. R.S.Chauhan	Pro-Vice Chancellor	0177-2831196
4.	Prof. Arvind Kalia	Dean of Studies	0177-2830922
5.	Prof. K.L.Bansal	Chairman	0177-2832569
6.	Prof. Kamal Jeet Singh	Dean Students Welfare	0177-2830926
7.	Prof. Nain Singh Negi	Chief Warden	0177-2830917
8.	Shri. <i>Ghanshyam Chand</i>	Registrar	0177-2830912
9.	Shri Narinder Thakur	Finance Officer	0177-2830913
10.	Dr. J. S. Negi	Controller of Exams	0177-2830911

### 8 TEACHING/ EXAMINATION/ VACATION SCHEDULE

The following schedule shall be followed for the academics in the MCA course for the session 2019-2020 in the Department of Computer Science, H.P. University, Shimla:

<b>Regular Teaching</b>			
(i)	I Semester	10-07-2019	09-11-2019
(ii)	III / V Semester	01-07-2019	09-11-2019
(iii)	II / IV/ VI Semester	17-02-2020	23-05-2020
<b>Preparation Days for Exams</b>			
(i)	Winter	10-11-2019	17-11-2019
(ii)	Summer	24-05-2020	30-05-2020
<b>Examination Schedule (Tentative)</b>			
(i)	Examination of Semesters I/ III/ V	18-11-2019	31-12-2019
(ii)	Examination of Semesters II/ IV/ VI	01-06-2020	30-06-2020
<b>Vacation Schedule</b>			
(i)	Winter Vacation	01-01-2020	16-02-2020
(ii)	Summer Vacation	21-06-2020	28-06-2020

#### Attendance:

*In order to be eligible to appear in the University examinations a candidate should have secured 75% attendance in each of the concerned courses in theory as well as practical.*

## **Ragging is Banned in H.P. University & Affiliated Colleges**

Hon'ble Supreme Court of India wide its judgment/orders dated 4<sup>th</sup> may 2001, 16<sup>th</sup> may 2007 and 11<sup>th</sup> Feb 2009 have outlined various steps which have been adopted by H.P. University so as to eliminate the ragging.

1. Ragging is banned in H.P. University and any one indulging in Ragging is likely to be punished appropriately. Which punishment includes imprisonment, fine or both, expulsion from the institution, suspension from the institution or classes for a limited period or fined with apology. The punishment may also take the shape of
  - (i) Withholding scholarship or other benefit
  - (ii) Debarring from representation in events
  - (iii) Withholding of results
  - (iv) Suspension or expulsion from hostels or mess or the like
2. In case the student seeking admission is found to have indulged in ragging in the past or if it is noticed latter that he has indulged in ragging, admission may be refused or he shall be expelled from the H.P. University.

### **9 LIST OF AFFILIATED COLLEGES:**

#### **9.1. K.L.B.D.A.V GIRLS COLLEGE FOR TECHNOLOGY, PALAMPUR**

##### **1. INTRODUCTION:**

**K.L.B.D.A.V College for Girls, Palampur** is one of the pioneer institute imparting education to girls in various disciplines. A beacon of knowledge and women empowerment, it has made a creative and meaningful contribution in the field of education in Himachal Pradesh and adjoining states. This prestigious institution is managed by **Sh. Kanhya Lal Butail College for girls Managing Body Palampur (H.P)**. College has well equipped **library, labs, class rooms** and **Wi-Fi campus** with the **hostel** and **bank** facility. The College is provided with high speed **internet connectivity** of 8mbps and having **Conference Hall** fitted with modern audio visual system.

**The institute is approved by AICTE, New Delhi and affiliated to Himachal Pradesh University Shimla.**

**2. INTAKE CAPACITY:** 60 Seats

**3. FEE STRUCTURE:** College fee Rs. **26,000/-** per Semester,  
[University Charges; Exam Fee and Security Fee (Refundable) extra].

##### **4. COMPLETE ADDRESS:**

K.L.B.D.A.V Girls College for Technology,  
Palampur. Distt Kangra (H.P)  
Pincode-176061, email: [principal@kldavcollege.org](mailto:principal@kldavcollege.org) , [ndawasthi@gmail.com](mailto:ndawasthi@gmail.com)

##### **5. IMPORTANT FUNCTIONARIES:**

Director-cum-Principal: Dr.N.D.Sharma  
Phone No: 01894-232587, 94180-45500, 98167-67528,98163-08440

**6. PLACEMENT CELL:** Institute has well equipped and active placement cell.

##### **7. CORE FACULTY:**

Sr.No	Name	Designation	Qualification
1.	Mr.Parvesh Sood	Asso. Professor	M.Sc.IT, M.Phil

2.	Mrs.Shivani Awasthi	Asso. Professor	MCA
3.	Mr.Avinav Banyal	Asst. Professor	MCA
4.	Ms.Tanya Chanana	Asst. Professor	M.Sc.IT
5.	Mr.Rohit Rana	Asst. Professor	MCA
6.	Ms.Omni Thakur	Asst. Professor	MCA
7.	Mrs.Anjali Thakur	Asst. Professor	MCA
8.	Ms.Simpy Rana	Asst. Professor	MCA
9.	Mr.Amit Rana	Asst. Professor	B.Tech

**8. GUEST FACULTY:**

Sr.No	Name	Designation	Qualification
1.	Mr.V.P.Sood	Asst.Professor	M.Sc Math
2.	Mrs.Bharti Sharma	Asst.Professor	M.A.English,M.Phil
3.	Mrs.Anjali	Asst.Professor	M.Sc Math
4.	Mrs.Niharika Kalia	Asst.Professor	MBA

**9. Topper in HPU Session 2018-19**

Sr.No	MCA 2 <sup>nd</sup>	MCA 4 <sup>th</sup>	MCA 6 <sup>th</sup>
1.	Kajal Dhiman	Kirti Thakur	Priyanka
2.	Ankita	Rimpica Thakur	Anchal
3.	Swati	Kashish Kapoor	Anita
4.		Anju	Sakshi

***Our students placed in Wipro, Airtel, TCS Ion, Atius Infotech PVT.Ltd, CS Infotech***

## KULGEET---- THE UNIVERSITY ANTHEM

Adorned with the holy Veda Mantras  
The abode of the gods nestles the novel Nalanda  
Himachal University  
The jewel of myriad learning  
Victory to you!

The land where deities abide, a hundred pilgrimages invite  
The land of mountain culture where dance and song entice  
The land where the Ravi-Vipasha-Chandrabhaga and  
Sutlej weave a garland bright.

Rishi Mandavya's sacred land, is alive with learning and pu<sup>r</sup>ity  
Himachal University  
The jewel of myriad learning  
Victory to you!

As far as the eyes can behold, the glorious Dhauladhars unfold  
The radiant rays of knowledge light up every hill and valley  
As the feet sway to the Nati and lips sing the Chamba songs  
The Goddess Sharada herself appears in incarnate from

Fearless with the mantra of Shastre cha Shastrey Kaushalam  
Himachal University  
The jewel of myriad learning  
victory to you!

The ascetic deodar trees stand with equanimity  
Reminiscent of the Buddha in their calm tranquility  
The offer ceaselessly, missives of sweet amity  
Himachal's supreme dignity, the seat of erudition—  
Of Art and Science, Technology and Ability

Marching steadily on, like the risen sun of dawn  
Himachal University  
The jewel of myriad learning  
Victory to you!